Well ID	SDG No.	PDF Page No.
BGMW01	23J026	21
BGMW02	23J026	21
BGMW03	23J004	3
	23J027	260
BGMW07	23J026	20
BGMW08	23J004	3
	23J027	261
BGMW09	23J026	20
BGMW10	23J026	20
BGMW11	23J039	500
BGMW12	23J004	3
	23J027	260
BGMW13S	23J114	1300
BGMW13D	23J114	1299
FW31	23J093	1282
	23J115	1539
MW01	23J026	21
MW02	23J026	21
MW03	23J063	729
	23J091	1107
MW18D	23J128_R1	1900
MW20	23J128_R1	1899
MW22D	23J142	2142
MW23	23J004	3
	23J027	259
MW24	23J026	21
MW25	23J087	749
	23J128_R1	1899
MW26	23J093	1282
	23J115	1536
MW27	23J093	1282
	23J115	1538
MW28	23J087	747
MW29	23J087	747
MW30	23J093	1282
	23J115	1536
MW31	23J093	1282
	23J115	1537
MW32	23J004	3
	23J027	260

Well ID	SDG No.	PDF Page No.
MW33	23J093	1282
	23J115	1537
MW34	23J093	1282
	23J115	1536
MW35	23J093	1282
	23J115	1539
MW36S	23J063	729
	23J091	1106
MW36D	23J063	729
	23J091	1106
MW37	23J128_R1	1898
MW38	23J093	1282
	23J115	1538
MW39	23J093	1282
	23J115	1538
SMW01	23J039	500
TMW01	23J087	747
TMW02	23J087	748
TMW03	23J114	1300
TMW04	23J039	501
TMW06	23J128_R1	1900
TMW07	23J087	746
TMW08	23J063	729
	23J091	1106
TMW10	23J063	729
	23J091	1107
TMW13	23J128_R1	1899
TMW14A	23J142	2141
TMW15	23J128_R1	1898
TMW16	23J027	259
TMW17	23J093	1282
	23J115	1537
TMW18	23J004	3
	23J027	261
TMW19	23J027	260
TMW21	23J142	2141
TMW22	23J087	748
TMW23	23J087	746
TMW24	23J093	1282
	23J115	1539

Well ID	SDG No.	PDF Page No.
TMW25	23J087	749
TMW26	23J039	499
TMW27	23J039	501
TMW28	23J114	1299
TMW29	23J087	746
TMW30	23J039	499
TMW31S	23J063	729
	23J091	1107
TMW31D	23J114	1299
TMW32	23J142	2142
TMW33	23J087	746
TMW34	23J114	1300
TMW35	23J128_R1	1899
TMW36	23J004	3
	23J027	261
TMW37	23J026	20
TMW38	23J142	2141
TMW39S	23J087	748
TMW39D	23J093	1282
	23J115	1539
TMW40D	23J087	749
TMW41	23J087	747
TMW43	23J114	1301
TMW44	23J004	3

Well ID	SDG No.	PDF Page No.
TMW44	23J027	259
TMW45	23J128_R1	1899
TMW46	23J004	3
	23J027	260
TMW47	23J142	2142
TMW48	23J087	749
TMW49	23J093	1282
	23J115	1539
TMW50	23J039	499
TMW51	23J087	749
TMW52	23J128_R1	1898
TMW53	23J093	1282
	23J115	1537
TMW55	23J087	747
TMW57	23J093	1282
	23J115	1537
TMW58	23J039	499
TMW59	23J093	1282
	23J115	1539
TMW61	23J093	1282
	23J115	1538
TMW62	23J087	748
TMW63	23J039	500
TMW64	23J128_R1	1899

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 10-27-2023
EMAX Batch No.: 23J004

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/03/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW44102023	J004-01	10/02/23	WATER	ANIONS BY IC
MW23102023	J004-02	10/02/23	WATER	ANIONS BY IC
BGMW12102023	J004-03	10/02/23	WATER	ANIONS BY IC
TMW46102023	J004-04	10/02/23	WATER	ANIONS BY IC
MW32102023	J004-05	10/02/23	WATER	ANIONS BY IC
BGMW03102023	J004-06	10/02/23	WATER	ANIONS BY IC
TMW18102023	J004-07	10/02/23	WATER	ANIONS BY IC
BGMW08102023	J004-08	10/02/23	WATER	ANIONS BY IC
TMW36102023	J004-09	10/02/23	WATER	ANIONS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 9056A
ANIONS

SDG#: 23J004

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J004

METHOD 9056A
BROMIDE

A total of nine(9) water samples were received on 10/03/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ004WL/ICJ004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J004-01I, -02I, -04I, -05I, -07I, and -09I were reported at a 2X dilution factor due to high conductivity. Sample J004-08J was reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J004

METHOD 9056A
CHLORIDE-CL

A total of nine(9) water samples were received on 10/03/23 to be analyzed for Chloride-Cl in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ004WB and ICJ006WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ004WL/ICJ004WC and ICJ006WL/ICJ006WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J004

METHOD 9056A
FLUORIDE

A total of nine(9) water samples were received on 10/03/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Fluoride-F was not detected in ICJ004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ004WL/ICJ004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J004-01I, -02I, -04I, -05I, -07I, and -09I were reported at a 2X dilution factor due to high conductivity. Sample J004-08J was reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J004

METHOD SW9056A
NITRATE-N

A total of nine(9) water samples were received on 10/03/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrate was not detected in ICJ004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ004WL/ICJ004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J004-02I, -07I, and -09I were reported at a 2X dilution factor due to high conductivity. Sample J004-08I was reported at a 5X dilution factor due high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J004

METHOD SW9056A
NITRITE-N

A total of nine(9) water samples were received on 10/03/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrite was not detected in ICJ004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ004WL/ICJ004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J004-01I, -02I, -04I, -05I, -07I, and -09I were reported at a 2X dilution factor due to high conductivity. Sample J004-08J was reported at a 10X dilution factor due to chloride interference. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J004

METHOD 9056A
ORTHOPHOSPHATE-P

A total of nine(9) water samples were received on 10/03/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ004WL/ICJ004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J004-01I, -02I, -04I, -05I, -07I, and -09I were reported at a 2X dilution factor due to high conductivity. Sample J004-08J was reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J004

METHOD 9056A
SULFATE

A total of nine(9) water samples were received on 10/03/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Sulfate was not detected in ICJ004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ004WL/ICJ004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J004

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ004WB	ND	1	NA	0.5	0.13	0.25	10/03/2313:00	NA	AJ04-03	AJ04-01	ICJ004W	NA	NA
LCS1W	ICJ004WL	1.1	1	NA	0.5	0.13	0.25	10/03/2313:20	NA	AJ04-04	AJ04-01	ICJ004W	NA	NA
LCD1W	ICJ004WC	1.1	1	NA	0.5	0.13	0.25	10/03/2313:40	NA	AJ04-05	AJ04-01	ICJ004W	NA	NA
TMW44102023	J004-01I	0.95J	2	NA	1	0.26	0.5	10/03/2314:00	NA	AJ04-06	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
MW23102023	J004-02I	0.99J	2	NA	1	0.26	0.5	10/03/2314:21	NA	AJ04-07	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
BGMW12102023	J004-03	0.65	1	NA	0.5	0.13	0.25	10/03/2314:41	NA	AJ04-08	AJ04-01	ICJ004W	10/02/2309:00	10/03/23
TMW46102023	J004-04I	1.4	2	NA	1	0.26	0.5	10/03/2315:01	NA	AJ04-09	AJ04-01	ICJ004W	10/02/2309:10	10/03/23
MW32102023	J004-05I	1.4	2	NA	1	0.26	0.5	10/03/2315:21	NA	AJ04-10	AJ04-01	ICJ004W	10/02/2309:55	10/03/23
BGMW03102023	J004-06	1.1	1	NA	0.5	0.13	0.25	10/03/2315:42	NA	AJ04-11	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
TMW18102023	J004-07I	0.73J	2	NA	1	0.26	0.5	10/03/2316:02	NA	AJ04-12	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
BGMW08102023	J004-08I	3.8	5	NA	2.5	0.65	1.2	10/03/2317:03	NA	AJ04-15	AJ04-13	ICJ004W	10/02/2310:50	10/03/23
TMW36102023	J004-09I	0.79J	2	NA	1	0.26	0.5	10/03/2317:23	NA	AJ04-16	AJ04-13	ICJ004W	10/02/2311:15	10/03/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J004

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ004WB	ND	1	NA	0.2	0.05	0.1	10/03/2313:00	NA	AJ04-03	AJ04-01	ICJ006W	NA	NA
LCS1W	ICJ004WL	2.0	1	NA	0.2	0.05	0.1	10/03/2313:20	NA	AJ04-04	AJ04-01	ICJ006W	NA	NA
LCD1W	ICJ004WC	2.0	1	NA	0.2	0.05	0.1	10/03/2313:40	NA	AJ04-05	AJ04-01	ICJ006W	NA	NA
TMW44102023	J004-01K	110	50	NA	10	2.5	5	10/03/2318:03	NA	AJ04-18	AJ04-13	ICJ006W	10/02/2308:20	10/03/23
TMW46102023	J004-04K	240	100	NA	20	5	10	10/03/2318:46	NA	AJ04-20	AJ04-13	ICJ006W	10/02/2309:10	10/03/23
MW23102023	J004-02J	82	25	NA	5	1.2	2.5	10/03/2321:28	NA	AJ04-28	AJ04-25	ICJ006W	10/02/2308:20	10/03/23
BGMW12102023	J004-03I	91	40	NA	8	2	4	10/03/2321:48	NA	AJ04-29	AJ04-25	ICJ006W	10/02/2309:00	10/03/23
MW32102023	J004-05T	260	100	NA	20	5	10	10/03/2322:08	NA	AJ04-30	AJ04-25	ICJ006W	10/02/2309:55	10/03/23
BGMW03102023	J004-06J	180	40	NA	8	2	4	10/03/2322:49	NA	AJ04-32	AJ04-25	ICJ006W	10/02/2310:15	10/03/23
TMW18102023	J004-07J	98	25	NA	5	1.2	2.5	10/03/2323:09	NA	AJ04-33	AJ04-25	ICJ006W	10/02/2310:15	10/03/23
TMW36102023	J004-09J	120	50	NA	10	2.5	5	10/04/2301:10	NA	AJ04-39	AJ04-37	ICJ006W	10/02/2311:15	10/03/23
MBLK2W	ICJ006WB	ND	1	NA	0.2	0.05	0.1	10/04/2308:56	NA	AJ04-62	AJ04-60	ICJ006W	NA	NA
LCS2W	ICJ006WL	2.0	1	NA	0.2	0.05	0.1	10/04/2309:16	NA	AJ04-63	AJ04-60	ICJ006W	NA	NA
LCD2W	ICJ006WC	2.0	1	NA	0.2	0.05	0.1	10/04/2309:39	NA	AJ04-64	AJ04-60	ICJ006W	NA	NA
BGMW08102023	J004-08G	4800	2000	NA	400	100	200	10/05/2307:48	NA	AJ04-118	AJ04-107	ICJ006W	10/02/2310:50	10/03/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J004

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ004WB	ND	1	NA	0.1	0.025	0.05	10/03/2313:00	NA	AJ04-03	AJ04-01	ICJ004W	NA	NA
LCS1W	ICJ004WL	0.99	1	NA	0.1	0.025	0.05	10/03/2313:20	NA	AJ04-04	AJ04-01	ICJ004W	NA	NA
LCD1W	ICJ004WC	0.98	1	NA	0.1	0.025	0.05	10/03/2313:40	NA	AJ04-05	AJ04-01	ICJ004W	NA	NA
TMW44102023	J004-01I	1.0	2	NA	0.2	0.05	0.1	10/03/2314:00	NA	AJ04-06	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
MW23102023	J004-02I	0.77	2	NA	0.2	0.05	0.1	10/03/2314:21	NA	AJ04-07	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
BGMW12102023	J004-03	1.7	1	NA	0.1	0.025	0.05	10/03/2314:41	NA	AJ04-08	AJ04-01	ICJ004W	10/02/2309:00	10/03/23
TMW46102023	J004-04I	0.38	2	NA	0.2	0.05	0.1	10/03/2315:01	NA	AJ04-09	AJ04-01	ICJ004W	10/02/2309:10	10/03/23
MW32102023	J004-05I	0.43	2	NA	0.2	0.05	0.1	10/03/2315:21	NA	AJ04-10	AJ04-01	ICJ004W	10/02/2309:55	10/03/23
BGMW03102023	J004-06	4.1	1	NA	0.1	0.025	0.05	10/03/2315:42	NA	AJ04-11	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
TMW18102023	J004-07I	2.1	2	NA	0.2	0.05	0.1	10/03/2316:02	NA	AJ04-12	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
BGMW08102023	J004-08I	0.53	5	NA	0.5	0.12	0.25	10/03/2317:03	NA	AJ04-15	AJ04-13	ICJ004W	10/02/2310:50	10/03/23
TMW36102023	J004-09I	0.74	2	NA	0.2	0.05	0.1	10/03/2317:23	NA	AJ04-16	AJ04-13	ICJ004W	10/02/2311:15	10/03/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J004

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ004WB	ND	1	NA	0.1	0.03	0.06	10/03/2313:00	NA	AJ04-03	AJ04-01	ICJ004W	NA	NA
LCS1W	ICJ004WL	1.1	1	NA	0.1	0.03	0.06	10/03/2313:20	NA	AJ04-04	AJ04-01	ICJ004W	NA	NA
LCD1W	ICJ004WC	1.1	1	NA	0.1	0.03	0.06	10/03/2313:40	NA	AJ04-05	AJ04-01	ICJ004W	NA	NA
MW23102023	J004-02I	0.13J	2	NA	0.2	0.06	0.12	10/03/2314:21	NA	AJ04-07	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
BGMW12102023	J004-03	0.071J	1	NA	0.1	0.03	0.06	10/03/2314:41	NA	AJ04-08	AJ04-01	ICJ004W	10/02/2309:00	10/03/23
BGMW03102023	J004-06	0.70	1	NA	0.1	0.03	0.06	10/03/2315:42	NA	AJ04-11	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
TMW18102023	J004-07I	ND	2	NA	0.2	0.06	0.12	10/03/2316:02	NA	AJ04-12	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
BGMW08102023	J004-08I	0.58	5	NA	0.5	0.15	0.3	10/03/2317:03	NA	AJ04-15	AJ04-13	ICJ004W	10/02/2310:50	10/03/23
TMW36102023	J004-09I	ND	2	NA	0.2	0.06	0.12	10/03/2317:23	NA	AJ04-16	AJ04-13	ICJ004W	10/02/2311:15	10/03/23
TMW44102023	J004-01K	53	50	NA	5	1.5	3	10/03/2318:03	NA	AJ04-18	AJ04-13	ICJ004W	10/02/2308:20	10/03/23
TMW46102023	J004-04K	79	100	NA	10	3	6	10/03/2318:46	NA	AJ04-20	AJ04-13	ICJ004W	10/02/2309:10	10/03/23
MW32102023	J004-05K	69	50	NA	5	1.5	3	10/03/2319:26	NA	AJ04-22	AJ04-13	ICJ004W	10/02/2309:55	10/03/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J004

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ004WB	ND	1	NA	0.1	0.03	0.06	10/03/2313:00	NA	AJ04-03	AJ04-01	ICJ004W	NA	NA
LCS1W	ICJ004WL	2.1	1	NA	0.1	0.03	0.06	10/03/2313:20	NA	AJ04-04	AJ04-01	ICJ004W	NA	NA
LCD1W	ICJ004WC	2.1	1	NA	0.1	0.03	0.06	10/03/2313:40	NA	AJ04-05	AJ04-01	ICJ004W	NA	NA
TMW44102023	J004-01I	ND	2	NA	0.2	0.06	0.12	10/03/2314:00	NA	AJ04-06	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
MW23102023	J004-02I	ND	2	NA	0.2	0.06	0.12	10/03/2314:21	NA	AJ04-07	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
BGMW12102023	J004-03	ND	1	NA	0.1	0.03	0.06	10/03/2314:41	NA	AJ04-08	AJ04-01	ICJ004W	10/02/2309:00	10/03/23
TMW46102023	J004-04I	ND	2	NA	0.2	0.06	0.12	10/03/2315:01	NA	AJ04-09	AJ04-01	ICJ004W	10/02/2309:10	10/03/23
MW32102023	J004-05I	ND	2	NA	0.2	0.06	0.12	10/03/2315:21	NA	AJ04-10	AJ04-01	ICJ004W	10/02/2309:55	10/03/23
BGMW03102023	J004-06	ND	1	NA	0.1	0.03	0.06	10/03/2315:42	NA	AJ04-11	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
TMW18102023	J004-07I	ND	2	NA	0.2	0.06	0.12	10/03/2316:02	NA	AJ04-12	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
TMW36102023	J004-09I	ND	2	NA	0.2	0.06	0.12	10/03/2317:23	NA	AJ04-16	AJ04-13	ICJ004W	10/02/2311:15	10/03/23
BGMW08102023	J004-08J	ND	10	NA	1	0.3	0.6	10/03/2320:07	NA	AJ04-24	AJ04-13	ICJ004W	10/02/2310:50	10/03/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J004
Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ004WB	ND	1	NA	0.5	0.12	0.25	10/03/2313:00	NA	AJ04-03	AJ04-01	ICJ004W	NA	NA
LCS1W	ICJ004WL	1.9	1	NA	0.5	0.12	0.25	10/03/2313:20	NA	AJ04-04	AJ04-01	ICJ004W	NA	NA
LCD1W	ICJ004WC	1.9	1	NA	0.5	0.12	0.25	10/03/2313:40	NA	AJ04-05	AJ04-01	ICJ004W	NA	NA
TMW44102023	J004-01I	ND	2	NA	1	0.25	0.5	10/03/2314:00	NA	AJ04-06	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
MW23102023	J004-02I	0.43J	2	NA	1	0.25	0.5	10/03/2314:21	NA	AJ04-07	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
BGMW12102023	J004-03	ND	1	NA	0.5	0.12	0.25	10/03/2314:41	NA	AJ04-08	AJ04-01	ICJ004W	10/02/2309:00	10/03/23
TMW46102023	J004-04I	ND	2	NA	1	0.25	0.5	10/03/2315:01	NA	AJ04-09	AJ04-01	ICJ004W	10/02/2309:10	10/03/23
MW32102023	J004-05I	ND	2	NA	1	0.25	0.5	10/03/2315:21	NA	AJ04-10	AJ04-01	ICJ004W	10/02/2309:55	10/03/23
BGMW03102023	J004-06	ND	1	NA	0.5	0.12	0.25	10/03/2315:42	NA	AJ04-11	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
TMW18102023	J004-07I	ND	2	NA	1	0.25	0.5	10/03/2316:02	NA	AJ04-12	AJ04-01	ICJ004W	10/02/2310:15	10/03/23
BGMW08102023	J004-08I	ND	5	NA	2.5	0.62	1.2	10/03/2317:03	NA	AJ04-15	AJ04-13	ICJ004W	10/02/2310:50	10/03/23
TMW36102023	J004-09I	ND	2	NA	1	0.25	0.5	10/03/2317:23	NA	AJ04-16	AJ04-13	ICJ004W	10/02/2311:15	10/03/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J004

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ004WB	ND	1	NA	0.5	0.13	0.25	10/03/2313:00	NA	AJ04-03	AJ04-01	ICJ004W	NA	NA
LCS1W	ICJ004WL	4.9	1	NA	0.5	0.13	0.25	10/03/2313:20	NA	AJ04-04	AJ04-01	ICJ004W	NA	NA
LCD1W	ICJ004WC	4.9	1	NA	0.5	0.13	0.25	10/03/2313:40	NA	AJ04-05	AJ04-01	ICJ004W	NA	NA
MW23102023	J004-02I	12	2	NA	1	0.26	0.5	10/03/2314:21	NA	AJ04-07	AJ04-01	ICJ004W	10/02/2308:20	10/03/23
TMW46102023	J004-04K	1800	100	NA	50	13	25	10/03/2318:46	NA	AJ04-20	AJ04-13	ICJ004W	10/02/2309:10	10/03/23
TMW44102023	J004-01G	710	100	NA	50	13	25	10/03/2321:07	NA	AJ04-27	AJ04-25	ICJ004W	10/02/2308:20	10/03/23
BGMW12102023	J004-03I	480	40	NA	20	5.2	10	10/03/2321:48	NA	AJ04-29	AJ04-25	ICJ004W	10/02/2309:00	10/03/23
MW32102023	J004-05T	1700	100	NA	50	13	25	10/03/2322:08	NA	AJ04-30	AJ04-25	ICJ004W	10/02/2309:55	10/03/23
BGMW03102023	J004-06J	530	40	NA	20	5.2	10	10/03/2322:49	NA	AJ04-32	AJ04-25	ICJ004W	10/02/2310:15	10/03/23
TMW18102023	J004-07K	1000	100	NA	50	13	25	10/03/2323:29	NA	AJ04-34	AJ04-25	ICJ004W	10/02/2310:15	10/03/23
BGMW08102023	J004-08K	2400	200	NA	100	26	50	10/03/2323:49	NA	AJ04-35	AJ04-25	ICJ004W	10/02/2310:50	10/03/23
TMW36102023	J004-09J	920	50	NA	25	6.5	12	10/04/2301:10	NA	AJ04-39	AJ04-37	ICJ004W	10/02/2311:15	10/03/23

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-20-2023
EMAX Batch No.: 23J026

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/04/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
BGMW09102023	J026-01	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
BGMW07102023	J026-02	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
TMW37102023	J026-03	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC
BGMW10102023	J026-04	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
FDUP02-102023	J026-05	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
MW24102023	J026-06	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC
MW02102023	J026-07	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE ANIONS BY IC TPH-DRO TPH GASOLINE
MW01102023	J026-08	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE ANIONS BY IC TPH-DRO TPH GASOLINE
BGMW01102023	J026-09	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC
BGMW02102023	J026-10	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC
QC03102023EB	J026-11	10/03/23	WATER	ANIONS BY IC VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 POLYCHLORINATED BIPHENYLS (PCBS) TPH-DRO TPH GASOLINE
QC03102023TB	J026-12	10/03/23	WATER	VOCS BY B260C TPH GASOLINE

LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
BGMW07102023MS	J026-02M	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
BGMW07102023MSD	J026-02S	10/03/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All calibration requirements were satisfied. Note that" Minimum Response Factor" for all analytes were within method recommended response factors with the exception of Acetone and 2-Butanone. However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV for details..

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. VO01J02Q - result was compliant to project requirement. 1,2,3-Trichlorobenzene(0.28J <1/2 LOQ) was detected at trace level in VO01J03B. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. VO01J02L/VO01J02C and VO01J03L/VO01J03C were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: 23J026-02M/23J026-02S - Percent recovery and RPD for Styrene(unstable in acidic matrix) were not within MS/MSD QC limits. Presence of matrix interference was suspected. The rest of the analytes were in control. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : 01

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V001J02L	1	NA	10/11/2311:55	10/11/2311:55	RJV021	RJV007	V001J02	Lab Control Sample (LCS)
LCD1W	V001J02C	1	NA	10/11/2312:25	10/11/2312:25	RJV022	RJV007	V001J02	LCS Duplicate
QC03102023TB	23J026-12	1	NA	10/11/2313:56	10/11/2313:56	RJV025	RJV007	V001J02	Field Sample
MBLK1W	V001J02Q	1	NA	10/11/2314:27	10/11/2314:27	RJV026	RJV007	V001J02	Method Blank
BGMW07102023	23J026-02	1	NA	10/11/2314:58	10/11/2314:58	RJV027	RJV007	V001J02	Field Sample
TMW37102023	23J026-03	1	NA	10/11/2315:28	10/11/2315:28	RJV028	RJV007	V001J02	Field Sample
BGMW10102023	23J026-04	1	NA	10/11/2315:59	10/11/2315:59	RJV029	RJV007	V001J02	Field Sample
FDUP02-102023	23J026-05	1	NA	10/11/2316:29	10/11/2316:29	RJV030	RJV007	V001J02	Field Sample
MW24102023	23J026-06	1	NA	10/11/2317:01	10/11/2317:01	RJV031	RJV007	V001J02	Field Sample
BGMW09102023	23J026-01	1	NA	10/11/2317:32	10/11/2317:32	RJV032	RJV007	V001J02	Field Sample
BGMW07102023MS	23J026-02M	1	NA	10/11/2318:02	10/11/2318:02	RJV033	RJV007	V001J02	Matrix Spike Sample (MS)
BGMW07102023MSD	23J026-02S	1	NA	10/11/2318:33	10/11/2318:33	RJV034	RJV007	V001J02	MS Duplicate (MSD)
LCS2W	V001J03L	1	NA	10/11/2322:20	10/11/2322:20	RJV038	RJV007	V001J03	Lab Control Sample (LCS)
LCD2W	V001J03C	1	NA	10/11/2322:51	10/11/2322:51	RJV039	RJV007	V001J03	LCS Duplicate
MBLK2W	V001J03B	1	NA	10/11/2323:50	10/11/2323:50	RJV041	RJV007	V001J03	Method Blank
QC03102023EB	23J026-11	1	NA	10/12/2300:51	10/12/2300:51	RJV043	RJV007	V001J03	Field Sample
MW02102023	23J026-07	1	NA	10/12/2301:20	10/12/2301:20	RJV044	RJV007	V001J03	Field Sample
BGMW02102023	23J026-10	1	NA	10/12/2301:50	10/12/2301:50	RJV045	RJV007	V001J03	Field Sample
MW01102023	23J026-08	1	NA	10/12/2302:20	10/12/2302:20	RJV046	RJV007	V001J03	Field Sample
BGMW01102023	23J026-09	1	NA	10/12/2302:50	10/12/2302:50	RJV047	RJV007	V001J03	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/11/23 17:32
Sample ID	: BGMW09102023	Date Analyzed:	10/11/23 17:32
Lab Samp ID:	23J026-01	Dilution Factor:	1
Lab File ID:	RJV032	Matrix:	WATER
Ext Btch ID:	V001J02	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.30	10.0	93	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	10.3	10.0	103	89-112
Dibromofluoromethane	9.81	10.0	98	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/11/23 14:58
Sample ID	: BGMW07102023	Date Analyzed:	10/11/23 14:58
Lab Samp ID:	23J026-02	Dilution Factor:	1
Lab File ID:	RJV027	Matrix:	WATER
Ext Btch ID:	V001J02	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.55	10.0	96	81-118
4-Bromofluorobenzene	9.83	10.0	98	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	9.80	10.0	98	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/11/23 15:28
Sample ID	: TMW37102023	Date Analyzed:	10/11/23 15:28
Lab Samp ID:	23J026-03	Dilution Factor:	1
Lab File ID:	RJV028	Matrix:	WATER
Ext Btch ID:	V001J02	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.42	10.0	94	81-118
4-Bromofluorobenzene	9.98	10.0	100	85-114
Toluene-d8	10.3	10.0	103	89-112
Dibromofluoromethane	9.70	10.0	97	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/11/23 15:59
Sample ID	: BGMW10102023	Date Analyzed:	10/11/23 15:59
Lab Samp ID:	23J026-04	Dilution Factor:	1
Lab File ID:	RJV029	Matrix:	WATER
Ext Btch ID:	VO01J02	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.54	10.0	95	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	9.82	10.0	98	80-119

Notes:
Sample Amount : 25ml
Prepared by : JMoros
Final Volume : 25ml
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:25
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/11/23 16:29
Sample ID	: FDUP02-102023	Date Analyzed:	10/11/23 16:29
Lab Samp ID:	23J026-05	Dilution Factor:	1
Lab File ID:	RJV030	Matrix:	WATER
Ext Btch ID:	V001J02	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.50	10.0	95	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	10.3	10.0	103	89-112
Dibromofluoromethane	9.56	10.0	96	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:45
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/11/23 17:01
Sample ID	: MW24102023	Date Analyzed:	10/11/23 17:01
Lab Samp ID:	23J026-06	Dilution Factor:	1
Lab File ID:	RJV031	Matrix:	WATER
Ext Btch ID:	V001J02	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.19	10.0	92	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	10.3	10.0	103	89-112
Dibromofluoromethane	9.73	10.0	97	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/12/23 01:20
Sample ID	: MW02102023	Date Analyzed:	10/12/23 01:20
Lab Samp ID:	23J026-07	Dilution Factor:	1
Lab File ID:	RJV044	Matrix:	WATER
Ext Btch ID:	VO01J03	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.41	10.0	94	81-118
4-Bromofluorobenzene	10.3	10.0	103	85-114
Toluene-d8	10.5	10.0	105	89-112
Dibromofluoromethane	9.67	10.0	97	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:40
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/12/23 02:20
Sample ID	: MW01102023	Date Analyzed:	10/12/23 02:20
Lab Samp ID:	23J026-08	Dilution Factor:	1
Lab File ID:	RJV046	Matrix:	WATER
Ext Btch ID:	V001J03	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	0.13J	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.32	10.0	93	81-118
4-Bromofluorobenzene	10.3	10.0	103	85-114
Toluene-d8	10.5	10.0	105	89-112
Dibromofluoromethane	9.73	10.0	97	80-119

Notes:
Sample Amount : 25ml Final Volume : 25ml
Prepared by : JMoros Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 11:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/12/23 02:50
Sample ID	: BGMW01102023	Date Analyzed:	10/12/23 02:50
Lab Samp ID:	23J026-09	Dilution Factor:	1
Lab File ID:	RJV047	Matrix:	WATER
Ext Btch ID:	VO01J03	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.89	10.0	99	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	10.4	10.0	104	89-112
Dibromofluoromethane	9.97	10.0	100	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 12:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/12/23 01:50
Sample ID	: BGMW02102023	Date Analyzed:	10/12/23 01:50
Lab Samp ID:	23J026-10	Dilution Factor:	1
Lab File ID:	RJV045	Matrix:	WATER
Ext Btch ID:	VO01J03	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.23	10.0	92	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	10.6	10.0	106	89-112
Dibromofluoromethane	9.66	10.0	97	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/12/23 00:51
Sample ID	: QC03102023EB	Date Analyzed:	10/12/23 00:51
Lab Samp ID:	23J026-11	Dilution Factor:	1
Lab File ID:	RJV043	Matrix:	WATER
Ext Btch ID:	V001J03	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	1.7	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	2.5	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	0.71J	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.46	10.0	95	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	10.6	10.0	106	89-112
Dibromofluoromethane	9.89	10.0	99	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/11/23 13:56
Sample ID	: QC03102023TB	Date Analyzed:	10/11/23 13:56
Lab Samp ID:	23J026-12	Dilution Factor:	1
Lab File ID:	RJV025	Matrix:	WATER
Ext Btch ID:	VO01J02	% Moisture:	NA
Calib. Ref.:	RJV007	Instrument ID:	01

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.40	10.0	94	81-118
4-Bromofluorobenzene	9.95	10.0	100	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	9.49	10.0	95	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JMoros
Analyzed by : JMoros
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS + APPENDIX 9

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of nine(9) water samples were received on 10/04/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were eight(8)CCVs (Data File IDs: RJJ256, RJJ25, RJJ292, RJJ293, RJJ296, RJJ297, RJJ332 and RJJ333) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ020WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: SVJ020WL/SVJ020WC - RPDs for 2,4,6-Trichlorophenol(RPD=24*), and 2,6-Dichlorophenol(RPD=21*) were greater than RPD QC limit. The rest of the analytes were in control. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: 23J026-02M/23J026-02S - Percent recoveries for 4-Nitroaniline and Benzidine were not within MS/MSD QC limits. Presence of matrix interference was suspected. The rest of the analytes were in control. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of nine(9) water samples were received on 10/04/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were four(4)CCVs (Data File IDs: RJJ259, RJJ291, RJJ299 and RJJ330) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ020WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. The target analyte was within LCS limits except for: CLJ020WL/CLJ020WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=24*) was not greater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 1,2,4,5-Tetrachlorobenzene was within MS QC limits in 23J026-02M/23J026-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of nine(9) water samples were received on 10/04/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method 3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were four(4)CCVs (Data File IDs: RJJ257, RJJ293, RJJ297 and RJJ331) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ020WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ020WL/CLJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 23J026-02M/23J026-02S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ020WB	1	NA	10/12/2314:52	10/10/2315:15	RJJ273	RGJ087	23SVJ020W	Method Blank
LCS1W	SVJ020WL	1	NA	10/12/2315:10	10/10/2315:15	RJJ274	RGJ087	23SVJ020W	Lab Control Sample (LCS)
LCD1W	SVJ020WC	1	NA	10/12/2315:29	10/10/2315:15	RJJ275	RGJ087	23SVJ020W	LCS Duplicate
BGMW07102023MS	23J026-02M	1	NA	10/12/2316:26	10/10/2315:15	RJJ278	RGJ087	23SVJ020W	Matrix Spike Sample (MS)
BGMW07102023MSD	23J026-02S	1	NA	10/12/2316:44	10/10/2315:15	RJJ279	RGJ087	23SVJ020W	MS Duplicate (MSD)
BGMW09102023	23J026-01	1	NA	10/12/2317:40	10/10/2315:15	RJJ282	RGJ087	23SVJ020W	Field Sample
BGMW07102023	23J026-02	1	NA	10/12/2317:59	10/10/2315:15	RJJ283	RGJ087	23SVJ020W	Field Sample
TMW37102023	23J026-03	1	NA	10/12/2318:18	10/10/2315:15	RJJ284	RGJ087	23SVJ020W	Field Sample
BGMW10102023	23J026-04	1	NA	10/12/2318:36	10/10/2315:15	RJJ285	RGJ087	23SVJ020W	Field Sample
FDUP02-102023	23J026-05	1	NA	10/12/2318:55	10/10/2315:15	RJJ286	RGJ087	23SVJ020W	Field Sample
MW24102023	23J026-06	1	NA	10/12/2319:14	10/10/2315:15	RJJ287	RGJ087	23SVJ020W	Field Sample
BGMW01102023	23J026-09	1	NA	10/12/2319:32	10/10/2315:15	RJJ288	RGJ087	23SVJ020W	Field Sample
BGMW02102023	23J026-10	1	NA	10/12/2319:51	10/10/2315:15	RJJ289	RGJ087	23SVJ020W	Field Sample
QC03102023EB	23J026-11	1	NA	10/13/2310:19	10/10/2315:15	RJJ300	RGJ087	23SVJ020W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ020WB	1	NA	10/12/2314:52	10/10/2315:15	RJJ273	RGJ100	23SVJ020W	Method Blank
LCS1W	CLJ020WL	1	NA	10/12/2315:48	10/10/2315:15	RJJ276	RGJ100	23SVJ020W	Lab Control Sample (LCS)
LCD1W	CLJ020WC	1	NA	10/12/2316:07	10/10/2315:15	RJJ277	RGJ100	23SVJ020W	LCS Duplicate
BGMW07102023MS	23J026-02M	1	NA	10/12/2317:03	10/10/2315:15	RJJ280	RGJ100	23SVJ020W	Matrix Spike Sample (MS)
BGMW07102023MSD	23J026-02S	1	NA	10/12/2317:22	10/10/2315:15	RJJ281	RGJ100	23SVJ020W	MS Duplicate (MSD)
BGMW09102023	23J026-01	1	NA	10/12/2317:40	10/10/2315:15	RJJ282	RGJ100	23SVJ020W	Field Sample
BGMW07102023	23J026-02	1	NA	10/12/2317:59	10/10/2315:15	RJJ283	RGJ100	23SVJ020W	Field Sample
TMW37102023	23J026-03	1	NA	10/12/2318:18	10/10/2315:15	RJJ284	RGJ100	23SVJ020W	Field Sample
BGMW10102023	23J026-04	1	NA	10/12/2318:36	10/10/2315:15	RJJ285	RGJ100	23SVJ020W	Field Sample
FDUP02-102023	23J026-05	1	NA	10/12/2318:55	10/10/2315:15	RJJ286	RGJ100	23SVJ020W	Field Sample
MW24102023	23J026-06	1	NA	10/12/2319:14	10/10/2315:15	RJJ287	RGJ100	23SVJ020W	Field Sample
BGMW01102023	23J026-09	1	NA	10/12/2319:32	10/10/2315:15	RJJ288	RGJ100	23SVJ020W	Field Sample
BGMW02102023	23J026-10	1	NA	10/12/2319:51	10/10/2315:15	RJJ289	RGJ100	23SVJ020W	Field Sample
QC03102023EB	23J026-11	1	NA	10/13/2310:19	10/10/2315:15	RJJ300	RGJ100	23SVJ020W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ020WB	1	NA	10/12/2314:52	10/10/2315:15	RJJ273	RGJ079	23SVJ020W	Method Blank
LCS1W	CLJ020WL	1	NA	10/12/2315:48	10/10/2315:15	RJJ276	RGJ079	23SVJ020W	Lab Control Sample (LCS)
LCD1W	CLJ020WC	1	NA	10/12/2316:07	10/10/2315:15	RJJ277	RGJ079	23SVJ020W	LCS Duplicate
BGMW07102023MS	23J026-02M	1	NA	10/12/2317:03	10/10/2315:15	RJJ280	RGJ079	23SVJ020W	Matrix Spike Sample (MS)
BGMW07102023MSD	23J026-02S	1	NA	10/12/2317:22	10/10/2315:15	RJJ281	RGJ079	23SVJ020W	MS Duplicate (MSD)
BGMW09102023	23J026-01	1	NA	10/12/2317:40	10/10/2315:15	RJJ282	RGJ079	23SVJ020W	Field Sample
BGMW07102023	23J026-02	1	NA	10/12/2317:59	10/10/2315:15	RJJ283	RGJ079	23SVJ020W	Field Sample
TMW37102023	23J026-03	1	NA	10/12/2318:18	10/10/2315:15	RJJ284	RGJ079	23SVJ020W	Field Sample
BGMW10102023	23J026-04	1	NA	10/12/2318:36	10/10/2315:15	RJJ285	RGJ079	23SVJ020W	Field Sample
FDUP02-102023	23J026-05	1	NA	10/12/2318:55	10/10/2315:15	RJJ286	RGJ079	23SVJ020W	Field Sample
MW24102023	23J026-06	1	NA	10/12/2319:14	10/10/2315:15	RJJ287	RGJ079	23SVJ020W	Field Sample
BGMW01102023	23J026-09	1	NA	10/12/2319:32	10/10/2315:15	RJJ288	RGJ079	23SVJ020W	Field Sample
BGMW02102023	23J026-10	1	NA	10/12/2319:51	10/10/2315:15	RJJ289	RGJ079	23SVJ020W	Field Sample
QC03102023EB	23J026-11	1	NA	10/13/2310:19	10/10/2315:15	RJJ300	RGJ079	23SVJ020W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW09102023	Date Analyzed:	10/12/23 17:40
Lab Samp ID:	23J026-01	Dilution Factor:	1
Lab File ID:	RJJ282	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	45
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	45	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	49.0	67.2	73	43-140
2-Fluorobiphenyl	17.1	22.4	77	44-119
2-Fluorophenol	37.6	67.2	56	19-119
Nitrobenzene-d5	17.3	22.4	77	44-120
Phenol-d5	45.9	67.2	68	40-130
Terphenyl-d14	16.6	22.4	74	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ257

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW09102023	Date Analyzed:	10/12/23 17:40
Lab Samp ID:	23J026-01	Dilution Factor:	1
Lab File ID:	RJJ282	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW09102023	Date Analyzed:	10/12/23 17:40
Lab Samp ID:	23J026-01	Dilution Factor:	1
Lab File ID:	RJJ282	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 2ml
Prepared by	: RGalan/POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW07102023	Date Analyzed:	10/12/23 17:59
Lab Samp ID:	23J026-02	Dilution Factor:	1
Lab File ID:	RJJ283	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	41.7	66.6	63	43-140
2-Fluorobiphenyl	16.4	22.2	74	44-119
2-Fluorophenol	33.3	66.6	50	19-119
Nitrobenzene-d5	17.2	22.2	77	44-120
Phenol-d5	40.9	66.6	61	40-130
Terphenyl-d14	18.7	22.2	84	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ257

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW07102023	Date Analyzed:	10/12/23 17:59
Lab Samp ID:	23J026-02	Dilution Factor:	1
Lab File ID:	RJJ283	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: RGalan/POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW07102023	Date Analyzed:	10/12/23 17:59
Lab Samp ID:	23J026-02	Dilution Factor:	1
Lab File ID:	RJJ283	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: TMW37102023	Date Analyzed:	10/12/23 18:18
Lab Samp ID:	23J026-03	Dilution Factor:	1
Lab File ID:	RJJ284	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.9	5.7
1,2-Diphenylhydrazine	ND	11	2.9	5.7
1,3-Dichlorobenzene	ND	11	2.9	5.7
1,4-Dichlorobenzene	ND	11	2.9	5.7
2,4,5-Trichlorophenol	ND	11	2.9	5.7
2,4,6-Trichlorophenol	ND	11	2.9	5.7
2,4-Dichlorophenol	ND	11	2.9	5.7
2,4-Dimethylphenol	ND	11	2.9	5.7
2,4-Dinitrophenol	ND	23	2.9	5.7
2,4-Dinitrotoluene	ND	11	2.9	5.7
2,6-Dinitrotoluene	ND	11	2.9	5.7
2-Chloronaphthalene	ND	11	2.9	5.7
2-Chlorophenol	ND	11	2.9	5.7
2-Methylnaphthalene	ND	11	2.9	5.7
2-Methylphenol	ND	11	2.9	5.7
2-Nitroaniline	ND	11	2.9	5.7
2-Nitrophenol	ND	11	2.9	5.7
3,3'-Dichlorobenzidine	ND	11	2.9	5.7
3/4-Methylphenol	ND	11	2.9	5.7
3-Nitroaniline	ND	11	2.9	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.7
4-Bromophenyl phenyl ether	ND	11	2.9	5.7
4-Chloro-3-methylphenol	ND	11	2.9	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.9	5.7
4-Nitroaniline	ND	11	2.9	5.7
4-Nitrophenol	ND	23	2.9	5.7
Acenaphthene	ND	11	2.9	5.7
Acenaphthylene	ND	11	2.9	5.7
Anthracene	ND	11	2.9	5.7
Benzo(a)anthracene	ND	11	2.9	5.7
Benzo(a)pyrene	ND	11	2.9	5.7
Benzo(b)fluoranthene	ND	11	2.9	5.7
Benzo(g,h,i)perylene	ND	11	2.9	5.7
Benzo(k)fluoranthene	ND	11	2.9	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.9	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.9	5.7
bis(2-Chloroethoxy)methane	ND	11	2.9	5.7
bis(2-Chloroethyl) ether	ND	11	2.9	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.9	5.7
Carbazole	ND	11	2.9	5.7
Chrysene	ND	11	2.9	5.7
Dibenzo(a,h)anthracene	ND	11	2.9	5.7
Dibenzofuran	ND	11	2.9	5.7
Diethylphthalate	ND	11	2.9	5.7
Dimethylphthalate	ND	11	2.9	5.7
Di-n-butyl phthalate	ND	11	2.9	5.7
Di-n-octyl phthalate	ND	11	2.9	5.7
Fluoranthene	ND	11	2.9	5.7
Fluorene	ND	11	2.9	5.7
Hexachlorobenzene	ND	11	2.9	5.7
Hexachlorobutadiene	ND	11	2.9	5.7
Hexachloroethane	ND	11	2.9	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.9	5.7
Isophorone	ND	11	2.9	5.7
Naphthalene	ND	11	2.9	5.7
Nitrobenzene	ND	11	2.9	5.7
N-Nitrosodimethylamine	ND	11	2.9	5.7
n-Nitroso-di-n-propylamine	ND	11	2.9	5.7
n-Nitrosodiphenylamine	ND	11	2.9	5.7
Pentachlorophenol	ND	23	2.9	5.7
Phenanthrene	ND	11	2.9	5.7
Phenol	ND	11	2.9	5.7
Pyrene	ND	11	2.9	5.7
Hexachlorocyclopentadiene	ND	11	2.9	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.9	5.7
2,6-Dichlorophenol	ND	11	2.9	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	38.0	69.0	55	43-140
2-Fluorobiphenyl	14.1	23.0	61	44-119
2-Fluorophenol	33.5	69.0	49	19-119
Nitrobenzene-d5	13.7	23.0	60	44-120
Phenol-d5	39.4	69.0	57	40-130
Terphenyl-d14	19.7	23.0	86	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ257

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: TMW37102023	Date Analyzed:	10/12/23 18:18
Lab Samp ID:	23J026-03	Dilution Factor:	1
Lab File ID:	RJJ284	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.9	5.7

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: TMW37102023	Date Analyzed:	10/12/23 18:18
Lab Samp ID:	23J026-03	Dilution Factor:	1
Lab File ID:	RJJ284	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW10102023	Date Analyzed:	10/12/23 18:36
Lab Samp ID:	23J026-04	Dilution Factor:	1
Lab File ID:	RJJ285	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.2	11
1,2-Dichlorobenzene	ND	11	2.6	5.2
1,2-Diphenylhydrazine	ND	11	2.6	5.2
1,3-Dichlorobenzene	ND	11	2.6	5.2
1,4-Dichlorobenzene	ND	11	2.6	5.2
2,4,5-Trichlorophenol	ND	11	2.6	5.2
2,4,6-Trichlorophenol	ND	11	2.6	5.2
2,4-Dichlorophenol	ND	11	2.6	5.2
2,4-Dimethylphenol	ND	11	2.6	5.2
2,4-Dinitrophenol	ND	21	2.6	5.2
2,4-Dinitrotoluene	ND	11	2.6	5.2
2,6-Dinitrotoluene	ND	11	2.6	5.2
2-Chloronaphthalene	ND	11	2.6	5.2
2-Chlorophenol	ND	11	2.6	5.2
2-Methylnaphthalene	ND	11	2.6	5.2
2-Methylphenol	ND	11	2.6	5.2
2-Nitroaniline	ND	11	2.6	5.2
2-Nitrophenol	ND	11	2.6	5.2
3,3'-Dichlorobenzidine	ND	11	2.6	5.2
3/4-Methylphenol	ND	11	2.6	5.2
3-Nitroaniline	ND	11	2.6	5.2
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.2
4-Bromophenyl phenyl ether	ND	11	2.6	5.2
4-Chloro-3-methylphenol	ND	11	2.6	5.2
4-Chloroaniline	ND	21	5.2	11
4-Chlorophenyl-phenyl ether	ND	11	2.6	5.2
4-Nitroaniline	ND	11	2.6	5.2
4-Nitrophenol	ND	21	2.6	5.2
Acenaphthene	ND	11	2.6	5.2
Acenaphthylene	ND	11	2.6	5.2
Anthracene	ND	11	2.6	5.2
Benzo(a)anthracene	ND	11	2.6	5.2
Benzo(a)pyrene	ND	11	2.6	5.2
Benzo(b)fluoranthene	ND	11	2.6	5.2
Benzo(g,h,i)perylene	ND	11	2.6	5.2
Benzo(k)fluoranthene	ND	11	2.6	5.2
Benzoic Acid	ND	100	21	42
Benzyl Alcohol	ND	11	2.6	5.2
bis(2-Chloroisopropyl) ether	ND	11	2.6	5.2
bis(2-Chloroethoxy)methane	ND	11	2.6	5.2
bis(2-Chloroethyl) ether	ND	11	2.6	5.2
bis(2-Ethylhexyl) phthalate	ND	21	5.2	11
Butylbenzylphthalate	ND	11	2.6	5.2
Carbazole	ND	11	2.6	5.2
Chrysene	ND	11	2.6	5.2
Dibenzo(a,h)anthracene	ND	11	2.6	5.2
Dibenzofuran	ND	11	2.6	5.2
Diethylphthalate	ND	11	2.6	5.2
Dimethylphthalate	ND	11	2.6	5.2
Di-n-butyl phthalate	ND	11	2.6	5.2
Di-n-octyl phthalate	ND	11	2.6	5.2
Fluoranthene	ND	11	2.6	5.2
Fluorene	ND	11	2.6	5.2
Hexachlorobenzene	ND	11	2.6	5.2
Hexachlorobutadiene	ND	11	2.6	5.2
Hexachloroethane	ND	11	2.6	5.2
Indeno(1,2,3-cd)pyrene	ND	11	2.6	5.2
Isophorone	ND	11	2.6	5.2
Naphthalene	ND	11	2.6	5.2
Nitrobenzene	ND	11	2.6	5.2
N-Nitrosodimethylamine	ND	11	2.6	5.2
n-Nitroso-di-n-propylamine	ND	11	2.6	5.2
n-Nitrosodiphenylamine	ND	11	2.6	5.2
Pentachlorophenol	ND	21	2.6	5.2
Phenanthrene	ND	11	2.6	5.2
Phenol	ND	11	2.6	5.2
Pyrene	ND	11	2.6	5.2
Hexachlorocyclopentadiene	ND	11	2.6	5.2
Benzidine	ND	42	11	21
2,3,4,6-Tetrachlorophenol	ND	11	2.6	5.2
2,6-Dichlorophenol	ND	11	2.6	5.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	42.2	63.0	67	43-140
2-Fluorobiphenyl	16.5	21.0	78	44-119
2-Fluorophenol	38.4	63.0	61	19-119
Nitrobenzene-d5	16.8	21.0	80	44-120
Phenol-d5	45.4	63.0	72	40-130
Terphenyl-d14	18.6	21.0	89	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ257

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW10102023	Date Analyzed:	10/12/23 18:36
Lab Samp ID:	23J026-04	Dilution Factor:	1
Lab File ID:	RJJ285	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.6	5.2

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW10102023	Date Analyzed:	10/12/23 18:36
Lab Samp ID:	23J026-04	Dilution Factor:	1
Lab File ID:	RJJ285	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.2	11
Benzaldehyde	ND	21	5.2	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:25
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: FDUP02-102023	Date Analyzed:	10/12/23 18:55
Lab Samp ID:	23J026-05	Dilution Factor:	1
Lab File ID:	RJJ286	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.2	10
1,2-Dichlorobenzene	ND	10	2.6	5.2
1,2-Diphenylhydrazine	ND	10	2.6	5.2
1,3-Dichlorobenzene	ND	10	2.6	5.2
1,4-Dichlorobenzene	ND	10	2.6	5.2
2,4,5-Trichlorophenol	ND	10	2.6	5.2
2,4,6-Trichlorophenol	ND	10	2.6	5.2
2,4-Dichlorophenol	ND	10	2.6	5.2
2,4-Dimethylphenol	ND	10	2.6	5.2
2,4-Dinitrophenol	ND	21	2.6	5.2
2,4-Dinitrotoluene	ND	10	2.6	5.2
2,6-Dinitrotoluene	ND	10	2.6	5.2
2-Chloronaphthalene	ND	10	2.6	5.2
2-Chlorophenol	ND	10	2.6	5.2
2-Methylnaphthalene	ND	10	2.6	5.2
2-Methylphenol	ND	10	2.6	5.2
2-Nitroaniline	ND	10	2.6	5.2
2-Nitrophenol	ND	10	2.6	5.2
3,3'-Dichlorobenzidine	ND	10	2.6	5.2
3/4-Methylphenol	ND	10	2.6	5.2
3-Nitroaniline	ND	10	2.6	5.2
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.2
4-Bromophenyl phenyl ether	ND	10	2.6	5.2
4-Chloro-3-methylphenol	ND	10	2.6	5.2
4-Chloroaniline	ND	21	5.2	10
4-Chlorophenyl-phenyl ether	ND	10	2.6	5.2
4-Nitroaniline	ND	10	2.6	5.2
4-Nitrophenol	ND	21	2.6	5.2
Acenaphthene	ND	10	2.6	5.2
Acenaphthylene	ND	10	2.6	5.2
Anthracene	ND	10	2.6	5.2
Benzo(a)anthracene	ND	10	2.6	5.2
Benzo(a)pyrene	ND	10	2.6	5.2
Benzo(b)fluoranthene	ND	10	2.6	5.2
Benzo(g,h,i)perylene	ND	10	2.6	5.2
Benzo(k)fluoranthene	ND	10	2.6	5.2
Benzoic Acid	ND	100	21	42
Benzyl Alcohol	ND	10	2.6	5.2
bis(2-Chloroisopropyl) ether	ND	10	2.6	5.2
bis(2-Chloroethoxy)methane	ND	10	2.6	5.2
bis(2-Chloroethyl) ether	ND	10	2.6	5.2
bis(2-Ethylhexyl) phthalate	ND	21	5.2	10
Butylbenzylphthalate	ND	10	2.6	5.2
Carbazole	ND	10	2.6	5.2
Chrysene	ND	10	2.6	5.2
Dibenzo(a,h)anthracene	ND	10	2.6	5.2
Dibenzofuran	ND	10	2.6	5.2
Diethylphthalate	ND	10	2.6	5.2
Dimethylphthalate	ND	10	2.6	5.2
Di-n-butyl phthalate	ND	10	2.6	5.2
Di-n-octyl phthalate	ND	10	2.6	5.2
Fluoranthene	ND	10	2.6	5.2
Fluorene	ND	10	2.6	5.2
Hexachlorobenzene	ND	10	2.6	5.2
Hexachlorobutadiene	ND	10	2.6	5.2
Hexachloroethane	ND	10	2.6	5.2
Indeno(1,2,3-cd)pyrene	ND	10	2.6	5.2
Isophorone	ND	10	2.6	5.2
Naphthalene	ND	10	2.6	5.2
Nitrobenzene	ND	10	2.6	5.2
N-Nitrosodimethylamine	ND	10	2.6	5.2
n-Nitroso-di-n-propylamine	ND	10	2.6	5.2
n-Nitrosodiphenylamine	ND	10	2.6	5.2
Pentachlorophenol	ND	21	2.6	5.2
Phenanthrene	ND	10	2.6	5.2
Phenol	ND	10	2.6	5.2
Pyrene	ND	10	2.6	5.2
Hexachlorocyclopentadiene	ND	10	2.6	5.2
Benzidine	ND	42	10	21
2,3,4,6-Tetrachlorophenol	ND	10	2.6	5.2
2,6-Dichlorophenol	ND	10	2.6	5.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	32.6	62.4	52	43-140
2-Fluorobiphenyl	11.2	20.8	54	44-119
2-Fluorophenol	23.3	62.4	37	19-119
Nitrobenzene-d5	11.2	20.8	54	44-120
Phenol-d5	28.6	62.4	46	40-130
Terphenyl-d14	18.5	20.8	89	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ257

Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:25
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: FDUP02-102023	Date Analyzed:	10/12/23 18:55
Lab Samp ID:	23J026-05	Dilution Factor:	1
Lab File ID:	RJJ286	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	10	2.6	5.2

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:25
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: FDUP02-102023	Date Analyzed:	10/12/23 18:55
Lab Samp ID:	23J026-05	Dilution Factor:	1
Lab File ID:	RJJ286	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.2	10
Benzaldehyde	ND	21	5.2	10

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 960ml	Final Volume :	2ml
Prepared by	: RGalan/POreto	Analyzed by :	KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:45
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: MW24102023	Date Analyzed:	10/12/23 19:14
Lab Samp ID:	23J026-06	Dilution Factor:	1
Lab File ID:	RJJ287	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.2	11
1,2-Dichlorobenzene	ND	11	2.6	5.2
1,2-Diphenylhydrazine	ND	11	2.6	5.2
1,3-Dichlorobenzene	ND	11	2.6	5.2
1,4-Dichlorobenzene	ND	11	2.6	5.2
2,4,5-Trichlorophenol	ND	11	2.6	5.2
2,4,6-Trichlorophenol	ND	11	2.6	5.2
2,4-Dichlorophenol	ND	11	2.6	5.2
2,4-Dimethylphenol	ND	11	2.6	5.2
2,4-Dinitrophenol	ND	21	2.6	5.2
2,4-Dinitrotoluene	ND	11	2.6	5.2
2,6-Dinitrotoluene	ND	11	2.6	5.2
2-Chloronaphthalene	ND	11	2.6	5.2
2-Chlorophenol	ND	11	2.6	5.2
2-Methylnaphthalene	ND	11	2.6	5.2
2-Methylphenol	ND	11	2.6	5.2
2-Nitroaniline	ND	11	2.6	5.2
2-Nitrophenol	ND	11	2.6	5.2
3,3'-Dichlorobenzidine	ND	11	2.6	5.2
3/4-Methylphenol	ND	11	2.6	5.2
3-Nitroaniline	ND	11	2.6	5.2
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.2
4-Bromophenyl phenyl ether	ND	11	2.6	5.2
4-Chloro-3-methylphenol	ND	11	2.6	5.2
4-Chloroaniline	ND	21	5.2	11
4-Chlorophenyl-phenyl ether	ND	11	2.6	5.2
4-Nitroaniline	ND	11	2.6	5.2
4-Nitrophenol	ND	21	2.6	5.2
Acenaphthene	ND	11	2.6	5.2
Acenaphthylene	ND	11	2.6	5.2
Anthracene	ND	11	2.6	5.2
Benzo(a)anthracene	ND	11	2.6	5.2
Benzo(a)pyrene	ND	11	2.6	5.2
Benzo(b)fluoranthene	ND	11	2.6	5.2
Benzo(g,h,i)perylene	ND	11	2.6	5.2
Benzo(k)fluoranthene	ND	11	2.6	5.2
Benzoic Acid	ND	100	21	42
Benzyl Alcohol	ND	11	2.6	5.2
bis(2-Chloroisopropyl) ether	ND	11	2.6	5.2
bis(2-Chloroethoxy)methane	ND	11	2.6	5.2
bis(2-Chloroethyl) ether	ND	11	2.6	5.2
bis(2-Ethylhexyl) phthalate	ND	21	5.2	11
Butylbenzylphthalate	ND	11	2.6	5.2
Carbazole	ND	11	2.6	5.2
Chrysene	ND	11	2.6	5.2
Dibenzo(a,h)anthracene	ND	11	2.6	5.2
Dibenzofuran	ND	11	2.6	5.2
Diethylphthalate	ND	11	2.6	5.2
Dimethylphthalate	ND	11	2.6	5.2
Di-n-butyl phthalate	ND	11	2.6	5.2
Di-n-octyl phthalate	ND	11	2.6	5.2
Fluoranthene	ND	11	2.6	5.2
Fluorene	ND	11	2.6	5.2
Hexachlorobenzene	ND	11	2.6	5.2
Hexachlorobutadiene	ND	11	2.6	5.2
Hexachloroethane	ND	11	2.6	5.2
Indeno(1,2,3-cd)pyrene	ND	11	2.6	5.2
Isophorone	ND	11	2.6	5.2
Naphthalene	ND	11	2.6	5.2
Nitrobenzene	ND	11	2.6	5.2
N-Nitrosodimethylamine	ND	11	2.6	5.2
n-Nitroso-di-n-propylamine	ND	11	2.6	5.2
n-Nitrosodiphenylamine	ND	11	2.6	5.2
Pentachlorophenol	ND	21	2.6	5.2
Phenanthrene	ND	11	2.6	5.2
Phenol	ND	11	2.6	5.2
Pyrene	ND	11	2.6	5.2
Hexachlorocyclopentadiene	ND	11	2.6	5.2
Benzidine	ND	42	11	21
2,3,4,6-Tetrachlorophenol	ND	11	2.6	5.2
2,6-Dichlorophenol	ND	11	2.6	5.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	36.9	63.0	59	43-140
2-Fluorobiphenyl	10.9	21.0	52	44-119
2-Fluorophenol	28.4	63.0	45	19-119
Nitrobenzene-d5	11.3	21.0	54	44-120
Phenol-d5	32.1	63.0	51	40-130
Terphenyl-d14	15.7	21.0	75	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ257

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:45
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: MW24102023	Date Analyzed:	10/12/23 19:14
Lab Samp ID:	23J026-06	Dilution Factor:	1
Lab File ID:	RJJ287	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.6	5.2

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:45
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: MW24102023	Date Analyzed:	10/12/23 19:14
Lab Samp ID:	23J026-06	Dilution Factor:	1
Lab File ID:	RJJ287	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.2	11
Benzaldehyde	ND	21	5.2	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 950ml	Final Volume	: 2ml
Prepared by	: RGalan/POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 11:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW01102023	Date Analyzed:	10/12/23 19:32
Lab Samp ID:	23J026-09	Dilution Factor:	1
Lab File ID:	RJJ288	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	20	5.0	10
1,2-Dichlorobenzene	ND	10	2.5	5.0
1,2-Diphenylhydrazine	ND	10	2.5	5.0
1,3-Dichlorobenzene	ND	10	2.5	5.0
1,4-Dichlorobenzene	ND	10	2.5	5.0
2,4,5-Trichlorophenol	ND	10	2.5	5.0
2,4,6-Trichlorophenol	ND	10	2.5	5.0
2,4-Dichlorophenol	ND	10	2.5	5.0
2,4-Dimethylphenol	ND	10	2.5	5.0
2,4-Dinitrophenol	ND	20	2.5	5.0
2,4-Dinitrotoluene	ND	10	2.5	5.0
2,6-Dinitrotoluene	ND	10	2.5	5.0
2-Chloronaphthalene	ND	10	2.5	5.0
2-Chlorophenol	ND	10	2.5	5.0
2-Methylnaphthalene	ND	10	2.5	5.0
2-Methylphenol	ND	10	2.5	5.0
2-Nitroaniline	ND	10	2.5	5.0
2-Nitrophenol	ND	10	2.5	5.0
3,3'-Dichlorobenzidine	ND	10	2.5	5.0
3/4-Methylphenol	ND	10	2.5	5.0
3-Nitroaniline	ND	10	2.5	5.0
4,6-Dinitro-2-methylphenol	ND	20	2.5	5.0
4-Bromophenyl phenyl ether	ND	10	2.5	5.0
4-Chloro-3-methylphenol	ND	10	2.5	5.0
4-Chloroaniline	ND	20	5.0	10
4-Chlorophenyl-phenyl ether	ND	10	2.5	5.0
4-Nitroaniline	ND	10	2.5	5.0
4-Nitrophenol	ND	20	2.5	5.0
Acenaphthene	ND	10	2.5	5.0
Acenaphthylene	ND	10	2.5	5.0
Anthracene	ND	10	2.5	5.0
Benzo(a)anthracene	ND	10	2.5	5.0
Benzo(a)pyrene	ND	10	2.5	5.0
Benzo(b)fluoranthene	ND	10	2.5	5.0
Benzo(g,h,i)perylene	ND	10	2.5	5.0
Benzo(k)fluoranthene	ND	10	2.5	5.0
Benzoic Acid	ND	100	20	40
Benzyl Alcohol	ND	10	2.5	5.0
bis(2-Chloroisopropyl) ether	ND	10	2.5	5.0
bis(2-Chloroethoxy)methane	ND	10	2.5	5.0
bis(2-Chloroethyl) ether	ND	10	2.5	5.0
bis(2-Ethylhexyl) phthalate	ND	20	5.0	10
Butylbenzylphthalate	ND	10	2.5	5.0
Carbazole	ND	10	2.5	5.0
Chrysene	ND	10	2.5	5.0
Dibenzo(a,h)anthracene	ND	10	2.5	5.0
Dibenzofuran	ND	10	2.5	5.0
Diethylphthalate	ND	10	2.5	5.0
Dimethylphthalate	ND	10	2.5	5.0
Di-n-butyl phthalate	ND	10	2.5	5.0
Di-n-octyl phthalate	ND	10	2.5	5.0
Fluoranthene	ND	10	2.5	5.0
Fluorene	ND	10	2.5	5.0
Hexachlorobenzene	ND	10	2.5	5.0
Hexachlorobutadiene	ND	10	2.5	5.0
Hexachloroethane	ND	10	2.5	5.0
Indeno(1,2,3-cd)pyrene	ND	10	2.5	5.0
Isophorone	ND	10	2.5	5.0
Naphthalene	ND	10	2.5	5.0
Nitrobenzene	ND	10	2.5	5.0
N-Nitrosodimethylamine	ND	10	2.5	5.0
n-Nitroso-di-n-propylamine	ND	10	2.5	5.0
n-Nitrosodiphenylamine	ND	10	2.5	5.0
Pentachlorophenol	ND	20	2.5	5.0
Phenanthrene	ND	10	2.5	5.0
Phenol	ND	10	2.5	5.0
Pyrene	ND	10	2.5	5.0
Hexachlorocyclopentadiene	ND	10	2.5	5.0
Benzidine	ND	40	10	20
2,3,4,6-Tetrachlorophenol	ND	10	2.5	5.0
2,6-Dichlorophenol	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	36.9	60.0	62	43-140
2-Fluorobiphenyl	12.4	20.0	62	44-119
2-Fluorophenol	27.2	60.0	45	19-119
Nitrobenzene-d5	11.6	20.0	58	44-120
Phenol-d5	32.7	60.0	54	40-130
Terphenyl-d14	16.3	20.0	82	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ257

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 11:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW01102023	Date Analyzed:	10/12/23 19:32
Lab Samp ID:	23J026-09	Dilution Factor:	1
Lab File ID:	RJJ288	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	10	2.5	5.0

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 11:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW01102023	Date Analyzed:	10/12/23 19:32
Lab Samp ID:	23J026-09	Dilution Factor:	1
Lab File ID:	RJJ288	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	20	5.0	10
Benzaldehyde	ND	20	5.0	10

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 12:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW02102023	Date Analyzed:	10/12/23 19:51
Lab Samp ID:	23J026-10	Dilution Factor:	1
Lab File ID:	RJJ289	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.8	5.7
1,2-Diphenylhydrazine	ND	11	2.8	5.7
1,3-Dichlorobenzene	ND	11	2.8	5.7
1,4-Dichlorobenzene	ND	11	2.8	5.7
2,4,5-Trichlorophenol	ND	11	2.8	5.7
2,4,6-Trichlorophenol	ND	11	2.8	5.7
2,4-Dichlorophenol	ND	11	2.8	5.7
2,4-Dimethylphenol	ND	11	2.8	5.7
2,4-Dinitrophenol	ND	23	2.8	5.7
2,4-Dinitrotoluene	ND	11	2.8	5.7
2,6-Dinitrotoluene	ND	11	2.8	5.7
2-Chloronaphthalene	ND	11	2.8	5.7
2-Chlorophenol	ND	11	2.8	5.7
2-Methylnaphthalene	ND	11	2.8	5.7
2-Methylphenol	ND	11	2.8	5.7
2-Nitroaniline	ND	11	2.8	5.7
2-Nitrophenol	ND	11	2.8	5.7
3,3'-Dichlorobenzidine	ND	11	2.8	5.7
3/4-Methylphenol	ND	11	2.8	5.7
3-Nitroaniline	ND	11	2.8	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.8	5.7
4-Bromophenyl phenyl ether	ND	11	2.8	5.7
4-Chloro-3-methylphenol	ND	11	2.8	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.7
4-Nitroaniline	ND	11	2.8	5.7
4-Nitrophenol	ND	23	2.8	5.7
Acenaphthene	ND	11	2.8	5.7
Acenaphthylene	ND	11	2.8	5.7
Anthracene	ND	11	2.8	5.7
Benzo(a)anthracene	ND	11	2.8	5.7
Benzo(a)pyrene	ND	11	2.8	5.7
Benzo(b)fluoranthene	ND	11	2.8	5.7
Benzo(g,h,i)perylene	ND	11	2.8	5.7
Benzo(k)fluoranthene	ND	11	2.8	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.8	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.7
bis(2-Chloroethoxy)methane	ND	11	2.8	5.7
bis(2-Chloroethyl) ether	ND	11	2.8	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.8	5.7
Carbazole	ND	11	2.8	5.7
Chrysene	ND	11	2.8	5.7
Dibenzo(a,h)anthracene	ND	11	2.8	5.7
Dibenzofuran	ND	11	2.8	5.7
Diethylphthalate	ND	11	2.8	5.7
Dimethylphthalate	ND	11	2.8	5.7
Di-n-butyl phthalate	ND	11	2.8	5.7
Di-n-octyl phthalate	ND	11	2.8	5.7
Fluoranthene	ND	11	2.8	5.7
Fluorene	ND	11	2.8	5.7
Hexachlorobenzene	ND	11	2.8	5.7
Hexachlorobutadiene	ND	11	2.8	5.7
Hexachloroethane	ND	11	2.8	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.7
Isophorone	ND	11	2.8	5.7
Naphthalene	ND	11	2.8	5.7
Nitrobenzene	ND	11	2.8	5.7
N-Nitrosodimethylamine	ND	11	2.8	5.7
n-Nitroso-di-n-propylamine	ND	11	2.8	5.7
n-Nitrosodiphenylamine	ND	11	2.8	5.7
Pentachlorophenol	ND	23	2.8	5.7
Phenanthrene	ND	11	2.8	5.7
Phenol	ND	11	2.8	5.7
Pyrene	ND	11	2.8	5.7
Hexachlorocyclopentadiene	ND	11	2.8	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.7
2,6-Dichlorophenol	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	39.3	68.4	57	43-140
2-Fluorobiphenyl	12.5	22.8	55	44-119
2-Fluorophenol	22.2	68.4	33	19-119
Nitrobenzene-d5	12.5	22.8	55	44-120
Phenol-d5	30.1	68.4	44	40-130
Terphenyl-d14	18.1	22.8	79	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ257

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 12:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW02102023	Date Analyzed:	10/12/23 19:51
Lab Samp ID:	23J026-10	Dilution Factor:	1
Lab File ID:	RJJ289	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.7

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 12:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: BGMW02102023	Date Analyzed:	10/12/23 19:51
Lab Samp ID:	23J026-10	Dilution Factor:	1
Lab File ID:	RJJ289	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: QC03102023EB	Date Analyzed:	10/13/23 10:19
Lab Samp ID:	23J026-11	Dilution Factor:	1
Lab File ID:	RJJ300	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.8	12
1,2-Dichlorobenzene	ND	12	2.9	5.8
1,2-Diphenylhydrazine	ND	12	2.9	5.8
1,3-Dichlorobenzene	ND	12	2.9	5.8
1,4-Dichlorobenzene	ND	12	2.9	5.8
2,4,5-Trichlorophenol	ND	12	2.9	5.8
2,4,6-Trichlorophenol	ND	12	2.9	5.8
2,4-Dichlorophenol	ND	12	2.9	5.8
2,4-Dimethylphenol	ND	12	2.9	5.8
2,4-Dinitrophenol	ND	23	2.9	5.8
2,4-Dinitrotoluene	ND	12	2.9	5.8
2,6-Dinitrotoluene	ND	12	2.9	5.8
2-Chloronaphthalene	ND	12	2.9	5.8
2-Chlorophenol	ND	12	2.9	5.8
2-Methylnaphthalene	ND	12	2.9	5.8
2-Methylphenol	ND	12	2.9	5.8
2-Nitroaniline	ND	12	2.9	5.8
2-Nitrophenol	ND	12	2.9	5.8
3,3'-Dichlorobenzidine	ND	12	2.9	5.8
3/4-Methylphenol	ND	12	2.9	5.8
3-Nitroaniline	ND	12	2.9	5.8
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.8
4-Bromophenyl phenyl ether	ND	12	2.9	5.8
4-Chloro-3-methylphenol	ND	12	2.9	5.8
4-Chloroaniline	ND	23	5.8	12
4-Chlorophenyl-phenyl ether	ND	12	2.9	5.8
4-Nitroaniline	ND	12	2.9	5.8
4-Nitrophenol	ND	23	2.9	5.8
Acenaphthene	ND	12	2.9	5.8
Acenaphthylene	ND	12	2.9	5.8
Anthracene	ND	12	2.9	5.8
Benzo(a)anthracene	ND	12	2.9	5.8
Benzo(a)pyrene	ND	12	2.9	5.8
Benzo(b)fluoranthene	ND	12	2.9	5.8
Benzo(g,h,i)perylene	ND	12	2.9	5.8
Benzo(k)fluoranthene	ND	12	2.9	5.8
Benzoic Acid	ND	120	23	46
Benzyl Alcohol	ND	12	2.9	5.8
bis(2-Chloroisopropyl) ether	ND	12	2.9	5.8
bis(2-Chloroethoxy)methane	ND	12	2.9	5.8
bis(2-Chloroethyl) ether	ND	12	2.9	5.8
bis(2-Ethylhexyl) phthalate	ND	23	5.8	12
Butylbenzylphthalate	ND	12	2.9	5.8
Carbazole	ND	12	2.9	5.8
Chrysene	ND	12	2.9	5.8
Dibenzo(a,h)anthracene	ND	12	2.9	5.8
Dibenzofuran	ND	12	2.9	5.8
Diethylphthalate	ND	12	2.9	5.8
Dimethylphthalate	ND	12	2.9	5.8
Di-n-butyl phthalate	ND	12	2.9	5.8
Di-n-octyl phthalate	ND	12	2.9	5.8
Fluoranthene	ND	12	2.9	5.8
Fluorene	ND	12	2.9	5.8
Hexachlorobenzene	ND	12	2.9	5.8
Hexachlorobutadiene	ND	12	2.9	5.8
Hexachloroethane	ND	12	2.9	5.8
Indeno(1,2,3-cd)pyrene	ND	12	2.9	5.8
Isophorone	ND	12	2.9	5.8
Naphthalene	ND	12	2.9	5.8
Nitrobenzene	ND	12	2.9	5.8
N-Nitrosodimethylamine	ND	12	2.9	5.8
n-Nitroso-di-n-propylamine	ND	12	2.9	5.8
n-Nitrosodiphenylamine	ND	12	2.9	5.8
Pentachlorophenol	ND	23	2.9	5.8
Phenanthrene	ND	12	2.9	5.8
Phenol	ND	12	2.9	5.8
Pyrene	ND	12	2.9	5.8
Hexachlorocyclopentadiene	ND	12	2.9	5.8
Benzidine	ND	46	12	23
2,3,4,6-Tetrachlorophenol	ND	12	2.9	5.8
2,6-Dichlorophenol	ND	12	2.9	5.8

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	36.7	69.6	53	43-140
2-Fluorobiphenyl	12.7	23.2	55	44-119
2-Fluorophenol	30.3	69.6	44	19-119
Nitrobenzene-d5	12.9	23.2	56	44-120
Phenol-d5	35.1	69.6	50	40-130
Terphenyl-d14	20.4	23.2	88	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ297

Detection limits are reported relative to sample result significant figures.
Sample Amount : 860ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: QC03102023EB	Date Analyzed:	10/13/23 10:19
Lab Samp ID:	23J026-11	Dilution Factor:	1
Lab File ID:	RJJ300	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	2.9	5.8

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 860ml	Final Volume :	2ml
Prepared by	: RGalan/POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/10/23 15:15
Sample ID	: QC03102023EB	Date Analyzed:	10/13/23 10:19
Lab Samp ID:	23J026-11	Dilution Factor:	1
Lab File ID:	RJJ300	Matrix:	WATER
Ext Btch ID:	23SVJ020W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.8	12
Benzaldehyde	ND	23	5.8	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 860ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of four(4) water samples were received on 10/04/23 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39J05B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VG39J05L/VG39J05C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG39J05B	1	NA	10/06/2312:22	10/06/2312:22	EJ06004A	EJ06003A	23VG39J05	Method Blank
LCS1W	VG39J05L	1	NA	10/06/2313:00	10/06/2313:00	EJ06005A	EJ06003A	23VG39J05	Lab Control Sample (LCS)
LCD1W	VG39J05C	1	NA	10/06/2313:39	10/06/2313:39	EJ06006A	EJ06003A	23VG39J05	LCS Duplicate
MW02102023	J026-07	1	NA	10/06/2314:17	10/06/2314:17	EJ06007A	EJ06003A	23VG39J05	Field Sample
MW01102023	J026-08	1	NA	10/06/2314:55	10/06/2314:55	EJ06008A	EJ06003A	23VG39J05	Field Sample
QC03102023EB	J026-11	1	NA	10/06/2315:34	10/06/2315:34	EJ06009A	EJ06003A	23VG39J05	Field Sample
QC03102023TB	J026-12	1	NA	10/06/2316:12	10/06/2316:12	EJ06010A	EJ06003A	23VG39J05	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 14:17
Sample ID	: MW02102023	Date Analyzed:	10/06/23 14:17
Lab Samp ID:	J026-07	Dilution Factor:	1
Lab File ID:	EJ06007A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06003A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.7	40.0	84	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:40
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 14:55
Sample ID	: MW01102023	Date Analyzed:	10/06/23 14:55
Lab Samp ID:	J026-08	Dilution Factor:	1
Lab File ID:	EJ06008A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06003A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.1	40.0	83	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 15:34
Sample ID	: QC03102023EB	Date Analyzed:	10/06/23 15:34
Lab Samp ID:	J026-11	Dilution Factor:	1
Lab File ID:	EJ06009A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06003A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	31.5	40.0	79	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 16:12
Sample ID	: QC03102023TB	Date Analyzed:	10/06/23 16:12
Lab Samp ID:	J026-12	Dilution Factor:	1
Lab File ID:	EJ06010A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06003A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	27J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.1	40.0	83	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of three(3) water samples were received on 10/04/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. DSJ005WB and DSJ006WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. DSJ005WL/DSJ005WC and DSJ006WL/DSJ006WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ005WB	1	NA	10/06/2317:54	10/05/2312:00	LJ05024A	LJ05016A	23DSJ005W	Method Blank
LCS1W	DSJ005WL	1	NA	10/06/2318:13	10/05/2312:00	LJ05025A	LJ05016A	23DSJ005W	Lab Control Sample (LCS)
LCD1W	DSJ005WC	1	NA	10/06/2318:31	10/05/2312:00	LJ05026A	LJ05016A	23DSJ005W	LCS Duplicate
MW02102023	J026-07	1	NA	10/06/2321:19	10/05/2312:00	LJ05035A	LJ05016A	23DSJ005W	Field Sample
MW01102023	J026-08	1	NA	10/06/2321:38	10/05/2312:00	LJ05036A	LJ05016A	23DSJ005W	Field Sample
MBLK2W	DSJ006WB	1	NA	10/10/2318:13	10/06/2315:00	LJ10022A	LJ10018A	23DSJ006W	Method Blank
LCS2W	DSJ006WL	1	NA	10/10/2318:32	10/06/2315:00	LJ10023A	LJ10018A	23DSJ006W	Lab Control Sample (LCS)
LCD2W	DSJ006WC	1	NA	10/10/2318:50	10/06/2315:00	LJ10024A	LJ10018A	23DSJ006W	LCS Duplicate
QC03102023EB	J026-11	1	NA	10/10/2319:09	10/06/2315:00	LJ10025A	LJ10018A	23DSJ006W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/05/23 12:00
Sample ID	: MW02102023	Date Analyzed:	10/06/23 21:19
Lab Samp ID:	23J026-07	Dilution Factor:	1
Lab File ID:	LJ05035A	Matrix:	WATER
Ext Btch ID:	23DSJ005W	% Moisture:	NA
Calib. Ref.:	LJ05016A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.50	0.050	0.099

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.741	0.990	75	60-130
Hexacosane	0.233	0.247	94	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1010ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:40
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/05/23 12:00
Sample ID	: MW01102023	Date Analyzed:	10/06/23 21:38
Lab Samp ID:	23J026-08	Dilution Factor:	1
Lab File ID:	LJ05036A	Matrix:	WATER
Ext Btch ID:	23DSJ005W	% Moisture:	NA
Calib. Ref.:	LJ05016A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.50	0.050	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.746	1.00	75	60-130
Hexacosane	0.239	0.250	95	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 15:00
Sample ID	: QC03102023EB	Date Analyzed:	10/10/23 19:09
Lab Samp ID:	23J026-11	Dilution Factor:	1
Lab File ID:	LJ10025A	Matrix:	WATER
Ext Btch ID:	23DSJ006W	% Moisture:	NA
Calib. Ref.:	LJ10018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.52	0.052	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.846	1.05	81	60-130
Hexacosane	0.253	0.262	97	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW3520C/8081B
PESTICIDES

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project except for Methoxychlor in closing CCV CCPF9J24018 (RK02052) was biased high. However, above analyte was not detected in associated samples. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. CPJ010WB and CPJ013WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- CPJ010WL/CPJ010WC were within LCS limits.
- CPJ013WL/CPJ013WC were within LCS limits.

Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J026-02M/J026-02S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J026
Project : USACE WINGATE Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ010WB	1	NA	10/27/2316:10	10/05/2312:45	RJ27006	RJ27003	23CPJ010W	Method Blank
LCS1W	CPJ010WL	1	NA	10/27/2316:31	10/05/2312:45	RJ27007	RJ27003	23CPJ010W	Lab Control Sample (LCS)
LCD1W	CPJ010WC	1	NA	10/27/2316:51	10/05/2312:45	RJ27008	RJ27003	23CPJ010W	LCS Duplicate
MBLK2W	CPJ013WB	1	NA	11/02/2322:12	10/09/2315:15	RK02020	RK02017	23CPJ013W	Method Blank
LCS2W	CPJ013WL	1	NA	11/02/2322:33	10/09/2315:15	RK02021	RK02017	23CPJ013W	Lab Control Sample (LCS)
LCD2W	CPJ013WC	1	NA	11/02/2322:53	10/09/2315:15	RK02022	RK02017	23CPJ013W	LCS Duplicate
BGMW09102023	J026-01	1	NA	11/03/2300:37	10/05/2312:45	RK02027	RK02017	23CPJ010W	Field Sample
BGMW07102023	J026-02	1	NA	11/03/2302:41	10/05/2312:45	RK02033	RK02030	23CPJ010W	Field Sample
BGMW07102023MS	J026-02M	1	NA	11/03/2303:01	10/05/2312:45	RK02034	RK02030	23CPJ010W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	1	NA	11/03/2303:22	10/05/2312:45	RK02035	RK02030	23CPJ010W	MS Duplicate (MSD)
TMW37102023	J026-03	1	NA	11/03/2304:24	10/05/2312:45	RK02038	RK02030	23CPJ010W	Field Sample
BGMW10102023	J026-04	1	NA	11/03/2304:44	10/05/2312:45	RK02039	RK02030	23CPJ010W	Field Sample
FDUP02-102023	J026-05	1	NA	11/03/2305:05	10/05/2312:45	RK02040	RK02030	23CPJ010W	Field Sample
MW24102023	J026-06	1	NA	11/03/2305:25	10/05/2312:45	RK02041	RK02030	23CPJ010W	Field Sample
MW02102023	J026-07	1	NA	11/03/2307:08	10/05/2312:45	RK02046	RK02043	23CPJ010W	Field Sample
MW01102023	J026-08	1	NA	11/03/2307:29	10/05/2312:45	RK02047	RK02043	23CPJ010W	Field Sample
BGMW01102023	J026-09	1	NA	11/03/2307:49	10/05/2312:45	RK02048	RK02043	23CPJ010W	Field Sample
BGMW02102023	J026-10	1	NA	11/03/2308:09	10/05/2312:45	RK02049	RK02043	23CPJ010W	Field Sample
QC03102023EB	J026-11	1	NA	11/03/2308:30	10/09/2315:15	RK02050	RK02043	23CPJ013W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/05/23 12:45
Sample ID	: BGMW09102023	Date Analyzed:	11/03/23 00:37
Lab Samp ID:	J026-01	Dilution Factor:	1
Lab File ID:	RK02027	Matrix:	WATER
Ext Btch ID:	23CPJ010W	% Moisture:	NA
Calib. Ref.:	RK02017	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.27	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.260) | 0.228	0.436	60	44-124
Decachlorobiphenyl	(0.541) | 0.508	0.436	124	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 920ml	Final Volume	: 10ml
Prepared by	: POreto	Analyzed by	: EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK02018

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/05/23 12:45
Sample ID	: BGMW07102023	Date Analyzed:	11/03/23 02:41
Lab Samp ID:	J026-02	Dilution Factor:	1
Lab File ID:	RK02033	Matrix:	WATER
Ext Btch ID:	23CPJ010W	% Moisture:	NA
Calib. Ref.:	RK02030	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	0.072J | (ND)	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	0.023J | (ND)	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	0.15 | (ND)	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | 0.032J	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.302) | 0.286	0.420	72	44-124
Decachlorobiphenyl	(0.508) | 0.490	0.420	121	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 950ml	Final Volume	: 10ml
Prepared by	: POreto	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK02031		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23 08:30
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 12:45
Sample ID : TMW37102023	Date Analyzed: 11/03/23 04:24
Lab Samp ID: J026-03	Dilution Factor: 1
Lab File ID: RK02038	Matrix: WATER
Ext Btch ID: 23CPJ010W	% Moisture: NA
Calib. Ref.: RK02030	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | ND	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.241) | 0.222	0.400	60	44-124
Decachlorobiphenyl	(0.493) | 0.443	0.400	123	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK02031

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026
Sample ID : BGMW10102023
Lab Samp ID: J026-04
Lab File ID: RK02039
Ext Btch ID: 23CPJ010W
Calib. Ref.: RK02030

Date Collected: 10/03/23 09:15
Date Received: 10/04/23
Date Extracted: 10/05/23 12:45
Date Analyzed: 11/03/23 04:44
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | ND	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.260) | 0.247	0.400	65	44-124
Decachlorobiphenyl	(0.499) | 0.459	0.400	125	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml
Final Volume : 10ml
Prepared by : POreto
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK02031

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23 09:25
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 12:45
Sample ID : FDUP02-102023	Date Analyzed: 11/03/23 05:05
Lab Samp ID: J026-05	Dilution Factor: 1
Lab File ID: RK02040	Matrix: WATER
Ext Btch ID: 23CPJ010W	% Moisture: NA
Calib. Ref.: RK02030	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.097	0.019	0.039
gamma-BHC (Lindane)	(ND) | ND	0.097	0.019	0.039
beta-BHC	(ND) | ND	0.097	0.019	0.039
Heptachlor	(ND) | ND	0.097	0.019	0.039
delta-BHC	(ND) | ND	0.097	0.019	0.039
Aldrin	(ND) | ND	0.097	0.019	0.039
Heptachlor Epoxide	(ND) | ND	0.097	0.019	0.039
gamma-Chlordane	(ND) | ND	0.097	0.019	0.039
alpha-Chlordane	(ND) | ND	0.097	0.019	0.039
Endosulfan I	(ND) | ND	0.097	0.019	0.039
4,4'-DDE	(ND) | ND	0.097	0.019	0.039
Dieldrin	(ND) | ND	0.097	0.019	0.039
Endrin	(ND) | ND	0.097	0.019	0.039
4,4'-DDD	(ND) | ND	0.097	0.019	0.039
Endosulfan II	(ND) | ND	0.097	0.019	0.039
4,4'-DDT	(ND) | ND	0.097	0.019	0.039
Endrin Aldehyde	(ND) | ND	0.097	0.019	0.039
Endosulfan Sulfate	(ND) | ND	0.097	0.019	0.039
Methoxychlor	(ND) | ND	0.97	0.097	0.19
Toxaphene	(ND) | ND	1.9	0.24	0.49
Endrin Ketone	(ND) | ND	0.097	0.019	0.039

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.231) | 0.220	0.388	60	44-124
Decachlorobiphenyl	(0.465) | 0.441	0.388	120	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 1030ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK02031

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23 09:45
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 12:45
Sample ID : MW24102023	Date Analyzed: 11/03/23 05:25
Lab Samp ID: J026-06	Dilution Factor: 1
Lab File ID: RK02041	Matrix: WATER
Ext Btch ID: 23CPJ010W	% Moisture: NA
Calib. Ref.: RK02030	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.099	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.099	0.020	0.040
beta-BHC	(ND) | ND	0.099	0.020	0.040
Heptachlor	(ND) | ND	0.099	0.020	0.040
delta-BHC	(ND) | ND	0.099	0.020	0.040
Aldrin	(ND) | ND	0.099	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.099	0.020	0.040
gamma-Chlordane	(ND) | ND	0.099	0.020	0.040
alpha-Chlordane	(ND) | ND	0.099	0.020	0.040
Endosulfan I	(ND) | ND	0.099	0.020	0.040
4,4'-DDE	(ND) | ND	0.099	0.020	0.040
Dieldrin	(ND) | ND	0.099	0.020	0.040
Endrin	(ND) | ND	0.099	0.020	0.040
4,4'-DDD	(ND) | ND	0.099	0.020	0.040
Endosulfan II	(ND) | ND	0.099	0.020	0.040
4,4'-DDT	(ND) | ND	0.099	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.099	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.099	0.020	0.040
Methoxychlor	(ND) | ND	0.99	0.099	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.099	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.285) | 0.268	0.396	72	44-124
Decachlorobiphenyl	(0.492) | 0.456	0.396	124	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 1010ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RK02031	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/05/23 12:45
Sample ID	: MW02102023	Date Analyzed:	11/03/23 07:08
Lab Samp ID:	J026-07	Dilution Factor:	1
Lab File ID:	RK02046	Matrix:	WATER
Ext Btch ID:	23CPJ010W	% Moisture:	NA
Calib. Ref.:	RK02043	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.303) | 0.279	0.420	72	44-124
Decachlorobiphenyl	(0.536) | 0.501	0.420	128	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 950ml	Final Volume	: 10ml
Prepared by	: POreto	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK02044		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23 10:40
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 12:45
Sample ID : MW01102023	Date Analyzed: 11/03/23 07:29
Lab Samp ID: J026-08	Dilution Factor: 1
Lab File ID: RK02047	Matrix: WATER
Ext Btch ID: 23CPJ010W	% Moisture: NA
Calib. Ref.: RK02043	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.041
beta-BHC	(ND) | 0.056J	0.10	0.020	0.041
Heptachlor	(ND) | ND	0.10	0.020	0.041
delta-BHC	(ND) | ND	0.10	0.020	0.041
Aldrin	(ND) | ND	0.10	0.020	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.041
gamma-Chlordane	(ND) | ND	0.10	0.020	0.041
alpha-Chlordane	(ND) | ND	0.10	0.020	0.041
Endosulfan I	(ND) | ND	0.10	0.020	0.041
4,4'-DDE	(ND) | ND	0.10	0.020	0.041
Dieldrin	(ND) | ND	0.10	0.020	0.041
Endrin	(ND) | ND	0.10	0.020	0.041
4,4'-DDD	(ND) | ND	0.10	0.020	0.041
Endosulfan II	(ND) | ND	0.10	0.020	0.041
4,4'-DDT	(ND) | ND	0.10	0.020	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.51
Endrin Ketone	(ND) | ND	0.10	0.020	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.296) | 0.295	0.408	73	44-124
Decachlorobiphenyl	(0.508) | 0.479	0.408	125	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 980ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RK02044	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026
Sample ID : BGMW01102023
Lab Samp ID: J026-09
Lab File ID: RK02048
Ext Btch ID: 23CPJ010W
Calib. Ref.: RK02043

Date Collected: 10/03/23 11:20
Date Received: 10/04/23
Date Extracted: 10/05/23 12:45
Date Analyzed: 11/03/23 07:49
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.097	0.019	0.039
gamma-BHC (Lindane)	(ND) | ND	0.097	0.019	0.039
beta-BHC	(ND) | ND	0.097	0.019	0.039
Heptachlor	(ND) | ND	0.097	0.019	0.039
delta-BHC	(ND) | ND	0.097	0.019	0.039
Aldrin	(ND) | ND	0.097	0.019	0.039
Heptachlor Epoxide	(ND) | ND	0.097	0.019	0.039
gamma-Chlordane	(ND) | ND	0.097	0.019	0.039
alpha-Chlordane	(ND) | ND	0.097	0.019	0.039
Endosulfan I	(ND) | ND	0.097	0.019	0.039
4,4'-DDE	(ND) | ND	0.097	0.019	0.039
Dieldrin	(ND) | ND	0.097	0.019	0.039
Endrin	(ND) | ND	0.097	0.019	0.039
4,4'-DDD	(ND) | ND	0.097	0.019	0.039
Endosulfan II	(ND) | ND	0.097	0.019	0.039
4,4'-DDT	(ND) | ND	0.097	0.019	0.039
Endrin Aldehyde	(ND) | ND	0.097	0.019	0.039
Endosulfan Sulfate	(ND) | ND	0.097	0.019	0.039
Methoxychlor	(ND) | ND	0.97	0.097	0.19
Toxaphene	(ND) | ND	1.9	0.24	0.49
Endrin Ketone	(ND) | ND	0.097	0.019	0.039

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.282) | 0.261	0.388	73	44-124
Decachlorobipheny1	(0.481) | 0.450	0.388	124	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 1030ml
Final Volume : 10ml
Prepared by : POreto
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK02044

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23 12:55
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 12:45
Sample ID : BGMW02102023	Date Analyzed: 11/03/23 08:09
Lab Samp ID: J026-10	Dilution Factor: 1
Lab File ID: RK02049	Matrix: WATER
Ext Btch ID: 23CPJ010W	% Moisture: NA
Calib. Ref.: RK02043	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.294) | 0.270	0.420	70	44-124
Decachlorobiphenyl	0.569 | (0.527)	0.420	126	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 950ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RK02044	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/09/23 15:15
Sample ID	: QC03102023EB	Date Analyzed:	11/03/23 08:30
Lab Samp ID:	J026-11	Dilution Factor:	1
Lab File ID:	RK02050	Matrix:	WATER
Ext Btch ID:	23CPJ013W	% Moisture:	NA
Calib. Ref.:	RK02043	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.256) | 0.243	0.420	61	44-124
Decachlorobiphenyl	(0.557) | 0.516	0.420	133	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 950ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK02044		

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW3520C/8082A
PCBS

A total of five(5) water samples were received on 10/04/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. CPJ010WB and CPJ013WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. 60J010WL/60J010WC and 60J013WL/60J013WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J026-02M/J026-02S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PCBs

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : 71

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ010WB	1	NA	10/11/2316:17	10/05/2312:45	KJ11015A	KJ11013A	CPJ010W	Method Blank
LCS1W	60J010WL	1	NA	10/11/2316:37	10/05/2312:45	KJ11016A	KJ11013A	CPJ010W	Lab Control Sample (LCS)
LCD1W	60J010WC	1	NA	10/11/2316:57	10/05/2312:45	KJ11017A	KJ11013A	CPJ010W	LCS Duplicate
MBLK2W	CPJ013WB	1	NA	10/11/2322:18	10/09/2315:15	KJ11033A	KJ11026A	CPJ013W	Method Blank
LCS2W	60J013WL	1	NA	10/11/2322:38	10/09/2315:15	KJ11034A	KJ11026A	CPJ013W	Lab Control Sample (LCS)
LCD2W	60J013WC	1	NA	10/11/2322:57	10/09/2315:15	KJ11035A	KJ11026A	CPJ013W	LCS Duplicate
BGMW09102023	J026-01	1.09	NA	10/11/2317:17	10/05/2312:45	KJ11018A	KJ11013A	CPJ010W	Field Sample
BGMW07102023	J026-02	1.05	NA	10/11/2317:37	10/05/2312:45	KJ11019A	KJ11013A	CPJ010W	Field Sample
BGMW10102023	J026-04	1	NA	10/11/2318:58	10/05/2312:45	KJ11023A	KJ11013A	CPJ010W	Field Sample
FDUP02-102023	J026-05	0.97	NA	10/11/2319:18	10/05/2312:45	KJ11024A	KJ11013A	CPJ010W	Field Sample
QC03102023EB	J026-11	1.05	NA	10/11/2323:18	10/09/2315:15	KJ11036A	KJ11026A	CPJ013W	Field Sample
BGMW07102023MS	J026-02M	0.98	NA	10/11/2317:58	10/05/2312:45	KJ11020A	KJ11013A	CPJ010W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	0.97	NA	10/11/2318:18	10/05/2312:45	KJ11021A	KJ11013A	CPJ010W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 12:45
Sample ID: BGMW09102023	Date Analyzed: 10/11/23 17:17
Lab Samp ID: J026-01	Dilution Factor: 1.09
Lab File ID: KJ11018A	Matrix : WATER
Ext Btch ID: CPJ010W	% Moisture : NA
Calib. Ref.: KJ11013A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.27	0.55
PCB-1221	(ND)|ND	1.1	0.27	0.55
PCB-1232	(ND)|ND	1.1	0.27	0.55
PCB-1242	(ND)|ND	1.1	0.27	0.55
PCB-1248	(ND)|ND	1.1	0.27	0.55
PCB-1254	(ND)|ND	1.1	0.27	0.55
PCB-1260	(ND)|ND	1.1	0.27	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3805|(0.4112)	0.4360	87.3|(94.3)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/05/23 12:45
Sample ID	: BGMW07102023	Date Analyzed	: 10/11/23 17:37
Lab Samp ID	: J026-02	Dilution Factor	: 1.05
Lab File ID	: KJ11019A	Matrix	: WATER
Ext Btch ID	: CPJ010W	% Moisture	: NA
Calib. Ref.	: KJ11013A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3814|(0.4041)	0.4200	90.8|(96.2)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 12:45
Sample ID: BGMW10102023	Date Analyzed: 10/11/23 18:58
Lab Samp ID: J026-04	Dilution Factor: 1
Lab File ID: KJ11023A	Matrix : WATER
Ext Btch ID: CPJ010W	% Moisture : NA
Calib. Ref.: KJ11013A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.50
PCB-1221	(ND)|ND	1.0	0.25	0.50
PCB-1232	(ND)|ND	1.0	0.25	0.50
PCB-1242	(ND)|ND	1.0	0.25	0.50
PCB-1248	(ND)|ND	1.0	0.25	0.50
PCB-1254	(ND)|ND	1.0	0.25	0.50
PCB-1260	(ND)|ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3571|(0.3807)	0.4000	89.3|(95.2)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 12:45
Sample ID: FDUP02-102023	Date Analyzed: 10/11/23 19:18
Lab Samp ID: J026-05	Dilution Factor: 0.97
Lab File ID: KJ11024A	Matrix : WATER
Ext Btch ID: CPJ010W	% Moisture : NA
Calib. Ref.: KJ11013A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	0.97	0.24	0.49
PCB-1221	(ND)|ND	0.97	0.24	0.49
PCB-1232	(ND)|ND	0.97	0.24	0.49
PCB-1242	(ND)|ND	0.97	0.24	0.49
PCB-1248	(ND)|ND	0.97	0.24	0.49
PCB-1254	(ND)|ND	0.97	0.24	0.49
PCB-1260	(ND)|ND	0.97	0.24	0.49

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3452|(0.3630)	0.3880	89.0|(93.5)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/09/23 15:15
Sample ID	: QC03102023EB	Date Analyzed	: 10/11/23 23:18
Lab Samp ID	: J026-11	Dilution Factor	: 1.05
Lab File ID	: KJ11036A	Matrix	: WATER
Ext Btch ID	: CPJ013W	% Moisture	: NA
Calib. Ref.	: KJ11026A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3972|(0.4225)	0.4200	94.6|(101)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD 8151A
HERBICIDES

A total of five(5) water samples were received on 10/04/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. HEJ002WB and HEJ003WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. HEJ002WL/HEJ002WC and HEJ003WL/HEJ003WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J026-02M/J026-02S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : 16

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEJ002WB	1	NA	10/11/2319:47	10/05/2311:45	WJ11003A	WJ11002A	HEJ002W	Method Blank
LCS1W	HEJ002WL	1	NA	10/11/2320:16	10/05/2311:45	WJ11004A	WJ11002A	HEJ002W	Lab Control Sample (LCS)
LCD1W	HEJ002WC	1	NA	10/11/2320:44	10/05/2311:45	WJ11005A	WJ11002A	HEJ002W	LCS Duplicate
MBLK2W	HEJ003WB	1	NA	10/11/2321:22	10/07/2313:05	WJ11006A	WJ11002A	HEJ003W	Method Blank
LCS2W	HEJ003WL	1	NA	10/11/2321:50	10/07/2313:05	WJ11007A	WJ11002A	HEJ003W	Lab Control Sample (LCS)
LCD2W	HEJ003WC	1	NA	10/11/2322:19	10/07/2313:05	WJ11008A	WJ11002A	HEJ003W	LCS Duplicate
BGMW09102023	J026-01	1	NA	10/11/2322:48	10/05/2311:45	WJ11009A	WJ11002A	HEJ002W	Field Sample
BGMW07102023	J026-02	1	NA	10/11/2323:16	10/05/2311:45	WJ11010A	WJ11002A	HEJ002W	Field Sample
BGMW07102023MS	J026-02M	1	NA	10/11/2323:45	10/05/2311:45	WJ11011A	WJ11002A	HEJ002W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	1	NA	10/12/2300:13	10/05/2311:45	WJ11012A	WJ11002A	HEJ002W	MS Duplicate (MSD)
BGMW10102023	J026-04	1	NA	10/12/2301:39	10/05/2311:45	WJ11015A	WJ11014A	HEJ002W	Field Sample
FDUP02-102023	J026-05	1	NA	10/12/2302:08	10/05/2311:45	WJ11016A	WJ11014A	HEJ002W	Field Sample
QC03102023EB	J026-11	1	NA	10/12/2302:36	10/07/2313:05	WJ11017A	WJ11014A	HEJ003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/05/23 11:45
Sample ID:	BGMW09102023	Date Analyzed:	10/11/23 22:48
Lab Samp ID:	J026-01	Dilution Factor:	1
Lab File ID:	WJ11009A	Matrix	: WATER
Ext Btch ID:	HEJ002W	% Moisture	: NA
Calib. Ref.:	WJ11002A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 0.77J	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	83 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.660 | (8.671)	10.00	86.6 | (86.7)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/05/23 11:45
Sample ID	: BGMW07102023	Date Analyzed	: 10/11/23 23:16
Lab Samp ID	: J026-02	Dilution Factor	: 1
Lab File ID	: WJ11010A	Matrix	: WATER
Ext Btch ID	: HEJ002W	% Moisture	: NA
Calib. Ref.	: WJ11002A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 2.4	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	64 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.645 | (7.647)	10.00	76.4 | (76.5)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 11:45
Sample ID: BGMW10102023	Date Analyzed: 10/12/23 01:39
Lab Samp ID: J026-04	Dilution Factor: 1
Lab File ID: WJ11015A	Matrix : WATER
Ext Btch ID: HEJ002W	% Moisture : NA
Calib. Ref.: WJ11014A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(0.14J) | 0.11J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	62 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.055 | (8.385)	10.00	80.6 | (83.9)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/05/23 11:45
Sample ID: FDUP02-102023	Date Analyzed: 10/12/23 02:08
Lab Samp ID: J026-05	Dilution Factor: 1
Lab File ID: WJ11016A	Matrix : WATER
Ext Btch ID: HEJ002W	% Moisture : NA
Calib. Ref.: WJ11014A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 4.2	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	46 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.242 | (8.395)	10.00	82.4 | (83.9)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/07/23 13:05
Sample ID: QC03102023EB	Date Analyzed: 10/12/23 02:36
Lab Samp ID: J026-11	Dilution Factor: 1
Lab File ID: WJ11017A	Matrix : WATER
Ext Btch ID: HEJ003W	% Moisture : NA
Calib. Ref.: WJ11014A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	24J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.886 | (8.093)	10.00	78.9 | (80.9)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW8330B
EXPLOSIVES

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ004WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ004WL/EXJ004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J026-02M/J026-02S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW8330B
EXPLOSIVES

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ004WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 35J004WL/35J004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 3,5-Dinitroaniline was within MS QC limits in J026-02M/J026-02S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ004WB	1	NA	10/10/2313:18	10/06/2313:00	XJ10005A	XJ10002A	EXJ004W	Method Blank
LCS1W	EXJ004WL	1	NA	10/10/2314:06	10/06/2313:00	XJ10006A	XJ10002A	EXJ004W	Lab Control Sample (LCS)
LCD1W	EXJ004WC	1	NA	10/10/2315:02	10/06/2313:00	XJ10007A	XJ10002A	EXJ004W	LCS Duplicate
BGMW09102023	J026-01	1	NA	10/10/2319:34	10/06/2313:00	XJ10011A	XJ10002A	EXJ004W	Field Sample
BGMW07102023	J026-02	1	NA	10/10/2320:22	10/06/2313:00	XJ10012A	XJ10002A	EXJ004W	Field Sample
TMW37102023	J026-03	1	NA	10/11/2302:33	10/06/2313:00	XJ10019A	XJ10015A	EXJ004W	Field Sample
BGMW10102023	J026-04	1	NA	10/11/2303:21	10/06/2313:00	XJ10020A	XJ10015A	EXJ004W	Field Sample
FDUP02-102023	J026-05	1	NA	10/11/2304:18	10/06/2313:00	XJ10021A	XJ10015A	EXJ004W	Field Sample
MW24102023	J026-06	1	NA	10/11/2305:06	10/06/2313:00	XJ10022A	XJ10015A	EXJ004W	Field Sample
MW02102023	J026-07	1	NA	10/11/2306:02	10/06/2313:00	XJ10023A	XJ10015A	EXJ004W	Field Sample
MW01102023	J026-08	1	NA	10/11/2306:51	10/06/2313:00	XJ10024A	XJ10015A	EXJ004W	Field Sample
BGMW01102023	J026-09	1	NA	10/11/2307:47	10/06/2313:00	XJ10025A	XJ10015A	EXJ004W	Field Sample
BGMW02102023	J026-10	1	NA	10/11/2308:35	10/06/2313:00	XJ10026A	XJ10015A	EXJ004W	Field Sample
QC03102023EB	J026-11	1	NA	10/11/2312:05	10/06/2313:00	XJ10030A	XJ10028A	EXJ004W	Field Sample
BGMW07102023MS	J026-02M	1	NA	10/10/2321:19	10/06/2313:00	XJ10013A	XJ10002A	EXJ004W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	1	NA	10/10/2322:07	10/06/2313:00	XJ10014A	XJ10002A	EXJ004W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ004WB	1	NA	10/10/2313:18	10/06/2313:00	XJ10005A	XJ10003A	EXJ004W	Method Blank
LCS1W	35J004WL	1	NA	10/10/2315:51	10/06/2313:00	XJ10008A	XJ10003A	EXJ004W	Lab Control Sample (LCS)
LCD1W	35J004WC	1	NA	10/10/2318:37	10/06/2313:00	XJ10010A	XJ10003A	EXJ004W	LCS Duplicate
BGMW09102023	J026-01	1	NA	10/10/2319:34	10/06/2313:00	XJ10011A	XJ10003A	EXJ004W	Field Sample
BGMW07102023	J026-02	1	NA	10/10/2320:22	10/06/2313:00	XJ10012A	XJ10003A	EXJ004W	Field Sample
TMW37102023	J026-03	1	NA	10/11/2302:33	10/06/2313:00	XJ10019A	XJ10016A	EXJ004W	Field Sample
BGMW10102023	J026-04	1	NA	10/11/2303:21	10/06/2313:00	XJ10020A	XJ10016A	EXJ004W	Field Sample
FDUP02-102023	J026-05	1	NA	10/11/2304:18	10/06/2313:00	XJ10021A	XJ10016A	EXJ004W	Field Sample
MW24102023	J026-06	1	NA	10/11/2305:06	10/06/2313:00	XJ10022A	XJ10016A	EXJ004W	Field Sample
MW02102023	J026-07	1	NA	10/11/2306:02	10/06/2313:00	XJ10023A	XJ10016A	EXJ004W	Field Sample
MW01102023	J026-08	1	NA	10/11/2306:51	10/06/2313:00	XJ10024A	XJ10016A	EXJ004W	Field Sample
BGMW01102023	J026-09	1	NA	10/11/2307:47	10/06/2313:00	XJ10025A	XJ10016A	EXJ004W	Field Sample
BGMW02102023	J026-10	1	NA	10/11/2308:35	10/06/2313:00	XJ10026A	XJ10016A	EXJ004W	Field Sample
QC03102023EB	J026-11	1	NA	10/11/2312:05	10/06/2313:00	XJ10030A	XJ10029A	EXJ004W	Field Sample
BGMW07102023MS	J026-02M	1	NA	10/11/2300:48	10/06/2313:00	XJ10017A	XJ10016A	EXJ004W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	1	NA	10/11/2301:36	10/06/2313:00	XJ10018A	XJ10016A	EXJ004W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: BGMW09102023	Date Analyzed: 10/10/23 19:34
Lab Samp ID: J026-01	Dilution Factor: 1
Lab File ID: XJ10011A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	2.71	4.000	67.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 13:00
Sample ID:	BGMW09102023	Date Analyzed:	10/10/23 19:34
Lab Samp ID:	J026-01	Dilution Factor:	1
Lab File ID:	XJ10011A	Matrix :	WATER
Ext Btch ID:	EXJ004W	% Moisture :	NA
Calib. Ref.:	XJ10003A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	2.71	4.000	67.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: BGMW07102023	Date Analyzed: 10/10/23 20:22
Lab Samp ID: J026-02	Dilution Factor: 1
Lab File ID: XJ10012A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.95	4.000	98.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/06/23 13:00
Sample ID	: BGMW07102023	Date Analyzed	: 10/10/23 20:22
Lab Samp ID	: J026-02	Dilution Factor	: 1
Lab File ID	: XJ10012A	Matrix	: WATER
Ext Btch ID	: EXJ004W	% Moisture	: NA
Calib. Ref.	: XJ10003A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.95	4.000	98.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: TMW37102023	Date Analyzed: 10/11/23 02:33
Lab Samp ID: J026-03	Dilution Factor: 1
Lab File ID: XJ10019A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.62	4.000	90.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: TMW37102023	Date Analyzed: 10/11/23 02:33
Lab Samp ID: J026-03	Dilution Factor: 1
Lab File ID: XJ10019A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10016A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.62	4.000	90.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: BGMW10102023	Date Analyzed: 10/11/23 03:21
Lab Samp ID: J026-04	Dilution Factor: 1
Lab File ID: XJ10020A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.66	4.000	91.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: BGMW10102023	Date Analyzed: 10/11/23 03:21
Lab Samp ID: J026-04	Dilution Factor: 1
Lab File ID: XJ10020A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10016A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.66	4.000	91.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: FDUP02-102023	Date Analyzed: 10/11/23 04:18
Lab Samp ID: J026-05	Dilution Factor: 1
Lab File ID: XJ10021A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.86	4.000	96.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/06/23 13:00
Sample ID	: FDUP02-102023	Date Analyzed	: 10/11/23 04:18
Lab Samp ID	: J026-05	Dilution Factor	: 1
Lab File ID	: XJ10021A	Matrix	: WATER
Ext Btch ID	: EXJ004W	% Moisture	: NA
Calib. Ref.	: XJ10016A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.86	4.000	96.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: MW24102023	Date Analyzed: 10/11/23 05:06
Lab Samp ID: J026-06	Dilution Factor: 1
Lab File ID: XJ10022A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.89	4.000	97.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/06/23 13:00
Sample ID	: MW24102023	Date Analyzed	: 10/11/23 05:06
Lab Samp ID	: J026-06	Dilution Factor	: 1
Lab File ID	: XJ10022A	Matrix	: WATER
Ext Btch ID	: EXJ004W	% Moisture	: NA
Calib. Ref.	: XJ10016A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.89	4.000	97.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: MW02102023	Date Analyzed: 10/11/23 06:02
Lab Samp ID: J026-07	Dilution Factor: 1
Lab File ID: XJ10023A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.79	4.000	94.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 13:00
Sample ID:	MW02102023	Date Analyzed:	10/11/23 06:02
Lab Samp ID:	J026-07	Dilution Factor:	1
Lab File ID:	XJ10023A	Matrix :	WATER
Ext Btch ID:	EXJ004W	% Moisture :	NA
Calib. Ref.:	XJ10016A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.79	4.000	94.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: MW01102023	Date Analyzed: 10/11/23 06:51
Lab Samp ID: J026-08	Dilution Factor: 1
Lab File ID: XJ10024A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.53	4.000	88.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/06/23 13:00
Sample ID	: MW01102023	Date Analyzed	: 10/11/23 06:51
Lab Samp ID	: J026-08	Dilution Factor	: 1
Lab File ID	: XJ10024A	Matrix	: WATER
Ext Btch ID	: EXJ004W	% Moisture	: NA
Calib. Ref.	: XJ10016A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.53	4.000	88.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: BGMW01102023	Date Analyzed: 10/11/23 07:47
Lab Samp ID: J026-09	Dilution Factor: 1
Lab File ID: XJ10025A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.82	4.000	95.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/06/23 13:00
Sample ID	: BGMW01102023	Date Analyzed	: 10/11/23 07:47
Lab Samp ID	: J026-09	Dilution Factor	: 1
Lab File ID	: XJ10025A	Matrix	: WATER
Ext Btch ID	: EXJ004W	% Moisture	: NA
Calib. Ref.	: XJ10016A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.82	4.000	95.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: BGMW02102023	Date Analyzed: 10/11/23 08:35
Lab Samp ID: J026-10	Dilution Factor: 1
Lab File ID: XJ10026A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.09	4.000	102	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J026	Date Extracted	: 10/06/23 13:00
Sample ID	: BGMW02102023	Date Analyzed	: 10/11/23 08:35
Lab Samp ID	: J026-10	Dilution Factor	: 1
Lab File ID	: XJ10026A	Matrix	: WATER
Ext Btch ID	: EXJ004W	% Moisture	: NA
Calib. Ref.	: XJ10016A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.09	4.000	102	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: QC03102023EB	Date Analyzed: 10/11/23 12:05
Lab Samp ID: J026-11	Dilution Factor: 1
Lab File ID: XJ10030A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10028A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.67	4.000	91.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 13:00
Sample ID: QC03102023EB	Date Analyzed: 10/11/23 12:05
Lab Samp ID: J026-11	Dilution Factor: 1
Lab File ID: XJ10030A	Matrix : WATER
Ext Btch ID: EXJ004W	% Moisture : NA
Calib. Ref.: XJ10029A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.67	4.000	91.8	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYECRIN AND PETN

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW8332
NITROGLYCERIN AND PETN

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Nitroglycerin And Petn in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ003WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ003WL/EXJ003WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J026-02M/J026-02S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ003WB	1	NA	10/10/2311:53	10/06/2312:00	NJ10003A	NJ10002A	EXJ003W	Method Blank
LCS1W	EXJ003WL	1	NA	10/10/2312:02	10/06/2312:00	NJ10004A	NJ10002A	EXJ003W	Lab Control Sample (LCS)
LCD1W	EXJ003WC	1	NA	10/10/2312:11	10/06/2312:00	NJ10005A	NJ10002A	EXJ003W	LCS Duplicate
BGMW09102023	J026-01	1	NA	10/10/2312:20	10/06/2312:00	NJ10006A	NJ10002A	EXJ003W	Field Sample
BGMW07102023	J026-02	1	NA	10/10/2312:29	10/06/2312:00	NJ10007A	NJ10002A	EXJ003W	Field Sample
TMW37102023	J026-03	1	NA	10/10/2312:57	10/06/2312:00	NJ10010A	NJ10002A	EXJ003W	Field Sample
BGMW10102023	J026-04	1	NA	10/10/2313:06	10/06/2312:00	NJ10011A	NJ10002A	EXJ003W	Field Sample
FDUP02-102023	J026-05	1	NA	10/10/2313:15	10/06/2312:00	NJ10012A	NJ10002A	EXJ003W	Field Sample
MW24102023	J026-06	1	NA	10/10/2314:27	10/06/2312:00	NJ10014A	NJ10013A	EXJ003W	Field Sample
MW02102023	J026-07	1	NA	10/10/2314:36	10/06/2312:00	NJ10015A	NJ10013A	EXJ003W	Field Sample
MW01102023	J026-08	1	NA	10/10/2314:45	10/06/2312:00	NJ10016A	NJ10013A	EXJ003W	Field Sample
BGMW01102023	J026-09	1	NA	10/10/2314:54	10/06/2312:00	NJ10017A	NJ10013A	EXJ003W	Field Sample
BGMW02102023	J026-10	1	NA	10/10/2315:04	10/06/2312:00	NJ10018A	NJ10013A	EXJ003W	Field Sample
QC03102023EB	J026-11	1	NA	10/10/2315:13	10/06/2312:00	NJ10019A	NJ10013A	EXJ003W	Field Sample
BGMW07102023MS	J026-02M	1	NA	10/10/2312:38	10/06/2312:00	NJ10008A	NJ10002A	EXJ003W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	1	NA	10/10/2312:47	10/06/2312:00	NJ10009A	NJ10002A	EXJ003W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: BGMW09102023	Date Analyzed: 10/10/23 12:20
Lab Samp ID: J026-01	Dilution Factor: 1
Lab File ID: NJ10006A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	535	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: BGMW07102023	Date Analyzed: 10/10/23 12:29
Lab Samp ID: J026-02	Dilution Factor: 1
Lab File ID: NJ10007A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	554	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: TMW37102023	Date Analyzed: 10/10/23 12:57
Lab Samp ID: J026-03	Dilution Factor: 1
Lab File ID: NJ10010A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	551	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: BGMW10102023	Date Analyzed: 10/10/23 13:06
Lab Samp ID: J026-04	Dilution Factor: 1
Lab File ID: NJ10011A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	544	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: FDUP02-102023	Date Analyzed: 10/10/23 13:15
Lab Samp ID: J026-05	Dilution Factor: 1
Lab File ID: NJ10012A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	546	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: MW24102023	Date Analyzed: 10/10/23 14:27
Lab Samp ID: J026-06	Dilution Factor: 1
Lab File ID: NJ10014A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	545	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 12:00
Sample ID:	MW02102023	Date Analyzed:	10/10/23 14:36
Lab Samp ID:	J026-07	Dilution Factor:	1
Lab File ID:	NJ10015A	Matrix :	WATER
Ext Btch ID:	EXJ003W	% Moisture :	NA
Calib. Ref.:	NJ10013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	537	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: MW01102023	Date Analyzed: 10/10/23 14:45
Lab Samp ID: J026-08	Dilution Factor: 1
Lab File ID: NJ10016A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	555	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: BGMW01102023	Date Analyzed: 10/10/23 14:54
Lab Samp ID: J026-09	Dilution Factor: 1
Lab File ID: NJ10017A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	551	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J026	Date Extracted:	10/06/23 12:00
Sample ID:	BGMW02102023	Date Analyzed:	10/10/23 15:04
Lab Samp ID:	J026-10	Dilution Factor:	1
Lab File ID:	NJ10018A	Matrix :	WATER
Ext Btch ID:	EXJ003W	% Moisture :	NA
Calib. Ref.:	NJ10013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	543	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J026	Date Extracted: 10/06/23 12:00
Sample ID: QC03102023EB	Date Analyzed: 10/10/23 15:13
Lab Samp ID: J026-11	Dilution Factor: 1
Lab File ID: NJ10019A	Matrix : WATER
Ext Btch ID: EXJ003W	% Moisture : NA
Calib. Ref.: NJ10013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	568	500.0	114	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW6020A
METALS BY ICP-MS

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ011WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ011WL/IMJ011WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J026-02M/J026-02S - Percent recoveries for Calcium(242X), Magnesium(33X), Sodium(2123X) and Zinc were not within MS/MSD QC limits. Percent recovery for Silver was not within MS QC limit. Percent recovery for Manganese(50X) was not within MSD QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ011WB	1	NA	10/17/2316:59	10/17/2310:45	H6J13031	H6J13029	IMJ011W	Method Blank
LCS1W	IMJ011WL	1	NA	10/17/2317:02	10/17/2310:45	H6J13032	H6J13029	IMJ011W	Lab Control Sample (LCS)
LCD1W	IMJ011WC	1	NA	10/17/2317:05	10/17/2310:45	H6J13033	H6J13029	IMJ011W	LCS Duplicate
BGMW09102023	J026-01I	10	NA	10/17/2317:08	10/17/2310:45	H6J13034	H6J13029	IMJ011W	Diluted Sample
BGMW07102023	J026-02A	20	NA	10/17/2317:11	10/17/2310:45	H6J13035	H6J13029	IMJ011W	Analytical Spike Sample
BGMW07102023	J026-02K	20	NA	10/17/2317:14	10/17/2310:45	H6J13036	H6J13029	IMJ011W	Diluted Sample
BGMW07102023	J026-02J	100	NA	10/17/2317:17	10/17/2310:45	H6J13037	H6J13029	IMJ011W	Diluted Sample
BGMW07102023MS	J026-02M	20	NA	10/17/2317:20	10/17/2310:45	H6J13038	H6J13029	IMJ011W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	20	NA	10/17/2317:22	10/17/2310:45	H6J13039	H6J13029	IMJ011W	MS Duplicate (MSD)
TMW37102023	J026-03G	5	NA	10/17/2317:25	10/17/2310:45	H6J13040	H6J13029	IMJ011W	Diluted Sample
BGMW10102023	J026-04G	5	NA	10/17/2317:34	10/17/2310:45	H6J13043	H6J13041	IMJ011W	Diluted Sample
FDUP02-102023	J026-05G	5	NA	10/17/2317:37	10/17/2310:45	H6J13044	H6J13041	IMJ011W	Diluted Sample
MW24102023	J026-06G	5	NA	10/17/2317:40	10/17/2310:45	H6J13045	H6J13041	IMJ011W	Diluted Sample
MW02102023	J026-07G	5	NA	10/17/2317:43	10/17/2310:45	H6J13046	H6J13041	IMJ011W	Diluted Sample
MW01102023	J026-08G	5	NA	10/17/2317:46	10/17/2310:45	H6J13047	H6J13041	IMJ011W	Diluted Sample
BGMW01102023	J026-09G	5	NA	10/17/2317:49	10/17/2310:45	H6J13048	H6J13041	IMJ011W	Diluted Sample
BGMW02102023	J026-10G	5	NA	10/17/2317:52	10/17/2310:45	H6J13049	H6J13041	IMJ011W	Diluted Sample
QC03102023EB	J026-11	1	NA	10/17/2317:54	10/17/2310:45	H6J13050	H6J13041	IMJ011W	Field Sample
BGMW09102023	J026-01T	50	NA	10/17/2318:20	10/17/2310:45	H6J13055	H6J13053	IMJ011W	Diluted Sample
TMW37102023	J026-03T	50	NA	10/17/2318:37	10/17/2310:45	H6J13061	H6J13053	IMJ011W	Diluted Sample
BGMW10102023	J026-04T	50	NA	10/17/2318:40	10/17/2310:45	H6J13062	H6J13053	IMJ011W	Diluted Sample
FDUP02-102023	J026-05T	50	NA	10/17/2318:43	10/17/2310:45	H6J13063	H6J13053	IMJ011W	Diluted Sample
MW24102023	J026-06T	50	NA	10/17/2318:46	10/17/2310:45	H6J13064	H6J13053	IMJ011W	Diluted Sample
MW02102023	J026-07T	50	NA	10/17/2318:55	10/17/2310:45	H6J13067	H6J13065	IMJ011W	Diluted Sample
MW01102023	J026-08T	50	NA	10/17/2318:58	10/17/2310:45	H6J13068	H6J13065	IMJ011W	Diluted Sample
BGMW01102023	J026-09T	50	NA	10/17/2319:01	10/17/2310:45	H6J13069	H6J13065	IMJ011W	Diluted Sample
BGMW02102023	J026-10T	50	NA	10/17/2319:03	10/17/2310:45	H6J13070	H6J13065	IMJ011W	Diluted Sample
BGMW07102023	J026-02A	200	NA	10/18/2313:17	10/17/2310:45	H6J14022	H6J14017	IMJ011W	Analytical Spike Sample
BGMW07102023	J026-02T	200	NA	10/18/2313:20	10/17/2310:45	H6J14023	H6J14017	IMJ011W	Diluted Sample
BGMW07102023	J026-02J	1000	NA	10/18/2313:23	10/17/2310:45	H6J14024	H6J14017	IMJ011W	Diluted Sample
BGMW07102023MS	J026-02M	200	NA	10/18/2313:32	10/17/2310:45	H6J14025	H6J14017	IMJ011W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	200	NA	10/18/2313:35	10/17/2310:45	H6J14026	H6J14017	IMJ011W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW09102023
Lab Samp ID: J026-01I
Lab File ID: H6J13034
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13029

Date Collected: 10/03/23 08:10
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:08
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5400	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	2.7J	10	1.2	2.5
Barium	170	10	2.5	5.0
Beryllium	1.1J	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	37000	2000	500	1000
Chromium	7.4J	10	1.0	2.0
Cobalt	1.4J	7.5	1.0	2.0
Copper	10J	20	5.0	10
Iron	3900	2000	250	500
Lead	13	10	0.50	1.0
Magnesium	5400	1000	200	500
Manganese	150	10	2.5	5.0
Nickel	3.9J	10	2.5	5.0
Potassium	2000J	3000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	10	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: BGMW09102023
Lab Samp ID: J026-01T
Lab File ID: H6J13055
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13053

Date Analyzed: 10/17/23 18:20
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1200000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW09102023	Date Analyzed:	10/17/23 17:08
Lab Samp ID:	J026-011	Dilution Factor:	10
Lab File ID:	H6J13034	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5400	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	2.7J	10	1.2	2.5
Barium	170	10	2.5	5.0
Beryllium	1.1J	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	37000	2000	500	1000
Chromium	7.4J	10	1.0	2.0
Cobalt	1.4J	7.5	1.0	2.0
Copper	10J	20	5.0	10
Iron	3900	2000	250	500
Lead	13	10	0.50	1.0
Magnesium	5400	1000	200	500
Manganese	150	10	2.5	5.0
Nickel	3.9J	10	2.5	5.0
Potassium	2000J	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1200000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	10	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW09102023	Date Analyzed:	10/17/23 18:20
Lab Samp ID:	J026-01T	Dilution Factor:	50
Lab File ID:	H6J13055	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13053	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5200	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	170	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	37000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	3900J	10000	1200	2500
Lead	11J	50	2.5	5.0
Magnesium	5300	5000	1000	2500
Manganese	150	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1200000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW07102023
Lab Samp ID: J026-02K
Lab File ID: H6J13036
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13029

Date Collected: 10/03/23 08:20
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:14
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	30	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	730000	4000	1000	2000
Chromium	3.8J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	14J	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	98000	2000	400	1000
Manganese	1500	20	5.0	10
Nickel	9.1J	20	5.0	10
Potassium	8800	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	ND	400	100	200

Sample ID: BGMW07102023
Lab Samp ID: J026-02T
Lab File ID: H6J14023
Ext Btch ID: IMJ011W
Calib. Ref.: H6J14017

Date Analyzed: 10/18/23 13:20
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	6400000	40000	10000	20000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW07102023	Date Analyzed:	10/17/23 17:14
Lab Samp ID:	J026-02K	Dilution Factor:	20
Lab File ID:	H6J13036	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	30	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	730000	4000	1000	2000
Chromium	3.8J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	14J	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	98000	2000	400	1000
Manganese	1500	20	5.0	10
Nickel	9.1J	20	5.0	10
Potassium	8800	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	6100000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	ND	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW07102023	Date Analyzed:	10/18/23 13:20
Lab Samp ID:	J026-02T	Dilution Factor:	200
Lab File ID:	H6J14023	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J14017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	20000	4000	10000
Antimony	ND	200	50	100
Arsenic	ND	200	25	50
Barium	190J	200	50	100
Beryllium	ND	100	20	40
Cadmium	ND	200	20	40
Calcium	740000	40000	10000	20000
Chromium	ND	200	20	40
Cobalt	ND	150	20	40
Copper	ND	400	100	200
Iron	ND	40000	5000	10000
Lead	ND	200	10	20
Magnesium	100000	20000	4000	10000
Manganese	1600	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	ND	200	30	60
Silver	ND	200	20	40
Sodium	6400000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	ND	200	50	100
Zinc	ND	4000	1000	2000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: TMW37102023
Lab Samp ID: J026-03G
Lab File ID: H6J13040
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13029

Date Collected: 10/03/23 08:30
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:25
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	280J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6000	1000	250	500
Chromium	25	5.0	0.50	1.0
Cobalt	0.68J	3.7	0.50	1.0
Copper	8.5J	10	2.5	5.0
Iron	360J	1000	120	250
Lead	0.46J	5.0	0.25	0.50
Magnesium	710	500	100	250
Manganese	14	5.0	1.2	2.5
Nickel	43	5.0	1.2	2.5
Potassium	600J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.5J	5.0	1.2	2.5
Zinc	31J	100	25	50

Sample ID: TMW37102023
Lab Samp ID: J026-03T
Lab File ID: H6J13061
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13053

Date Analyzed: 10/17/23 18:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	550000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23 08:30
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J026	Date Extracted: 10/17/23 10:45
Sample ID: TMW37102023	Date Analyzed: 10/17/23 17:25
Lab Samp ID: J026-03G	Dilution Factor: 5
Lab File ID: H6J13040	Matrix: WATER
Ext Btch ID: IMJ011W	% Moisture: NA
Calib. Ref.: H6J13029	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	280J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6000	1000	250	500
Chromium	25	5.0	0.50	1.0
Cobalt	0.68J	3.7	0.50	1.0
Copper	8.5J	10	2.5	5.0
Iron	360J	1000	120	250
Lead	0.46J	5.0	0.25	0.50
Magnesium	710	500	100	250
Manganese	14	5.0	1.2	2.5
Nickel	43	5.0	1.2	2.5
Potassium	600J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	540000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.5J	5.0	1.2	2.5
Zinc	31J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	TMW37102023	Date Analyzed:	10/17/23 18:37
Lab Samp ID:	J026-03T	Dilution Factor:	50
Lab File ID:	H6J13061	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13053	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	5400J	10000	2500	5000
Chromium	19J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	36J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	550000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW10102023
Lab Samp ID: J026-04G
Lab File ID: H6J13043
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13041

Date Collected: 10/03/23 09:15
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:34
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	7.9	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8300	1000	250	500
Chromium	0.92J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.8J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	910	500	100	250
Manganese	20	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	700J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW10102023
Lab Samp ID: J026-04T
Lab File ID: H6J13062
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13053

Date Analyzed: 10/17/23 18:40
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	640000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW10102023	Date Analyzed:	10/17/23 17:34
Lab Samp ID:	J026-04G	Dilution Factor:	5
Lab File ID:	H6J13043	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	7.9	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8300	1000	250	500
Chromium	0.92J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.8J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	910	500	100	250
Manganese	20	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	700J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	630000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW10102023	Date Analyzed:	10/17/23 18:40
Lab Samp ID:	J026-04T	Dilution Factor:	50
Lab File ID:	H6J13062	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13053	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	8100J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	18J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	640000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: FDUP02-102023
Lab Samp ID: J026-05G
Lab File ID: H6J13044
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13041

Date Collected: 10/03/23 09:25
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:37
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	7.2	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8200	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.1J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	880	500	100	250
Manganese	17	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	690J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP02-102023
Lab Samp ID: J026-05T
Lab File ID: H6J13063
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13053

Date Analyzed: 10/17/23 18:43
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	610000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:25
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	FDUP02-102023	Date Analyzed:	10/17/23 17:37
Lab Samp ID:	J026-05G	Dilution Factor:	5
Lab File ID:	H6J13044	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	7.2	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8200	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.1J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	880	500	100	250
Manganese	17	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	690J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	620000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:25
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	FDUP02-102023	Date Analyzed:	10/17/23 18:43
Lab Samp ID:	J026-05T	Dilution Factor:	50
Lab File ID:	H6J13063	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13053	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7700J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	16J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	610000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: MW24102023
Lab Samp ID: J026-06G
Lab File ID: H6J13045
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13041

Date Collected: 10/03/23 09:45
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:40
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	370	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.1J	10	2.5	5.0
Iron	2700	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	450	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	750J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW24102023
Lab Samp ID: J026-06T
Lab File ID: H6J13064
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13053

Date Analyzed: 10/17/23 18:46
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	270000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:45
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW24102023	Date Analyzed:	10/17/23 17:40
Lab Samp ID:	J026-06G	Dilution Factor:	5
Lab File ID:	H6J13045	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	370	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.1J	10	2.5	5.0
Iron	2700	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	450	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	750J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	270000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:45
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW24102023	Date Analyzed:	10/17/23 18:46
Lab Samp ID:	J026-06T	Dilution Factor:	50
Lab File ID:	H6J13064	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13053	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	350	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	33000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	2800J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	460	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	270000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: MW02102023
Lab Samp ID: J026-07G
Lab File ID: H6J13046
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13041

Date Collected: 10/03/23 10:20
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:43
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	110	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	100000	1000	250	500
Chromium	5.3	5.0	0.50	1.0
Cobalt	2.2J	3.7	0.50	1.0
Copper	14	10	2.5	5.0
Iron	3700	1000	120	250
Lead	4.4J	5.0	0.25	0.50
Magnesium	21000	500	100	250
Manganese	640	5.0	1.2	2.5
Nickel	7.1	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	3.7J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	9.2	5.0	1.2	2.5
Zinc	110	100	25	50

Sample ID: MW02102023
Lab Samp ID: J026-07T
Lab File ID: H6J13067
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13065

Date Analyzed: 10/17/23 18:55
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	550000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS FY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW02102023	Date Analyzed:	10/17/23 17:43
Lab Samp ID:	J026-07G	Dilution Factor:	5
Lab File ID:	H6J13046	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	110	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	100000	1000	250	500
Chromium	5.3	5.0	0.50	1.0
Cobalt	2.2J	3.7	0.50	1.0
Copper	14	10	2.5	5.0
Iron	3700	1000	120	250
Lead	4.4J	5.0	0.25	0.50
Magnesium	21000	500	100	250
Manganese	640	5.0	1.2	2.5
Nickel	7.1	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	3.7J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	560000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	9.2	5.0	1.2	2.5
Zinc	110	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW02102023	Date Analyzed:	10/17/23 18:55
Lab Samp ID:	J026-07T	Dilution Factor:	50
Lab File ID:	H6J13067	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13065	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5000J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	110	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	99000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	3400J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	22000	5000	1000	2500
Manganese	670	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	550000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: MW01102023
Lab Samp ID: J026-08G
Lab File ID: H6J13047
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13041

Date Collected: 10/03/23 10:40
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:46
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	53	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	3.0J	5.0	0.50	1.0
Cobalt	1.2J	3.7	0.50	1.0
Copper	7.4J	10	2.5	5.0
Iron	2000	1000	120	250
Lead	1.7J	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	100	5.0	1.2	2.5
Nickel	3.1J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	3.0J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.4	5.0	1.2	2.5
Zinc	36J	100	25	50

Sample ID: MW01102023
Lab Samp ID: J026-08T
Lab File ID: H6J13068
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13065

Date Analyzed: 10/17/23 18:58
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	810000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW01102023	Date Analyzed:	10/17/23 17:46
Lab Samp ID:	J026-08G	Dilution Factor:	5
Lab File ID:	H6J13047	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	53	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	3.0J	5.0	0.50	1.0
Cobalt	1.2J	3.7	0.50	1.0
Copper	7.4J	10	2.5	5.0
Iron	2000	1000	120	250
Lead	1.7J	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	100	5.0	1.2	2.5
Nickel	3.1J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	3.0J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	810000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.4	5.0	1.2	2.5
Zinc	36J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW01102023	Date Analyzed:	10/17/23 18:58
Lab Samp ID:	J026-08T	Dilution Factor:	50
Lab File ID:	H6J13068	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13065	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3400J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	51	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	33000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	2100J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7700	5000	1000	2500
Manganese	98	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	810000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW01102023
Lab Samp ID: J026-09G
Lab File ID: H6J13048
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13041

Date Collected: 10/03/23 11:20
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:49
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.79J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	62000	1000	250	500
Chromium	45	5.0	0.50	1.0
Cobalt	0.76J	3.7	0.50	1.0
Copper	4.7J	10	2.5	5.0
Iron	230J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	37000	500	100	250
Manganese	330	5.0	1.2	2.5
Nickel	12	5.0	1.2	2.5
Potassium	410J	1000	250	500
Selenium	7.5	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW01102023
Lab Samp ID: J026-09T
Lab File ID: H6J13069
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13065

Date Analyzed: 10/17/23 19:01
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	930000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 11:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW01102023	Date Analyzed:	10/17/23 17:49
Lab Samp ID:	J026-09G	Dilution Factor:	5
Lab File ID:	H6J13048	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.79J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	62000	1000	250	500
Chromium	45	5.0	0.50	1.0
Cobalt	0.76J	3.7	0.50	1.0
Copper	4.7J	10	2.5	5.0
Iron	230J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	37000	500	100	250
Manganese	330	5.0	1.2	2.5
Nickel	12	5.0	1.2	2.5
Potassium	410J	1000	250	500
Selenium	7.5	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	940000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 11:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW01102023	Date Analyzed:	10/17/23 19:01
Lab Samp ID:	J026-09T	Dilution Factor:	50
Lab File ID:	H6J13069	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13065	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	18J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	61000	10000	2500	5000
Chromium	40J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	37000	5000	1000	2500
Manganese	320	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	930000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW02102023
Lab Samp ID: J026-10G
Lab File ID: H6J13049
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13041

Date Collected: 10/03/23 12:55
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 17:52
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	200J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.94J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	52000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	71000	500	100	250
Manganese	98	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	27	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW02102023
Lab Samp ID: J026-10T
Lab File ID: H6J13070
Ext Btch ID: IMJ011W
Calib. Ref.: H6J13065

Date Analyzed: 10/17/23 19:03
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	790000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 12:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW02102023	Date Analyzed:	10/17/23 17:52
Lab Samp ID:	J026-10G	Dilution Factor:	5
Lab File ID:	H6J13049	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	200J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.94J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	52000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	71000	500	100	250
Manganese	98	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	27	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	780000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 12:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW02102023	Date Analyzed:	10/17/23 19:03
Lab Samp ID:	J026-10T	Dilution Factor:	50
Lab File ID:	H6J13070	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13065	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	16J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	51000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	72000	5000	1000	2500
Manganese	98	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	27J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	790000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	QC03102023EB	Date Analyzed:	10/17/23 17:54
Lab Samp ID:	J026-11	Dilution Factor:	1
Lab File ID:	H6J13050	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	0.57J	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	0.55J	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	84J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MBLK1W	Date Analyzed:	10/17/23 16:59
Lab Samp ID:	IMJ011WB	Dilution Factor:	1
Lab File ID:	H6J13031	Matrix:	WATER
Ext Btch ID:	IMJ011W	% Moisture:	NA
Calib. Ref.:	H6J13029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Thallium(0.12J <1/2 LOQ) was detected at trace level in IMJ012WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ012WL/IMJ012WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of MS/MSD were analyzed and the following were noted: J026-02M/J026-02S - Percent recoveries for Calcium(241X), Copper, Magnesium(31X), Manganese(48X), Sodium(1973X) and Zinc were not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ012WB	1	NA	10/18/2313:09	10/17/2310:45	H6J14019	H6J14017	IMJ012W	Method Blank
LCS1W	IMJ012WL	1	NA	10/18/2313:12	10/17/2310:45	H6J14020	H6J14017	IMJ012W	Lab Control Sample (LCS)
LCD1W	IMJ012WC	1	NA	10/18/2313:15	10/17/2310:45	H6J14021	H6J14017	IMJ012W	LCS Duplicate
BGMW09102023	J026-01I	10	NA	10/17/2319:24	10/17/2310:45	H6J13077	H6J13072	IMJ012W	Diluted Sample
BGMW07102023	J026-02A	20	NA	10/17/2319:27	10/17/2310:45	H6J13078	H6J13072	IMJ012W	Analytical Spike Sample
BGMW07102023	J026-02K	20	NA	10/17/2319:30	10/17/2310:45	H6J13079	H6J13072	IMJ012W	Diluted Sample
BGMW07102023	J026-02J	100	NA	10/17/2319:33	10/17/2310:45	H6J13080	H6J13072	IMJ012W	Diluted Sample
BGMW07102023MS	J026-02M	20	NA	10/17/2319:35	10/17/2310:45	H6J13081	H6J13072	IMJ012W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	20	NA	10/17/2319:38	10/17/2310:45	H6J13082	H6J13072	IMJ012W	MS Duplicate (MSD)
TMW37102023	J026-03G	5	NA	10/17/2319:41	10/17/2310:45	H6J13083	H6J13072	IMJ012W	Diluted Sample
BGMW10102023	J026-04G	5	NA	10/17/2319:50	10/17/2310:45	H6J13086	H6J13084	IMJ012W	Diluted Sample
FDUP02-102023	J026-05G	5	NA	10/17/2319:53	10/17/2310:45	H6J13087	H6J13084	IMJ012W	Diluted Sample
MW24102023	J026-06G	5	NA	10/17/2319:56	10/17/2310:45	H6J13088	H6J13084	IMJ012W	Diluted Sample
MW02102023	J026-07G	5	NA	10/17/2319:59	10/17/2310:45	H6J13089	H6J13084	IMJ012W	Diluted Sample
MW01102023	J026-08G	5	NA	10/17/2320:02	10/17/2310:45	H6J13090	H6J13084	IMJ012W	Diluted Sample
BGMW01102023	J026-09G	5	NA	10/17/2320:05	10/17/2310:45	H6J13091	H6J13084	IMJ012W	Diluted Sample
BGMW02102023	J026-10G	5	NA	10/17/2320:08	10/17/2310:45	H6J13092	H6J13084	IMJ012W	Diluted Sample
QC03102023EB	J026-11	1	NA	10/17/2320:10	10/17/2310:45	H6J13093	H6J13084	IMJ012W	Field Sample
BGMW09102023	J026-01T	50	NA	10/17/2320:19	10/17/2310:45	H6J13096	H6J13094	IMJ012W	Diluted Sample
BGMW07102023	J026-02A	200	NA	10/17/2320:22	10/17/2310:45	H6J13097	H6J13094	IMJ012W	Analytical Spike Sample
BGMW07102023	J026-02T	200	NA	10/17/2320:25	10/17/2310:45	H6J13098	H6J13094	IMJ012W	Diluted Sample
BGMW07102023	J026-02J	1000	NA	10/17/2320:28	10/17/2310:45	H6J13099	H6J13094	IMJ012W	Diluted Sample
BGMW07102023MS	J026-02M	200	NA	10/17/2320:31	10/17/2310:45	H6J13100	H6J13094	IMJ012W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	200	NA	10/17/2320:34	10/17/2310:45	H6J13101	H6J13094	IMJ012W	MS Duplicate (MSD)
TMW37102023	J026-03T	50	NA	10/17/2320:37	10/17/2310:45	H6J13102	H6J13094	IMJ012W	Diluted Sample
BGMW10102023	J026-04T	50	NA	10/17/2320:39	10/17/2310:45	H6J13103	H6J13094	IMJ012W	Diluted Sample
FDUP02-102023	J026-05T	50	NA	10/17/2320:42	10/17/2310:45	H6J13104	H6J13094	IMJ012W	Diluted Sample
MW24102023	J026-06T	50	NA	10/17/2320:45	10/17/2310:45	H6J13105	H6J13094	IMJ012W	Diluted Sample
MW02102023	J026-07T	50	NA	10/17/2320:54	10/17/2310:45	H6J13108	H6J13106	IMJ012W	Diluted Sample
MW01102023	J026-08T	50	NA	10/17/2320:57	10/17/2310:45	H6J13109	H6J13106	IMJ012W	Diluted Sample
BGMW01102023	J026-09T	50	NA	10/17/2321:00	10/17/2310:45	H6J13110	H6J13106	IMJ012W	Diluted Sample
BGMW02102023	J026-10T	50	NA	10/17/2321:03	10/17/2310:45	H6J13111	H6J13106	IMJ012W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW09102023
Lab Samp ID: J026-01I
Lab File ID: H6J13077
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13072

Date Collected: 10/03/23 08:10
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 19:24
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.3J	10	1.2	2.5
Barium	9.3J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	32000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	3900	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1700J	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	4.8J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: BGMW09102023
Lab Samp ID: J026-01T
Lab File ID: H6J13096
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13094

Date Analyzed: 10/17/23 20:19
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW09102023	Date Analyzed:	10/17/23 19:24
Lab Samp ID:	J026-01I	Dilution Factor:	10
Lab File ID:	H6J13077	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13072	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.3J	10	1.2	2.5
Barium	9.3J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	32000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	3900	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1700J	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1200000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	4.8J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW09102023	Date Analyzed:	10/17/23 20:19
Lab Samp ID:	J026-01T	Dilution Factor:	50
Lab File ID:	H6J13096	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	33000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4000J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	3000J	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW07102023
Lab Samp ID: J026-02K
Lab File ID: H6J13079
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13072

Date Collected: 10/03/23 08:20
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 19:30
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	30	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	720000	4000	1000	2000
Chromium	ND	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	94000	2000	400	1000
Manganese	1400	20	5.0	10
Nickel	7.0J	20	5.0	10
Potassium	8600	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	ND	400	100	200

Sample ID: BGMW07102023
Lab Samp ID: J026-02T
Lab File ID: H6J13098
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13094

Date Analyzed: 10/17/23 20:25
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	5900000	40000	10000	20000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW07102023	Date Analyzed:	10/17/23 19:30
Lab Samp ID:	J026-02K	Dilution Factor:	20
Lab File ID:	H6J13079	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13072	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	30	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	720000	4000	1000	2000
Chromium	ND	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	94000	2000	400	1000
Manganese	1400	20	5.0	10
Nickel	7.0J	20	5.0	10
Potassium	8600	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	6000000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	ND	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW07102023	Date Analyzed:	10/17/23 20:25
Lab Samp ID:	J026-02T	Dilution Factor:	200
Lab File ID:	H6J13098	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	20000	4000	10000
Antimony	ND	200	50	100
Arsenic	ND	200	25	50
Barium	ND	200	50	100
Beryllium	ND	100	20	40
Cadmium	ND	200	20	40
Calcium	710000	40000	10000	20000
Chromium	ND	200	20	40
Cobalt	ND	150	20	40
Copper	ND	400	100	200
Iron	ND	40000	5000	10000
Lead	ND	200	10	20
Magnesium	98000	20000	4000	10000
Manganese	1500	200	50	100
Nickel	ND	200	50	100
Potassium	13000J	40000	10000	20000
Selenium	ND	200	30	60
Silver	ND	200	20	40
Sodium	5900000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	ND	200	50	100
Zinc	ND	4000	1000	2000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: TMW37102023
Lab Samp ID: J026-03G
Lab File ID: H6J13083
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13072

Date Collected: 10/03/23 08:30
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 19:41
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7900	1000	250	500
Chromium	0.77J	5.0	0.50	1.0
Cobalt	1.4J	3.7	0.50	1.0
Copper	4.4J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	850	500	100	250
Manganese	46	5.0	1.2	2.5
Nickel	110	5.0	1.2	2.5
Potassium	860J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW37102023
Lab Samp ID: J026-03T
Lab File ID: H6J13102
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13094

Date Analyzed: 10/17/23 20:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	630000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	TMW37102023	Date Analyzed:	10/17/23 19:41
Lab Samp ID:	J026-03G	Dilution Factor:	5
Lab File ID:	H6J13083	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13072	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7900	1000	250	500
Chromium	0.77J	5.0	0.50	1.0
Cobalt	1.4J	3.7	0.50	1.0
Copper	4.4J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	850	500	100	250
Manganese	46	5.0	1.2	2.5
Nickel	110	5.0	1.2	2.5
Potassium	860J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	630000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	TMW37102023	Date Analyzed:	10/17/23 20:37
Lab Samp ID:	J026-03T	Dilution Factor:	50
Lab File ID:	H6J13102	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7400J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	46J	50	12	25
Nickel	100	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	630000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW10102023
Lab Samp ID: J026-04G
Lab File ID: H6J13086
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13084

Date Collected: 10/03/23 09:15
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 19:50
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	6.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8100	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	900	500	100	250
Manganese	15	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	760J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW10102023
Lab Samp ID: J026-04T
Lab File ID: H6J13103
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13094

Date Analyzed: 10/17/23 20:39
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	620000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW10102023	Date Analyzed:	10/17/23 19:50
Lab Samp ID:	J026-04G	Dilution Factor:	5
Lab File ID:	H6J13086	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	6.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8100	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	900	500	100	250
Manganese	15	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	760J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	600000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW10102023	Date Analyzed:	10/17/23 20:39
Lab Samp ID:	J026-04T	Dilution Factor:	50
Lab File ID:	H6J13103	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7400J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	620000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: FDUP02-102023
Lab Samp ID: J026-05G
Lab File ID: H6J13087
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13084

Date Collected: 10/03/23 09:25
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 19:53
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	7.5	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8200	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	910	500	100	250
Manganese	15	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	900J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP02-102023
Lab Samp ID: J026-05T
Lab File ID: H6J13104
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13094

Date Analyzed: 10/17/23 20:42
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	630000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:25
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	FDUP02-102023	Date Analyzed:	10/17/23 19:53
Lab Samp ID:	J026-05G	Dilution Factor:	5
Lab File ID:	H6J13087	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	7.5	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8200	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	910	500	100	250
Manganese	15	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	900J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	630000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/03/23 09:25
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J026	Date Extracted: 10/17/23 10:45
Sample ID: FDUP02-102023	Date Analyzed: 10/17/23 20:42
Lab Samp ID: J026-05T	Dilution Factor: 50
Lab File ID: H6J13104	Matrix: WATER
Ext Btch ID: IMJ012W	% Moisture: NA
Calib. Ref.: H6J13094	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7700J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	14J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	630000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: MW24102023
Lab Samp ID: J026-06G
Lab File ID: H6J13088
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13084

Date Collected: 10/03/23 09:45
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 19:56
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.72J	5.0	0.62	1.2
Barium	320	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	32000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	2100	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	430	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	930J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW24102023
Lab Samp ID: J026-06T
Lab File ID: H6J13105
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13094

Date Analyzed: 10/17/23 20:45
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	260000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 09:45
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW24102023	Date Analyzed:	10/17/23 19:56
Lab Samp ID:	J026-06G	Dilution Factor:	5
Lab File ID:	H6J13088	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.72J	5.0	0.62	1.2
Barium	320	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	32000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	2100	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	430	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	930J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	260000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/03/23 09:45
Project	: USACE WINGATE	Date Received	: 10/04/23
SDG NO.	: 23J026	Date Extracted	: 10/17/23 10:45
Sample ID	: MW24102023	Date Analyzed	: 10/17/23 20:45
Lab Samp ID	: J026-06T	Dilution Factor	: 50
Lab File ID	: H6J13105	Matrix	: WATER
Ext Btch ID	: IMJ012W	% Moisture	: NA
Calib. Ref.	: H6J13094	Instrument ID	: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	310	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	31000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	2100J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	440	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	260000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume	:50ml
Prepared by	: THuang	Analyzed by	:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: MW02102023
Lab Samp ID: J026-07G
Lab File ID: H6J13089
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13084

Date Collected: 10/03/23 10:20
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 19:59
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	32	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	95000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	20000	500	100	250
Manganese	30	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	450J	1000	250	500
Selenium	3.7J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	26J	100	25	50

Sample ID: MW02102023
Lab Samp ID: J026-07T
Lab File ID: H6J13108
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13106

Date Analyzed: 10/17/23 20:54
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW02102023	Date Analyzed:	10/17/23 19:59
Lab Samp ID:	J026-07G	Dilution Factor:	5
Lab File ID:	H6J13089	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	32	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	95000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	20000	500	100	250
Manganese	30	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	450J	1000	250	500
Selenium	3.7J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	550000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	26J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW02102023	Date Analyzed:	10/17/23 20:54
Lab Samp ID:	J026-07T	Dilution Factor:	50
Lab File ID:	H6J13108	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	31J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	94000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	20000	5000	1000	2500
Manganese	27J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	570000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW01102023	Date Analyzed:	10/17/23 20:02
Lab Samp ID:	J026-08G	Dilution Factor:	5
Lab File ID:	H6J13090	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	31000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6700	500	100	250
Manganese	7.5	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	450J	1000	250	500
Selenium	3.6J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	MW01102023	Date Analyzed:	10/17/23 20:57
Lab Samp ID:	J026-08T	Dilution Factor:	50
Lab File ID:	H6J13109	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	790000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW01102023	Date Analyzed:	10/17/23 20:02
Lab Samp ID:	J026-08G	Dilution Factor:	5
Lab File ID:	H6J13090	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	31000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6700	500	100	250
Manganese	7.5	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	450J	1000	250	500
Selenium	3.6J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	800000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 10:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MW01102023	Date Analyzed:	10/17/23 20:57
Lab Samp ID:	J026-08T	Dilution Factor:	50
Lab File ID:	H6J13109	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	30000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6900	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	790000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 11:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW01102023	Date Analyzed:	10/17/23 20:05
Lab Samp ID:	J026-09G	Dilution Factor:	5
Lab File ID:	H6J13091	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.72J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	61000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	6.3J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	35000	500	100	250
Manganese	300	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	500J	1000	250	500
Selenium	7.4	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	BGMW01102023	Date Analyzed:	10/17/23 21:00
Lab Samp ID:	J026-09T	Dilution Factor:	50
Lab File ID:	H6J13110	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	930000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW01102023
Lab Samp ID: J026-09G
Lab File ID: H6J13091
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13084

Date Collected: 10/03/23 11:20
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 20:05
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.72J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	61000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	6.3J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	35000	500	100	250
Manganese	300	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	500J	1000	250	500
Selenium	7.4	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	920000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 11:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW01102023	Date Analyzed:	10/17/23 21:00
Lab Samp ID:	J026-09T	Dilution Factor:	50
Lab File ID:	H6J13110	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	59000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	37000	5000	1000	2500
Manganese	310	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	930000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J026
Sample ID: BGMW02102023
Lab Samp ID: J026-10G
Lab File ID: H6J13092
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13084

Date Collected: 10/03/23 12:55
Date Received: 10/04/23
Date Extracted: 10/17/23 10:45
Date Analyzed: 10/17/23 20:08
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.0J	5.0	0.62	1.2
Barium	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	52000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.0J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	70000	500	100	250
Manganese	49	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	470J	1000	250	500
Selenium	30	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW02102023
Lab Samp ID: J026-10T
Lab File ID: H6J13111
Ext Btch ID: IMJ012W
Calib. Ref.: H6J13106

Date Analyzed: 10/17/23 21:03
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	770000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 12:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW02102023	Date Analyzed:	10/17/23 20:08
Lab Samp ID:	J026-10G	Dilution Factor:	5
Lab File ID:	H6J13092	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.0J	5.0	0.62	1.2
Barium	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	52000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.0J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	70000	500	100	250
Manganese	49	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	470J	1000	250	500
Selenium	30	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	800000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 12:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	BGMW02102023	Date Analyzed:	10/17/23 21:03
Lab Samp ID:	J026-10T	Dilution Factor:	50
Lab File ID:	H6J13111	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	49000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	69000	5000	1000	2500
Manganese	46J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	27J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	770000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/03/23 14:00
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	QC03102023EB	Date Analyzed:	10/17/23 20:10
Lab Samp ID:	J026-11	Dilution Factor:	1
Lab File ID:	H6J13093	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J13084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	0.97J	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	62J	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	0.74J	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	130J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J026	Date Extracted:	10/17/23 10:45
Sample ID:	MBLK1W	Date Analyzed:	10/18/23 13:09
Lab Samp ID:	IMJ012WB	Dilution Factor:	1
Lab File ID:	H6J14019	Matrix:	WATER
Ext Btch ID:	IMJ012W	% Moisture:	NA
Calib. Ref.:	H6J14017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	0.12J	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ019WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ019WL/HGJ019WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J026-02M/J026-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

J026-02 was reported from dilution due to suspected matrix interference exhibited by MS/MSD/PS deficiencies at non-dilution run.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ019WB	1	NA	10/23/2314:27	10/23/2310:37	M47J010012	M47J010	23HGJ019W	Method Blank
LCS1W	HGJ019WL	1	NA	10/23/2314:29	10/23/2310:37	M47J010013	M47J010	23HGJ019W	Lab Control Sample (LCS)
LCD1W	HGJ019WC	1	NA	10/23/2314:31	10/23/2310:37	M47J010014	M47J010	23HGJ019W	LCS Duplicate
BGMW09102023	J026-01	1	NA	10/23/2314:50	10/23/2310:37	M47J010024	M47J010	23HGJ019W	Field Sample
TMW37102023	J026-03	1	NA	10/23/2315:00	10/23/2310:37	M47J010030	M47J010	23HGJ019W	Field Sample
BGMW10102023	J026-04	1	NA	10/23/2315:02	10/23/2310:37	M47J010031	M47J010	23HGJ019W	Field Sample
FDUP02-102023	J026-05	1	NA	10/23/2315:04	10/23/2310:37	M47J010032	M47J010	23HGJ019W	Field Sample
MW24102023	J026-06	1	NA	10/23/2315:06	10/23/2310:37	M47J010033	M47J010	23HGJ019W	Field Sample
MW02102023	J026-07	1	NA	10/23/2315:11	10/23/2310:37	M47J010036	M47J010	23HGJ019W	Field Sample
MW01102023	J026-08	1	NA	10/23/2315:13	10/23/2310:37	M47J010037	M47J010	23HGJ019W	Field Sample
BGMW01102023	J026-09	1	NA	10/23/2315:15	10/23/2310:37	M47J010038	M47J010	23HGJ019W	Field Sample
BGMW02102023	J026-10	1	NA	10/23/2315:17	10/23/2310:37	M47J010039	M47J010	23HGJ019W	Field Sample
QC03102023EB	J026-11	1	NA	10/23/2315:19	10/23/2310:37	M47J010040	M47J010	23HGJ019W	Field Sample
BGMW07102023MS	J026-02M	5	NA	10/23/2316:43	10/23/2310:37	M47J010083	M47J010	23HGJ019W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	5	NA	10/23/2316:45	10/23/2310:37	M47J010084	M47J010	23HGJ019W	MS Duplicate (MSD)
BGMW07102023	J026-02I	5	NA	10/23/2316:49	10/23/2310:37	M47J010086	M47J010	23HGJ019W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ019WB	ND	1	NA	0.50	0.10	0.20	10/23/2314:27	10/23/2310:37	M47J010012	M47J010	23HGJ019W	NA	NA
LCS1W	HGJ019WL	2.5	1	NA	0.50	0.10	0.20	10/23/2314:29	10/23/2310:37	M47J010013	M47J010	23HGJ019W	NA	NA
LCD1W	HGJ019WC	2.7	1	NA	0.50	0.10	0.20	10/23/2314:31	10/23/2310:37	M47J010014	M47J010	23HGJ019W	NA	NA
BGMW09102023	J026-01	ND	1	NA	0.50	0.10	0.20	10/23/2314:50	10/23/2310:37	M47J010024	M47J010	23HGJ019W	10/03/2308:10	10/04/23
TMW37102023	J026-03	ND	1	NA	0.50	0.10	0.20	10/23/2315:00	10/23/2310:37	M47J010030	M47J010	23HGJ019W	10/03/2308:30	10/04/23
BGMW10102023	J026-04	ND	1	NA	0.50	0.10	0.20	10/23/2315:02	10/23/2310:37	M47J010031	M47J010	23HGJ019W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05	ND	1	NA	0.50	0.10	0.20	10/23/2315:04	10/23/2310:37	M47J010032	M47J010	23HGJ019W	10/03/2309:25	10/04/23
MW24102023	J026-06	ND	1	NA	0.50	0.10	0.20	10/23/2315:06	10/23/2310:37	M47J010033	M47J010	23HGJ019W	10/03/2309:45	10/04/23
MW02102023	J026-07	ND	1	NA	0.50	0.10	0.20	10/23/2315:11	10/23/2310:37	M47J010036	M47J010	23HGJ019W	10/03/2310:20	10/04/23
MW01102023	J026-08	ND	1	NA	0.50	0.10	0.20	10/23/2315:13	10/23/2310:37	M47J010037	M47J010	23HGJ019W	10/03/2310:40	10/04/23
BGMW01102023	J026-09	ND	1	NA	0.50	0.10	0.20	10/23/2315:15	10/23/2310:37	M47J010038	M47J010	23HGJ019W	10/03/2311:20	10/04/23
BGMW02102023	J026-10	ND	1	NA	0.50	0.10	0.20	10/23/2315:17	10/23/2310:37	M47J010039	M47J010	23HGJ019W	10/03/2312:55	10/04/23
QC03102023EB	J026-11	ND	1	NA	0.50	0.10	0.20	10/23/2315:19	10/23/2310:37	M47J010040	M47J010	23HGJ019W	10/03/2314:00	10/04/23
BGMW07102023MS	J026-02M	2.3J	5	NA	2.5	0.50	1.0	10/23/2316:43	10/23/2310:37	M47J010083	M47J010	23HGJ019W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02S	2.3J	5	NA	2.5	0.50	1.0	10/23/2316:45	10/23/2310:37	M47J010084	M47J010	23HGJ019W	10/03/2308:20	10/04/23
BGMW07102023	J026-02I	ND	5	NA	2.5	0.50	1.0	10/23/2316:49	10/23/2310:37	M47J010086	M47J010	23HGJ019W	10/03/2308:20	10/04/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ020WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ020WL/HGJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J026-02M/J026-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

J026-02 was reported from dilution due to suspected matrix interference exhibited by MS/MSD/PS deficiencies at non-dilution run.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J026
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ020WB	1	NA	10/23/2315:40	10/23/2311:20	M47J010051	M47J010	23HGJ020W	Method Blank
LCS1W	HGJ020WL	1	NA	10/23/2315:42	10/23/2311:20	M47J010052	M47J010	23HGJ020W	Lab Control Sample (LCS)
LCD1W	HGJ020WC	1	NA	10/23/2315:45	10/23/2311:20	M47J010053	M47J010	23HGJ020W	LCS Duplicate
BGMW09102023	J026-01	1	NA	10/23/2315:46	10/23/2311:20	M47J010054	M47J010	23HGJ020W	Field Sample
TMW37102023	J026-03	1	NA	10/23/2316:03	10/23/2311:20	M47J010062	M47J010	23HGJ020W	Field Sample
BGMW10102023	J026-04	1	NA	10/23/2316:05	10/23/2311:20	M47J010063	M47J010	23HGJ020W	Field Sample
FDUP02-102023	J026-05	1	NA	10/23/2316:07	10/23/2311:20	M47J010064	M47J010	23HGJ020W	Field Sample
MW24102023	J026-06	1	NA	10/23/2316:09	10/23/2311:20	M47J010065	M47J010	23HGJ020W	Field Sample
MW02102023	J026-07	1	NA	10/23/2316:10	10/23/2311:20	M47J010066	M47J010	23HGJ020W	Field Sample
MW01102023	J026-08	1	NA	10/23/2316:12	10/23/2311:20	M47J010067	M47J010	23HGJ020W	Field Sample
BGMW01102023	J026-09	1	NA	10/23/2316:14	10/23/2311:20	M47J010068	M47J010	23HGJ020W	Field Sample
BGMW02102023	J026-10	1	NA	10/23/2316:16	10/23/2311:20	M47J010069	M47J010	23HGJ020W	Field Sample
QC03102023EB	J026-11	1	NA	10/23/2316:22	10/23/2311:20	M47J010072	M47J010	23HGJ020W	Field Sample
BGMW07102023MS	J026-02M	5	NA	10/23/2316:53	10/23/2311:20	M47J010088	M47J010	23HGJ020W	Matrix Spike Sample (MS)
BGMW07102023MSD	J026-02S	5	NA	10/23/2316:54	10/23/2311:20	M47J010089	M47J010	23HGJ020W	MS Duplicate (MSD)
BGMW07102023	J026-02I	5	NA	10/23/2316:58	10/23/2311:20	M47J010091	M47J010	23HGJ020W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ020WB	ND	1	NA	0.50	0.10	0.20	10/23/2315:40	10/23/2311:20	M47J010051	M47J010	23HGJ020W	NA	NA
LCS1W	HGJ020WL	2.7	1	NA	0.50	0.10	0.20	10/23/2315:42	10/23/2311:20	M47J010052	M47J010	23HGJ020W	NA	NA
LCD1W	HGJ020WC	2.7	1	NA	0.50	0.10	0.20	10/23/2315:45	10/23/2311:20	M47J010053	M47J010	23HGJ020W	NA	NA
BGMW09102023	J026-01	ND	1	NA	0.50	0.10	0.20	10/23/2315:46	10/23/2311:20	M47J010054	M47J010	23HGJ020W	10/03/2308:10	10/04/23
TMW37102023	J026-03	ND	1	NA	0.50	0.10	0.20	10/23/2316:03	10/23/2311:20	M47J010062	M47J010	23HGJ020W	10/03/2308:30	10/04/23
BGMW10102023	J026-04	ND	1	NA	0.50	0.10	0.20	10/23/2316:05	10/23/2311:20	M47J010063	M47J010	23HGJ020W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05	ND	1	NA	0.50	0.10	0.20	10/23/2316:07	10/23/2311:20	M47J010064	M47J010	23HGJ020W	10/03/2309:25	10/04/23
MW24102023	J026-06	ND	1	NA	0.50	0.10	0.20	10/23/2316:09	10/23/2311:20	M47J010065	M47J010	23HGJ020W	10/03/2309:45	10/04/23
MW02102023	J026-07	ND	1	NA	0.50	0.10	0.20	10/23/2316:10	10/23/2311:20	M47J010066	M47J010	23HGJ020W	10/03/2310:20	10/04/23
MW01102023	J026-08	ND	1	NA	0.50	0.10	0.20	10/23/2316:12	10/23/2311:20	M47J010067	M47J010	23HGJ020W	10/03/2310:40	10/04/23
BGMW01102023	J026-09	ND	1	NA	0.50	0.10	0.20	10/23/2316:14	10/23/2311:20	M47J010068	M47J010	23HGJ020W	10/03/2311:20	10/04/23
BGMW02102023	J026-10	ND	1	NA	0.50	0.10	0.20	10/23/2316:16	10/23/2311:20	M47J010069	M47J010	23HGJ020W	10/03/2312:55	10/04/23
QC03102023EB	J026-11	ND	1	NA	0.50	0.10	0.20	10/23/2316:22	10/23/2311:20	M47J010072	M47J010	23HGJ020W	10/03/2314:00	10/04/23
BGMW07102023MS	J026-02M	2.2J	5	NA	2.5	0.50	1.0	10/23/2316:53	10/23/2311:20	M47J010088	M47J010	23HGJ020W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02S	2.2J	5	NA	2.5	0.50	1.0	10/23/2316:54	10/23/2311:20	M47J010089	M47J010	23HGJ020W	10/03/2308:20	10/04/23
BGMW07102023	J026-02I	ND	5	NA	2.5	0.50	1.0	10/23/2316:58	10/23/2311:20	M47J010091	M47J010	23HGJ020W	10/03/2308:20	10/04/23

Note: Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23J026

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, three(3) method blanks were analyzed. PLJ007WB, PLJ008WB and PLJ011WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, three(3) sets of LCS/LCD were analyzed.
- PLJ007WL/PLJ007WC were within LCS limits.
- PLJ008WL/PLJ008WC were within LCS limits.
- PLJ011WL/PLJ011WC were within LCS limits.

Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Perchlorate was within MS QC limits in J026-02M/J026-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J026-05I, -06I, -07J, -08I, and -11I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ007WB	ND	1	NA	0.20	0.050	0.10	10/11/2310:51	NA	23MJ11008	MJ11004	PLJ007W	NA	NA
LCS1W	PLJ007WL	0.22	1	NA	0.20	0.050	0.10	10/11/2311:06	NA	23MJ11009	MJ11004	PLJ007W	NA	NA
LCD1W	PLJ007WC	0.21	1	NA	0.20	0.050	0.10	10/11/2311:21	NA	23MJ11010	MJ11004	PLJ007W	NA	NA
BGMW09102023	J026-01	ND	1	NA	0.20	0.050	0.10	10/11/2311:43	NA	23MJ11011	MJ11004	PLJ007W	10/03/2308:10	10/04/23
BGMW07102023	J026-02	ND	1	NA	0.20	0.050	0.10	10/11/2311:59	NA	23MJ11012	MJ11004	PLJ007W	10/03/2308:20	10/04/23
BGMW07102023MS	J026-02M	0.22	1	NA	0.20	0.050	0.10	10/11/2312:13	NA	23MJ11013	MJ11004	PLJ007W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02S	0.23	1	NA	0.20	0.050	0.10	10/11/2312:28	NA	23MJ11014	MJ11004	PLJ007W	10/03/2308:20	10/04/23
TMW37102023	J026-03	ND	1	NA	0.20	0.050	0.10	10/11/2312:43	NA	23MJ11015	MJ11004	PLJ007W	10/03/2308:30	10/04/23
BGMW10102023	J026-04	ND	1	NA	0.20	0.050	0.10	10/11/2312:57	NA	23MJ11016	MJ11004	PLJ007W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05I	ND	5	NA	1.0	0.25	0.50	10/11/2316:01	NA	23MJ11026	MJ11025	PLJ007W	10/03/2309:25	10/04/23
MW24102023	J026-06I	ND	5	NA	1.0	0.25	0.50	10/11/2316:17	NA	23MJ11027	MJ11025	PLJ007W	10/03/2309:45	10/04/23
MW01102023	J026-08I	ND	5	NA	1.0	0.25	0.50	10/11/2316:46	NA	23MJ11029	MJ11025	PLJ007W	10/03/2310:40	10/04/23
QC03102023EB	J026-11I	ND	5	NA	1.0	0.25	0.50	10/11/2317:30	NA	23MJ11032	MJ11025	PLJ007W	10/03/2314:00	10/04/23
MBLK2W	PLJ008WB	ND	1	NA	0.20	0.050	0.10	10/12/2310:49	NA	23MJ12007	MJ12004	PLJ008W	NA	NA
LCS2W	PLJ008WL	0.22	1	NA	0.20	0.050	0.10	10/12/2311:04	NA	23MJ12008	MJ12004	PLJ008W	NA	NA
LCD2W	PLJ008WC	0.22	1	NA	0.20	0.050	0.10	10/12/2311:38	NA	23MJ12009	MJ12004	PLJ008W	NA	NA
MW02102023	J026-07J	ND	10	NA	2.0	0.50	1.0	10/12/2311:57	NA	23MJ12010	MJ12004	PLJ008W	10/03/2310:20	10/04/23
MBLK3W	PLJ011WB	ND	1	NA	0.20	0.050	0.10	10/18/2311:12	NA	23MJ18007	MJ18004	PLJ011W	NA	NA
LCS3W	PLJ011WL	0.22	1	NA	0.20	0.050	0.10	10/18/2311:27	NA	23MJ18008	MJ18004	PLJ011W	NA	NA
LCD3W	PLJ011WC	0.22	1	NA	0.20	0.050	0.10	10/18/2311:42	NA	23MJ18009	MJ18004	PLJ011W	NA	NA
BGMW01102023	J026-09H	0.80	2	NA	0.40	0.10	0.20	10/18/2312:10	NA	23MJ18010	MJ18004	PLJ011W	10/03/2311:20	10/04/23
BGMW02102023	J026-10H	0.55	2	NA	0.40	0.10	0.20	10/18/2312:25	NA	23MJ18011	MJ18004	PLJ011W	10/03/2312:55	10/04/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD 9056A
BROMIDE

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ006WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ006WL/ICJ006WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Bromide was within MS QC limits in J026-02IM/J026-02IS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J026-01I was reported at a 10X dilution factor as the sample was not able to be filtered. Samples J026-06I and -08I were reported at a 2X and 5X dilution factor respectively due to yellow color. Sample J026-02I and -09I were reported at a 5X and 2X dilution factor respectively due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD 9056A
CHLORIDE-CL

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Chloride-Cl in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ006WB and ICJ016WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ006WL/ICJ006WC and ICJ016WL/ICJ016WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Chloride-Cl was within MS QC limits in J026-02GM/J026-02GS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD 9056A
FLUORIDE

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ006WB and ICJ014WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ006WL/ICJ006WC and ICJ014WL/ICJ014WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Fluoride-F was within MS QC limits in J026-02KM/J026-02KS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J026-01I was reported at a 10X dilution factor as the sample was not able to be filtered. Samples J026-06I and -08I were reported at a 2X and 5X dilution factor respectively due to yellow color. Sample J026-02K was reported at a 10X dilution factor due to matrix interference. Samples J026-09I was reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW9056A
NITRATE-N

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrate was not detected in ICJ006WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ006WL/ICJ006WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J026-02IM/J026-02IS - Percent recovery for Nitrate was not within MS/MSD QC limits. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J026-01I was reported at a 10X dilution factor as the sample was not able to be filtered. Sample J026-06I was reported at a 2X dilution due to yellow color. Sample J026-02I was reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD SW9056A
NITRITE-N

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrite was not detected in ICJ006WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ006WL/ICJ006WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J026-02JM/J026-02JS - Percent recovery for Nitrite was not within MS/MSD QC limits. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J026-01I was reported at a 10X dilution factor as the sample was not able to be filtered. Samples J026-06I and -08I were reported at a 2X and 5X dilution factor respectively due to yellow color. Sample J026-02J was reported at a 20X dilution factor due to chloride interference. Samples J026-09J and -10I were reported at a 5X and 2X dilution factor respectively due to chloride interference. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD 9056A
ORTHOPHOSPHATE-P

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ006WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ006WL/ICJ006WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J026-02IM/J026-02IS - Percent recovery for Orthophosphate-P was not within MS/MSD QC limits. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J026-01I was reported at a 10X dilution factor as the sample was not able to be filtered. Samples J026-06I and -08I were reported at a 2X and 5X dilution factor respectively due to yellow color. Samples J026-02I and -09I were reported at a 5X and 2X dilution factor respectively due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J026

METHOD 9056A
SULFATE

A total of eleven(11) water samples were received on 10/04/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ006WB and ICJ014WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ006WL/ICJ006WC and ICJ014WL/ICJ014WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Sulfate was within MS QC limits in J026-02TM/J026-02TS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J026-06I was reported at a 2X dilution factor due to yellow color. Refer to sample result form for details.

SAMPLE RESULTS

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ006WB	ND	1	NA	0.5	0.13	0.25	10/04/2308:56	NA	AJ04-62	AJ04-60	ICJ006W	NA	NA
LCS1W	ICJ006WL	1.1	1	NA	0.5	0.13	0.25	10/04/2309:16	NA	AJ04-63	AJ04-60	ICJ006W	NA	NA
LCD1W	ICJ006WC	1.1	1	NA	0.5	0.13	0.25	10/04/2309:39	NA	AJ04-64	AJ04-60	ICJ006W	NA	NA
BGMW07102023	J026-02I	7.5	5	NA	2.5	0.65	1.2	10/04/2312:43	NA	AJ04-65	AJ04-60	ICJ006W	10/03/2308:20	10/04/23
TMW37102023	J026-03	0.56	1	NA	0.5	0.13	0.25	10/04/2313:03	NA	AJ04-66	AJ04-60	ICJ006W	10/03/2308:30	10/04/23
BGMW10102023	J026-04	0.45J	1	NA	0.5	0.13	0.25	10/04/2313:23	NA	AJ04-67	AJ04-60	ICJ006W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05	0.45J	1	NA	0.5	0.13	0.25	10/04/2313:44	NA	AJ04-68	AJ04-60	ICJ006W	10/03/2309:25	10/04/23
BGMW09102023	J026-01I	2.7J	10	NA	5	1.3	2.5	10/04/2314:04	NA	AJ04-69	AJ04-60	ICJ006W	10/03/2308:10	10/04/23
MW24102023	J026-06I	0.76J	2	NA	1	0.26	0.5	10/04/2314:24	NA	AJ04-70	AJ04-60	ICJ006W	10/03/2309:45	10/04/23
MW02102023	J026-07	0.40J	1	NA	0.5	0.13	0.25	10/04/2314:44	NA	AJ04-71	AJ04-60	ICJ006W	10/03/2310:20	10/04/23
QC03102023EB	J026-11	ND	1	NA	0.5	0.13	0.25	10/04/2316:06	NA	AJ04-74	AJ04-72	ICJ006W	10/03/2314:00	10/04/23
MW01102023	J026-08I	1.4J	5	NA	2.5	0.65	1.2	10/04/2316:26	NA	AJ04-75	AJ04-72	ICJ006W	10/03/2310:40	10/04/23
BGMW01102023	J026-09I	1.8	2	NA	1	0.26	0.5	10/04/2316:46	NA	AJ04-76	AJ04-72	ICJ006W	10/03/2311:20	10/04/23
BGMW02102023	J026-10	1.6	1	NA	0.5	0.13	0.25	10/04/2317:06	NA	AJ04-77	AJ04-72	ICJ006W	10/03/2312:55	10/04/23
BGMW07102023DUP	J026-02ID	7.5	5	NA	2.5	0.65	1.2	10/04/2320:40	NA	AJ04-85	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023MS	J026-02IM	13	5	NA	2.5	0.65	1.2	10/04/2321:00	NA	AJ04-86	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02IS	13	5	NA	2.5	0.65	1.2	10/04/2321:20	NA	AJ04-87	AJ04-83	ICJ006W	10/03/2308:20	10/04/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ006WB	ND	1	NA	0.2	0.05	0.1	10/04/2308:56	NA	AJ04-62	AJ04-60	ICJ006W	NA	NA
LCS1W	ICJ006WL	2.0	1	NA	0.2	0.05	0.1	10/04/2309:16	NA	AJ04-63	AJ04-60	ICJ006W	NA	NA
LCD1W	ICJ006WC	2.0	1	NA	0.2	0.05	0.1	10/04/2309:39	NA	AJ04-64	AJ04-60	ICJ006W	NA	NA
QC03102023EB	J026-11	0.19J	1	NA	0.2	0.05	0.1	10/04/2316:06	NA	AJ04-74	AJ04-72	ICJ006W	10/03/2314:00	10/04/23
BGMW09102023	J026-01J	440	200	NA	40	10	20	10/05/2302:04	NA	AJ04-101	AJ04-95	ICJ006W	10/03/2308:10	10/04/23
TMW37102023	J026-03I	200	50	NA	10	2.5	5	10/05/2302:24	NA	AJ04-102	AJ04-95	ICJ006W	10/03/2308:30	10/04/23
BGMW10102023	J026-04I	69	40	NA	8	2	4	10/05/2302:44	NA	AJ04-103	AJ04-95	ICJ006W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05I	70	40	NA	8	2	4	10/05/2303:25	NA	AJ04-105	AJ04-95	ICJ006W	10/03/2309:25	10/04/23
MW24102023	J026-06J	94	40	NA	8	2	4	10/05/2304:46	NA	AJ04-109	AJ04-107	ICJ006W	10/03/2309:45	10/04/23
MW02102023	J026-07I	36	10	NA	2	0.5	1	10/05/2305:06	NA	AJ04-110	AJ04-107	ICJ006W	10/03/2310:20	10/04/23
MW01102023	J026-08J	49	20	NA	4	1	2	10/05/2305:47	NA	AJ04-112	AJ04-107	ICJ006W	10/03/2310:40	10/04/23
BGMW01102023	J026-09T	420	100	NA	20	5	10	10/05/2306:27	NA	AJ04-114	AJ04-107	ICJ006W	10/03/2311:20	10/04/23
BGMW02102023	J026-10K	310	100	NA	20	5	10	10/05/2306:47	NA	AJ04-115	AJ04-107	ICJ006W	10/03/2312:55	10/04/23
MBLK2W	ICJ016WB	ND	1	NA	0.2	0.05	0.1	10/08/2315:08	NA	AJ08-81	AJ08-79	ICJ016W	NA	NA
LCS2W	ICJ016WL	1.9	1	NA	0.2	0.05	0.1	10/08/2315:28	NA	AJ08-82	AJ08-79	ICJ016W	NA	NA
LCD2W	ICJ016WC	1.9	1	NA	0.2	0.05	0.1	10/08/2315:48	NA	AJ08-83	AJ08-79	ICJ016W	NA	NA
BGMW07102023	J026-02G	10000	4000	NA	800	200	400	10/08/2320:53	NA	AJ08-98	AJ08-91	ICJ016W	10/03/2308:20	10/04/23
BGMW07102023DUP	J026-02GD	10000	4000	NA	800	200	400	10/08/2321:13	NA	AJ08-99	AJ08-91	ICJ016W	10/03/2308:20	10/04/23
BGMW07102023MS	J026-02GM	19000	4000	NA	800	200	400	10/08/2321:33	NA	AJ08-100	AJ08-91	ICJ016W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02GS	19000	4000	NA	800	200	400	10/08/2321:54	NA	AJ08-101	AJ08-91	ICJ016W	10/03/2308:20	10/04/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ006WB	ND	1	NA	0.1	0.025	0.05	10/04/2308:56	NA	AJ04-62	AJ04-60	ICJ006W	NA	NA
LCS1W	ICJ006WL	0.98	1	NA	0.1	0.025	0.05	10/04/2309:16	NA	AJ04-63	AJ04-60	ICJ006W	NA	NA
LCD1W	ICJ006WC	0.99	1	NA	0.1	0.025	0.05	10/04/2309:39	NA	AJ04-64	AJ04-60	ICJ006W	NA	NA
TMW37102023	J026-03	0.91	1	NA	0.1	0.025	0.05	10/04/2313:03	NA	AJ04-66	AJ04-60	ICJ006W	10/03/2308:30	10/04/23
BGMW10102023	J026-04	0.61	1	NA	0.1	0.025	0.05	10/04/2313:23	NA	AJ04-67	AJ04-60	ICJ006W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05	0.63	1	NA	0.1	0.025	0.05	10/04/2313:44	NA	AJ04-68	AJ04-60	ICJ006W	10/03/2309:25	10/04/23
BGMW09102023	J026-01I	1.1	10	NA	1	0.25	0.5	10/04/2314:04	NA	AJ04-69	AJ04-60	ICJ006W	10/03/2308:10	10/04/23
MW24102023	J026-06I	1.0	2	NA	0.2	0.05	0.1	10/04/2314:24	NA	AJ04-70	AJ04-60	ICJ006W	10/03/2309:45	10/04/23
MW02102023	J026-07	0.39	1	NA	0.1	0.025	0.05	10/04/2314:44	NA	AJ04-71	AJ04-60	ICJ006W	10/03/2310:20	10/04/23
QC03102023EB	J026-11	0.047J	1	NA	0.1	0.025	0.05	10/04/2316:06	NA	AJ04-74	AJ04-72	ICJ006W	10/03/2314:00	10/04/23
MW01102023	J026-08I	0.90	5	NA	0.5	0.12	0.25	10/04/2316:26	NA	AJ04-75	AJ04-72	ICJ006W	10/03/2310:40	10/04/23
BGMW01102023	J026-09I	1.1	2	NA	0.2	0.05	0.1	10/04/2316:46	NA	AJ04-76	AJ04-72	ICJ006W	10/03/2311:20	10/04/23
BGMW02102023	J026-10	0.34	1	NA	0.1	0.025	0.05	10/04/2317:06	NA	AJ04-77	AJ04-72	ICJ006W	10/03/2312:55	10/04/23
MBLK2W	ICJ014WB	ND	1	NA	0.1	0.025	0.05	10/08/2300:55	NA	AJ08-39	AJ08-37	ICJ014W	NA	NA
LCS2W	ICJ014WL	0.95	1	NA	0.1	0.025	0.05	10/08/2301:16	NA	AJ08-40	AJ08-37	ICJ014W	NA	NA
LCD2W	ICJ014WC	0.94	1	NA	0.1	0.025	0.05	10/08/2301:36	NA	AJ08-41	AJ08-37	ICJ014W	NA	NA
BGMW07102023	J026-02K	0.64J	10	NA	1	0.25	0.5	10/08/2311:04	NA	AJ08-69	AJ08-61	ICJ014W	10/03/2308:20	10/04/23
BGMW07102023DUP	J026-02KD	0.64J	10	NA	1	0.25	0.5	10/08/2311:24	NA	AJ08-70	AJ08-61	ICJ014W	10/03/2308:20	10/04/23
BGMW07102023MS	J026-02KM	9.8	10	NA	1	0.25	0.5	10/08/2311:45	NA	AJ08-71	AJ08-61	ICJ014W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02KS	9.8	10	NA	1	0.25	0.5	10/08/2312:05	NA	AJ08-72	AJ08-61	ICJ014W	10/03/2308:20	10/04/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ006WB	ND	1	NA	0.1	0.03	0.06	10/04/2308:56	NA	AJ04-62	AJ04-60	ICJ006W	NA	NA
LCS1W	ICJ006WL	1.1	1	NA	0.1	0.03	0.06	10/04/2309:16	NA	AJ04-63	AJ04-60	ICJ006W	NA	NA
LCD1W	ICJ006WC	1.1	1	NA	0.1	0.03	0.06	10/04/2309:39	NA	AJ04-64	AJ04-60	ICJ006W	NA	NA
BGMW07102023	J026-02I	ND	5	NA	0.5	0.15	0.3	10/04/2312:43	NA	AJ04-65	AJ04-60	ICJ006W	10/03/2308:20	10/04/23
TMW37102023	J026-03	0.066J	1	NA	0.1	0.03	0.06	10/04/2313:03	NA	AJ04-66	AJ04-60	ICJ006W	10/03/2308:30	10/04/23
BGMW10102023	J026-04	0.077J	1	NA	0.1	0.03	0.06	10/04/2313:23	NA	AJ04-67	AJ04-60	ICJ006W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05	0.081J	1	NA	0.1	0.03	0.06	10/04/2313:44	NA	AJ04-68	AJ04-60	ICJ006W	10/03/2309:25	10/04/23
BGMW09102023	J026-01I	2.0	10	NA	1	0.3	0.6	10/04/2314:04	NA	AJ04-69	AJ04-60	ICJ006W	10/03/2308:10	10/04/23
MW24102023	J026-06I	ND	2	NA	0.2	0.06	0.12	10/04/2314:24	NA	AJ04-70	AJ04-60	ICJ006W	10/03/2309:45	10/04/23
MW02102023	J026-07	1.0	1	NA	0.1	0.03	0.06	10/04/2314:44	NA	AJ04-71	AJ04-60	ICJ006W	10/03/2310:20	10/04/23
QC03102023EB	J026-11	0.069J	1	NA	0.1	0.03	0.06	10/04/2316:06	NA	AJ04-74	AJ04-72	ICJ006W	10/03/2314:00	10/04/23
MW01102023	J026-08I	3.2	5	NA	0.5	0.15	0.3	10/04/2316:26	NA	AJ04-75	AJ04-72	ICJ006W	10/03/2310:40	10/04/23
BGMW07102023DUP	J026-02ID	ND	5	NA	0.5	0.15	0.3	10/04/2320:40	NA	AJ04-85	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023MS	J026-02IM	5.7	5	NA	0.5	0.15	0.3	10/04/2321:00	NA	AJ04-86	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02IS	5.9	5	NA	0.5	0.15	0.3	10/04/2321:20	NA	AJ04-87	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW01102023	J026-09J	8.9	5	NA	0.5	0.15	0.3	10/05/2300:43	NA	AJ04-97	AJ04-95	ICJ006W	10/03/2311:20	10/04/23
BGMW02102023	J026-10J	14	20	NA	2	0.6	1.2	10/05/2301:44	NA	AJ04-100	AJ04-95	ICJ006W	10/03/2312:55	10/04/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ006WB	ND	1	NA	0.1	0.03	0.06	10/04/2308:56	NA	AJ04-62	AJ04-60	ICJ006W	NA	NA
LCS1W	ICJ006WL	2.1	1	NA	0.1	0.03	0.06	10/04/2309:16	NA	AJ04-63	AJ04-60	ICJ006W	NA	NA
LCD1W	ICJ006WC	2.1	1	NA	0.1	0.03	0.06	10/04/2309:39	NA	AJ04-64	AJ04-60	ICJ006W	NA	NA
TMW37102023	J026-03	ND	1	NA	0.1	0.03	0.06	10/04/2313:03	NA	AJ04-66	AJ04-60	ICJ006W	10/03/2308:30	10/04/23
BGMW10102023	J026-04	ND	1	NA	0.1	0.03	0.06	10/04/2313:23	NA	AJ04-67	AJ04-60	ICJ006W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05	ND	1	NA	0.1	0.03	0.06	10/04/2313:44	NA	AJ04-68	AJ04-60	ICJ006W	10/03/2309:25	10/04/23
BGMW09102023	J026-01I	ND	10	NA	1	0.3	0.6	10/04/2314:04	NA	AJ04-69	AJ04-60	ICJ006W	10/03/2308:10	10/04/23
MW24102023	J026-06I	ND	2	NA	0.2	0.06	0.12	10/04/2314:24	NA	AJ04-70	AJ04-60	ICJ006W	10/03/2309:45	10/04/23
MW02102023	J026-07	ND	1	NA	0.1	0.03	0.06	10/04/2314:44	NA	AJ04-71	AJ04-60	ICJ006W	10/03/2310:20	10/04/23
QC03102023EB	J026-11	ND	1	NA	0.1	0.03	0.06	10/04/2316:06	NA	AJ04-74	AJ04-72	ICJ006W	10/03/2314:00	10/04/23
MW01102023	J026-08I	ND	5	NA	0.5	0.15	0.3	10/04/2316:26	NA	AJ04-75	AJ04-72	ICJ006W	10/03/2310:40	10/04/23
BGMW07102023	J026-02J	ND	20	NA	2	0.6	1.2	10/04/2321:41	NA	AJ04-88	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023DUP	J026-02JD	ND	20	NA	2	0.6	1.2	10/04/2322:01	NA	AJ04-89	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023MS	J026-02JM	66	20	NA	2	0.6	1.2	10/04/2322:21	NA	AJ04-90	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02JS	65	20	NA	2	0.6	1.2	10/04/2322:41	NA	AJ04-91	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW01102023	J026-09J	ND	5	NA	0.5	0.15	0.3	10/05/2300:43	NA	AJ04-97	AJ04-95	ICJ006W	10/03/2311:20	10/04/23
BGMW02102023	J026-10I	ND	2	NA	0.2	0.06	0.12	10/05/2301:23	NA	AJ04-99	AJ04-95	ICJ006W	10/03/2312:55	10/04/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ006WB	ND	1	NA	0.5	0.12	0.25	10/04/2308:56	NA	AJ04-62	AJ04-60	ICJ006W	NA	NA
LCS1W	ICJ006WL	2.0	1	NA	0.5	0.12	0.25	10/04/2309:16	NA	AJ04-63	AJ04-60	ICJ006W	NA	NA
LCD1W	ICJ006WC	2.0	1	NA	0.5	0.12	0.25	10/04/2309:39	NA	AJ04-64	AJ04-60	ICJ006W	NA	NA
BGMW07102023	J026-02I	ND	5	NA	2.5	0.62	1.2	10/04/2312:43	NA	AJ04-65	AJ04-60	ICJ006W	10/03/2308:20	10/04/23
TMW37102023	J026-03	ND	1	NA	0.5	0.12	0.25	10/04/2313:03	NA	AJ04-66	AJ04-60	ICJ006W	10/03/2308:30	10/04/23
BGMW10102023	J026-04	ND	1	NA	0.5	0.12	0.25	10/04/2313:23	NA	AJ04-67	AJ04-60	ICJ006W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05	ND	1	NA	0.5	0.12	0.25	10/04/2313:44	NA	AJ04-68	AJ04-60	ICJ006W	10/03/2309:25	10/04/23
BGMW09102023	J026-01I	ND	10	NA	5	1.2	2.5	10/04/2314:04	NA	AJ04-69	AJ04-60	ICJ006W	10/03/2308:10	10/04/23
MW24102023	J026-06I	0.57J	2	NA	1	0.25	0.5	10/04/2314:24	NA	AJ04-70	AJ04-60	ICJ006W	10/03/2309:45	10/04/23
MW02102023	J026-07	0.20J	1	NA	0.5	0.12	0.25	10/04/2314:44	NA	AJ04-71	AJ04-60	ICJ006W	10/03/2310:20	10/04/23
QC03102023EB	J026-11	ND	1	NA	0.5	0.12	0.25	10/04/2316:06	NA	AJ04-74	AJ04-72	ICJ006W	10/03/2314:00	10/04/23
MW01102023	J026-08I	ND	5	NA	2.5	0.62	1.2	10/04/2316:26	NA	AJ04-75	AJ04-72	ICJ006W	10/03/2310:40	10/04/23
BGMW01102023	J026-09I	ND	2	NA	1	0.25	0.5	10/04/2316:46	NA	AJ04-76	AJ04-72	ICJ006W	10/03/2311:20	10/04/23
BGMW02102023	J026-10	ND	1	NA	0.5	0.12	0.25	10/04/2317:06	NA	AJ04-77	AJ04-72	ICJ006W	10/03/2312:55	10/04/23
BGMW07102023DUP	J026-02ID	ND	5	NA	2.5	0.62	1.2	10/04/2320:40	NA	AJ04-85	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023MS	J026-02IM	13	5	NA	2.5	0.62	1.2	10/04/2321:00	NA	AJ04-86	AJ04-83	ICJ006W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02IS	13	5	NA	2.5	0.62	1.2	10/04/2321:20	NA	AJ04-87	AJ04-83	ICJ006W	10/03/2308:20	10/04/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J026

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ006WB	ND	1	NA	0.5	0.13	0.25	10/04/2308:56	NA	AJ04-62	AJ04-60	ICJ006W	NA	NA
LCS1W	ICJ006WL	4.9	1	NA	0.5	0.13	0.25	10/04/2309:16	NA	AJ04-63	AJ04-60	ICJ006W	NA	NA
LCD1W	ICJ006WC	4.9	1	NA	0.5	0.13	0.25	10/04/2309:39	NA	AJ04-64	AJ04-60	ICJ006W	NA	NA
MW24102023	J026-06I	3.1	2	NA	1	0.26	0.5	10/04/2314:24	NA	AJ04-70	AJ04-60	ICJ006W	10/03/2309:45	10/04/23
QC03102023EB	J026-11	0.76	1	NA	0.5	0.13	0.25	10/04/2316:06	NA	AJ04-74	AJ04-72	ICJ006W	10/03/2314:00	10/04/23
BGMW09102023	J026-01J	1700	200	NA	100	26	50	10/05/2302:04	NA	AJ04-101	AJ04-95	ICJ006W	10/03/2308:10	10/04/23
TMW37102023	J026-03I	630	50	NA	25	6.5	12	10/05/2302:24	NA	AJ04-102	AJ04-95	ICJ006W	10/03/2308:30	10/04/23
BGMW10102023	J026-04J	850	100	NA	50	13	25	10/05/2303:05	NA	AJ04-104	AJ04-95	ICJ006W	10/03/2309:15	10/04/23
FDUP02-102023	J026-05J	900	100	NA	50	13	25	10/05/2303:45	NA	AJ04-106	AJ04-95	ICJ006W	10/03/2309:25	10/04/23
MW02102023	J026-07J	690	100	NA	50	13	25	10/05/2305:26	NA	AJ04-111	AJ04-107	ICJ006W	10/03/2310:20	10/04/23
MW01102023	J026-08K	820	100	NA	50	13	25	10/05/2306:07	NA	AJ04-113	AJ04-107	ICJ006W	10/03/2310:40	10/04/23
BGMW01102023	J026-09T	1200	100	NA	50	13	25	10/05/2306:27	NA	AJ04-114	AJ04-107	ICJ006W	10/03/2311:20	10/04/23
BGMW02102023	J026-10K	1000	100	NA	50	13	25	10/05/2306:47	NA	AJ04-115	AJ04-107	ICJ006W	10/03/2312:55	10/04/23
MBLK2W	ICJ014WB	ND	1	NA	0.5	0.13	0.25	10/08/2300:55	NA	AJ08-39	AJ08-37	ICJ014W	NA	NA
LCS2W	ICJ014WL	4.6	1	NA	0.5	0.13	0.25	10/08/2301:16	NA	AJ08-40	AJ08-37	ICJ014W	NA	NA
LCD2W	ICJ014WC	4.6	1	NA	0.5	0.13	0.25	10/08/2301:36	NA	AJ08-41	AJ08-37	ICJ014W	NA	NA
BGMW07102023	J026-02T	1200	100	NA	50	13	25	10/08/2313:06	NA	AJ08-75	AJ08-73	ICJ014W	10/03/2308:20	10/04/23
BGMW07102023DUP	J026-02TD	1200	100	NA	50	13	25	10/08/2313:26	NA	AJ08-76	AJ08-73	ICJ014W	10/03/2308:20	10/04/23
BGMW07102023MS	J026-02TM	1700	100	NA	50	13	25	10/08/2313:47	NA	AJ08-77	AJ08-73	ICJ014W	10/03/2308:20	10/04/23
BGMW07102023MSD	J026-02TS	1700	100	NA	50	13	25	10/08/2314:07	NA	AJ08-78	AJ08-73	ICJ014W	10/03/2308:20	10/04/23

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-21-2023
EMAX Batch No.: 23J027

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/04/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW23102023	J027-01	10/02/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9
TMW44102023	J027-02	10/02/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9
TMW16102023	J027-03	10/02/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9
FDUP01-102023	J027-04	10/02/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
BGMW12102023	J027-05	10/02/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
TMW46102023	J027-06	10/02/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
TMW19102023	J027-07	10/02/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				SEMIVOLATILES + APP 9
MW32102023	J027-08	10/02/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
BGMW03102023	J027-09	10/02/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW18102023	J027-10	10/02/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9
BGMW08102023	J027-11	10/02/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 POLYCHLORINATED BIPHENYLS (PCBS)
TMW36102023	J027-12	10/02/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9
QC02102023TB	J027-13	10/02/23	WATER	VOCS BY 8260C TPH GASOLINE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of thirteen(13) water samples were received on 10/04/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied except for Naphthalene was detected biased high(%D=26.3) in CCV(data file ID RJG104). However, note that Naphthalene was not detected in the associated field samples. Note that" Minimum Response Factor" for all analytes were within method recommended response factors with the exception of Acetone and 2-Butanone. However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VOE2J07B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VOE2J07L/VOE2J07C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : E2

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOE2J07L	1	NA	10/12/2318:43	10/12/2318:43	RJG105	RJG046	VOE2J07	Lab Control Sample (LCS)
LCD1W	VOE2J07C	1	NA	10/12/2319:07	10/12/2319:07	RJG106	RJG046	VOE2J07	LCS Duplicate
MBLK1W	VOE2J07B	1	NA	10/12/2320:05	10/12/2320:05	RJG108	RJG046	VOE2J07	Method Blank
MW23102023	23J027-01	1	NA	10/12/2320:43	10/12/2320:43	RJG109	RJG046	VOE2J07	Field Sample
TMW44102023	23J027-02	1	NA	10/12/2321:07	10/12/2321:07	RJG110	RJG046	VOE2J07	Field Sample
TMW16102023	23J027-03	1	NA	10/12/2321:32	10/12/2321:32	RJG111	RJG046	VOE2J07	Field Sample
FDUP01-102023	23J027-04	1	NA	10/12/2321:56	10/12/2321:56	RJG112	RJG046	VOE2J07	Field Sample
BGMW12102023	23J027-05	1	NA	10/12/2322:20	10/12/2322:20	RJG113	RJG046	VOE2J07	Field Sample
TMW46102023	23J027-06	1	NA	10/12/2322:45	10/12/2322:45	RJG114	RJG046	VOE2J07	Field Sample
TMW19102023	23J027-07	1	NA	10/12/2323:09	10/12/2323:09	RJG115	RJG046	VOE2J07	Field Sample
MW32102023	23J027-08	1	NA	10/12/2323:33	10/12/2323:33	RJG116	RJG046	VOE2J07	Field Sample
BGMW03102023	23J027-09	1	NA	10/12/2323:58	10/12/2323:58	RJG117	RJG046	VOE2J07	Field Sample
TMW18102023	23J027-10	1	NA	10/13/2300:22	10/13/2300:22	RJG118	RJG046	VOE2J07	Field Sample
BGMW08102023	23J027-11	1	NA	10/13/2300:46	10/13/2300:46	RJG119	RJG046	VOE2J07	Field Sample
TMW36102023	23J027-12	1	NA	10/13/2301:10	10/13/2301:10	RJG120	RJG046	VOE2J07	Field Sample
QC02102023TB	23J027-13	1	NA	10/13/2301:35	10/13/2301:35	RJG121	RJG046	VOE2J07	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 20:43
Sample ID	: MW23102023	Date Analyzed:	10/12/23 20:43
Lab Samp ID:	23J027-01	Dilution Factor:	1
Lab File ID:	RJG109	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.1	10.0	101	81-118
4-Bromofluorobenzene	9.71	10.0	97	85-114
Toluene-d8	9.41	10.0	94	89-112
Dibromofluoromethane	9.95	10.0	99	80-119

Notes:
Sample Amount : 10ml Final Volume : 10ml
Prepared by : DNguye Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 21:07
Sample ID	: TMW44102023	Date Analyzed:	10/12/23 21:07
Lab Samp ID:	23J027-02	Dilution Factor:	1
Lab File ID:	RJG110	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.7	10.0	107	81-118
4-Bromofluorobenzene	9.69	10.0	97	85-114
Toluene-d8	9.47	10.0	95	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 21:32
Sample ID	: TMW16102023	Date Analyzed:	10/12/23 21:32
Lab Samp ID:	23J027-03	Dilution Factor:	1
Lab File ID:	RJG111	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.7	10.0	107	81-118
4-Bromofluorobenzene	9.58	10.0	96	85-114
Toluene-d8	9.42	10.0	94	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

Notes:
Sample Amount : 10ml Final Volume : 10ml
Prepared by : DNguye Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:40
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 21:56
Sample ID	: FDUP01-102023	Date Analyzed:	10/12/23 21:56
Lab Samp ID:	23J027-04	Dilution Factor:	1
Lab File ID:	RJG112	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.7	10.0	107	81-118
4-Bromofluorobenzene	9.63	10.0	96	85-114
Toluene-d8	9.33	10.0	93	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 22:20
Sample ID	: BGMW12102023	Date Analyzed:	10/12/23 22:20
Lab Samp ID:	23J027-05	Dilution Factor:	1
Lab File ID:	RJG113	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.8	10.0	108	81-118
4-Bromofluorobenzene	9.78	10.0	98	85-114
Toluene-d8	9.43	10.0	94	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE_WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 22:45
Sample ID	: TMW46102023	Date Analyzed:	10/12/23 22:45
Lab Samp ID:	23J027-06	Dilution Factor:	1
Lab File ID:	RJG114	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	0.10J	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.1	10.0	111	81-118
4-Bromofluorobenzene	9.6B	10.0	97	85-114
Toluene-d8	9.2B	10.0	93	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 23:09
Sample ID	: TMW19102023	Date Analyzed:	10/12/23 23:09
Lab Samp ID:	23J027-07	Dilution Factor:	1
Lab File ID:	RJG115	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	9.82	10.0	98	85-114
Toluene-d8	9.43	10.0	94	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 23:33
Sample ID	: MW32102023	Date Analyzed:	10/12/23 23:33
Lab Samp ID:	23J027-08	Dilution Factor:	1
Lab File ID:	RJG116	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.0	10.0	110	81-118
4-Bromofluorobenzene	9.69	10.0	97	85-114
Toluene-d8	9.26	10.0	93	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/12/23 23:58
Sample ID	: BGMW03102023	Date Analyzed:	10/12/23 23:58
Lab Samp ID:	23J027-09	Dilution Factor:	1
Lab File ID:	RJG117	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	9.79	10.0	98	85-114
Toluene-d8	9.90	10.0	99	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/13/23 00:22
Sample ID	: TMW18102023	Date Analyzed:	10/13/23 00:22
Lab Samp ID:	23J027-10	Dilution Factor:	1
Lab File ID:	RJG118	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.1	10.0	111	81-118
4-Bromofluorobenzene	9.74	10.0	97	85-114
Toluene-d8	9.27	10.0	93	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:50
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/13/23 00:46
Sample ID	: BGMW08102023	Date Analyzed:	10/13/23 00:46
Lab Samp ID:	23J027-11	Dilution Factor:	1
Lab File ID:	RJG119	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.3	10.0	113	81-118
4-Bromofluorobenzene	9.97	10.0	100	85-114
Toluene-d8	9.31	10.0	93	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 11:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/13/23 01:10
Sample ID	: TMW36102023	Date Analyzed:	10/13/23 01:10
Lab Samp ID:	23J027-12	Dilution Factor:	1
Lab File ID:	RJG120	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.56	10.0	96	81-118
4-Bromofluorobenzene	9.54	10.0	95	85-114
Toluene-d8	9.25	10.0	93	89-112
Dibromofluoromethane	9.96	10.0	100	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/13/23 01:35
Sample ID	: QC02102023TB	Date Analyzed:	10/13/23 01:35
Lab Samp ID:	23J027-13	Dilution Factor:	1
Lab File ID:	RJG121	Matrix:	WATER
Ext Btch ID:	VOE2J07	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.4	10.0	114	81-118
4-Bromofluorobenzene	9.68	10.0	97	85-114
Toluene-d8	9.27	10.0	93	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS
+ APPENDIX 9

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ218 and RJJ253) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ015WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. SVJ015WL/SVJ015WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. For this SDG, all surrogate recoveries were within QC limits except for Phenol-D5 in J027-01, 2-Fluorophenol and Phenol-D5 in J027-04, J027-06 and 2-Fluorophenol and Phenol-D5 in J027-11; most likely due to matrix interference. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J027-02 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ220 and RJJ251) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ015WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ015WL/CLJ015WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method 3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ219 and RJJ252) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ015WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ015WL/CLJ015WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ015WB	1	NA	10/11/2313:44	10/09/2313:00	RJJ222	RGJ087	23SVJ015W	Method Blank
LCS1W	SVJ015WL	1	NA	10/11/2314:02	10/09/2313:00	RJJ223	RGJ087	23SVJ015W	Lab Control Sample (LCS)
LCD1W	SVJ015WC	1	NA	10/11/2314:21	10/09/2313:00	RJJ224	RGJ087	23SVJ015W	LCS Duplicate
MW23102023	23J027-01	1	NA	10/11/2319:02	10/09/2313:00	RJJ239	RGJ087	23SVJ015W	Field Sample
TMW44102023	23J027-02	2	NA	10/11/2319:21	10/09/2313:00	RJJ240	RGJ087	23SVJ015W	Field Sample
TMW16102023	23J027-03	1	NA	10/11/2319:40	10/09/2313:00	RJJ241	RGJ087	23SVJ015W	Field Sample
FDUP01-102023	23J027-04	1	NA	10/11/2319:58	10/09/2313:00	RJJ242	RGJ087	23SVJ015W	Field Sample
BGMW12102023	23J027-05	1	NA	10/11/2320:17	10/09/2313:00	RJJ243	RGJ087	23SVJ015W	Field Sample
TMW46102023	23J027-06	1	NA	10/11/2320:36	10/09/2313:00	RJJ244	RGJ087	23SVJ015W	Field Sample
TMW19102023	23J027-07	1	NA	10/11/2320:55	10/09/2313:00	RJJ245	RGJ087	23SVJ015W	Field Sample
MW32102023	23J027-08	1	NA	10/11/2321:13	10/09/2313:00	RJJ246	RGJ087	23SVJ015W	Field Sample
BGMW03102023	23J027-09	1	NA	10/11/2321:32	10/09/2313:00	RJJ247	RGJ087	23SVJ015W	Field Sample
TMW18102023	23J027-10	1	NA	10/11/2321:51	10/09/2313:00	RJJ248	RGJ087	23SVJ015W	Field Sample
BGMW08102023	23J027-11	1	NA	10/11/2322:09	10/09/2313:00	RJJ249	RGJ087	23SVJ015W	Field Sample
TMW36102023	23J027-12	1	NA	10/11/2322:28	10/09/2313:00	RJJ250	RGJ087	23SVJ015W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ015WB	1	NA	10/11/2313:44	10/09/2313:00	RJJ222	RGJ100	23SVJ015W	Method Blank
LCS1W	CLJ015WL	1	NA	10/11/2314:40	10/09/2313:00	RJJ225	RGJ100	23SVJ015W	Lab Control Sample (LCS)
LCD1W	CLJ015WC	1	NA	10/11/2314:59	10/09/2313:00	RJJ226	RGJ100	23SVJ015W	LCS Duplicate
MW23102023	23J027-01	1	NA	10/11/2319:02	10/09/2313:00	RJJ239	RGJ100	23SVJ015W	Field Sample
TMW44102023	23J027-02	2	NA	10/11/2319:21	10/09/2313:00	RJJ240	RGJ100	23SVJ015W	Field Sample
TMW16102023	23J027-03	1	NA	10/11/2319:40	10/09/2313:00	RJJ241	RGJ100	23SVJ015W	Field Sample
FDUP01-102023	23J027-04	1	NA	10/11/2319:58	10/09/2313:00	RJJ242	RGJ100	23SVJ015W	Field Sample
BGMW12102023	23J027-05	1	NA	10/11/2320:17	10/09/2313:00	RJJ243	RGJ100	23SVJ015W	Field Sample
TMW46102023	23J027-06	1	NA	10/11/2320:36	10/09/2313:00	RJJ244	RGJ100	23SVJ015W	Field Sample
TMW19102023	23J027-07	1	NA	10/11/2320:55	10/09/2313:00	RJJ245	RGJ100	23SVJ015W	Field Sample
MW32102023	23J027-08	1	NA	10/11/2321:13	10/09/2313:00	RJJ246	RGJ100	23SVJ015W	Field Sample
BGMW03102023	23J027-09	1	NA	10/11/2321:32	10/09/2313:00	RJJ247	RGJ100	23SVJ015W	Field Sample
TMW18102023	23J027-10	1	NA	10/11/2321:51	10/09/2313:00	RJJ248	RGJ100	23SVJ015W	Field Sample
BGMW08102023	23J027-11	1	NA	10/11/2322:09	10/09/2313:00	RJJ249	RGJ100	23SVJ015W	Field Sample
TMW36102023	23J027-12	1	NA	10/11/2322:28	10/09/2313:00	RJJ250	RGJ100	23SVJ015W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ015WB	1	NA	10/11/2313:44	10/09/2313:00	RJJ222	RGJ079	23SVJ015W	Method Blank
LCS1W	CLJ015WL	1	NA	10/11/2314:40	10/09/2313:00	RJJ225	RGJ079	23SVJ015W	Lab Control Sample (LCS)
LCD1W	CLJ015WC	1	NA	10/11/2314:59	10/09/2313:00	RJJ226	RGJ079	23SVJ015W	LCS Duplicate
MW23102023	23J027-01	1	NA	10/11/2319:02	10/09/2313:00	RJJ239	RGJ079	23SVJ015W	Field Sample
TMW44102023	23J027-02	2	NA	10/11/2319:21	10/09/2313:00	RJJ240	RGJ079	23SVJ015W	Field Sample
TMW16102023	23J027-03	1	NA	10/11/2319:40	10/09/2313:00	RJJ241	RGJ079	23SVJ015W	Field Sample
FDUP01-102023	23J027-04	1	NA	10/11/2319:58	10/09/2313:00	RJJ242	RGJ079	23SVJ015W	Field Sample
BGMW12102023	23J027-05	1	NA	10/11/2320:17	10/09/2313:00	RJJ243	RGJ079	23SVJ015W	Field Sample
TMW46102023	23J027-06	1	NA	10/11/2320:36	10/09/2313:00	RJJ244	RGJ079	23SVJ015W	Field Sample
TMW19102023	23J027-07	1	NA	10/11/2320:55	10/09/2313:00	RJJ245	RGJ079	23SVJ015W	Field Sample
MW32102023	23J027-08	1	NA	10/11/2321:13	10/09/2313:00	RJJ246	RGJ079	23SVJ015W	Field Sample
BGMW03102023	23J027-09	1	NA	10/11/2321:32	10/09/2313:00	RJJ247	RGJ079	23SVJ015W	Field Sample
TMW18102023	23J027-10	1	NA	10/11/2321:51	10/09/2313:00	RJJ248	RGJ079	23SVJ015W	Field Sample
BGMW08102023	23J027-11	1	NA	10/11/2322:09	10/09/2313:00	RJJ249	RGJ079	23SVJ015W	Field Sample
TMW36102023	23J027-12	1	NA	10/11/2322:28	10/09/2313:00	RJJ250	RGJ079	23SVJ015W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: MW23102023	Date Analyzed:	10/11/23 19:02
Lab Samp ID:	23J027-01	Dilution Factor:	1
Lab File ID:	RJJ239	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.2	11
1,2-Dichlorobenzene	ND	11	2.6	5.2
1,2-Diphenylhydrazine	ND	11	2.6	5.2
1,3-Dichlorobenzene	ND	11	2.6	5.2
1,4-Dichlorobenzene	ND	11	2.6	5.2
2,4,5-Trichlorophenol	ND	11	2.6	5.2
2,4,6-Trichlorophenol	ND	11	2.6	5.2
2,4-Dichlorophenol	ND	11	2.6	5.2
2,4-Dimethylphenol	ND	11	2.6	5.2
2,4-Dinitrophenol	ND	21	2.6	5.2
2,4-Dinitrotoluene	ND	11	2.6	5.2
2,6-Dinitrotoluene	ND	11	2.6	5.2
2-Chloronaphthalene	ND	11	2.6	5.2
2-Chlorophenol	ND	11	2.6	5.2
2-Methylnaphthalene	ND	11	2.6	5.2
2-Methylphenol	ND	11	2.6	5.2
2-Nitroaniline	ND	11	2.6	5.2
2-Nitrophenol	ND	11	2.6	5.2
3,3'-Dichlorobenzidine	ND	11	2.6	5.2
3/4-Methylphenol	ND	11	2.6	5.2
3-Nitroaniline	ND	11	2.6	5.2
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.2
4-Bromophenyl phenyl ether	ND	11	2.6	5.2
4-Chloro-3-methylphenol	ND	11	2.6	5.2
4-Chloroaniline	ND	21	5.2	11
4-Chlorophenyl-phenyl ether	ND	11	2.6	5.2
4-Nitroaniline	ND	11	2.6	5.2
4-Nitrophenol	ND	21	2.6	5.2
Acenaphthene	ND	11	2.6	5.2
Acenaphthylene	ND	11	2.6	5.2
Anthracene	ND	11	2.6	5.2
Benzo(a)anthracene	ND	11	2.6	5.2
Benzo(a)pyrene	ND	11	2.6	5.2
Benzo(b)fluoranthene	ND	11	2.6	5.2
Benzo(g,h,i)perylene	ND	11	2.6	5.2
Benzo(k)fluoranthene	ND	11	2.6	5.2
Benzoic Acid	ND	100	21	42
Benzyl Alcohol	ND	11	2.6	5.2
bis(2-Chloroisopropyl) ether	ND	11	2.6	5.2
bis(2-Chloroethoxy)methane	ND	11	2.6	5.2
bis(2-Chloroethyl) ether	ND	11	2.6	5.2
bis(2-Ethylhexyl) phthalate	ND	21	5.2	11
Butylbenzylphthalate	ND	11	2.6	5.2
Carbazole	ND	11	2.6	5.2
Chrysene	ND	11	2.6	5.2
Dibenzo(a,h)anthracene	ND	11	2.6	5.2
Dibenzofuran	ND	11	2.6	5.2
Diethylphthalate	ND	11	2.6	5.2
Dimethylphthalate	ND	11	2.6	5.2
Di-n-butyl phthalate	ND	11	2.6	5.2
Di-n-octyl phthalate	ND	11	2.6	5.2
Fluoranthene	ND	11	2.6	5.2
Fluorene	ND	11	2.6	5.2
Hexachlorobenzene	ND	11	2.6	5.2
Hexachlorobutadiene	ND	11	2.6	5.2
Hexachloroethane	ND	11	2.6	5.2
Indeno(1,2,3-cd)pyrene	ND	11	2.6	5.2
Isophorone	ND	11	2.6	5.2
Naphthalene	ND	11	2.6	5.2
Nitrobenzene	ND	11	2.6	5.2
N-Nitrosodimethylamine	ND	11	2.6	5.2
n-Nitroso-di-n-propylamine	ND	11	2.6	5.2
n-Nitrosodiphenylamine	ND	11	2.6	5.2
Pentachlorophenol	ND	21	2.6	5.2
Phenanthrene	ND	11	2.6	5.2
Phenol	ND	11	2.6	5.2
Pyrene	ND	11	2.6	5.2
Hexachlorocyclopentadiene	ND	11	2.6	5.2
Benzidine	ND	42	11	21
2,3,4,6-Tetrachlorophenol	ND	11	2.6	5.2
2,6-Dichlorophenol	ND	11	2.6	5.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	38.9	63.0	62	43-140
2-Fluorobiphenyl	10.8	21.0	52	44-119
2-Fluorophenol	17.4	63.0	28	19-119
Nitrobenzene-d5	9.73	21.0	46	44-120
Phenol-d5	24.7	63.0	39*	40-130
Terphenyl-d14	18.1	21.0	86	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: MW23102023	Date Analyzed:	10/11/23 19:02
Lab Samp ID:	23J027-01	Dilution Factor:	1
Lab File ID:	RJJ239	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.6	5.2

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 950ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: MW23102023	Date Analyzed:	10/11/23 19:02
Lab Samp ID:	23J027-01	Dilution Factor:	1
Lab File ID:	RJJ239	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.2	11
Benzaldehyde	ND	21	5.2	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 950ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW44102023	Date Analyzed:	10/11/23 19:21
Lab Samp ID:	23J027-02	Dilution Factor:	2
Lab File ID:	RJJ240	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	42	10	21
1,2-Dichlorobenzene	ND	21	5.2	10
1,2-Diphenylhydrazine	ND	21	5.2	10
1,3-Dichlorobenzene	ND	21	5.2	10
1,4-Dichlorobenzene	ND	21	5.2	10
2,4,5-Trichlorophenol	ND	21	5.2	10
2,4,6-Trichlorophenol	ND	21	5.2	10
2,4-Dichlorophenol	ND	21	5.2	10
2,4-Dimethylphenol	ND	21	5.2	10
2,4-Dinitrophenol	ND	42	5.2	10
2,4-Dinitrotoluene	ND	21	5.2	10
2,6-Dinitrotoluene	ND	21	5.2	10
2-Chloronaphthalene	ND	21	5.2	10
2-Chlorophenol	ND	21	5.2	10
2-Methylnaphthalene	ND	21	5.2	10
2-Methylphenol	ND	21	5.2	10
2-Nitroaniline	ND	21	5.2	10
2-Nitrophenol	ND	21	5.2	10
3,3'-Dichlorobenzidine	ND	21	5.2	10
3/4-Methylphenol	ND	21	5.2	10
3-Nitroaniline	ND	21	5.2	10
4,6-Dinitro-2-methylphenol	ND	42	5.2	10
4-Bromophenyl phenyl ether	ND	21	5.2	10
4-Chloro-3-methylphenol	ND	21	5.2	10
4-Chloroaniline	ND	42	10	21
4-Chlorophenyl-phenyl ether	ND	21	5.2	10
4-Nitroaniline	ND	21	5.2	10
4-Nitrophenol	ND	42	5.2	10
Acenaphthene	ND	21	5.2	10
Acenaphthylene	ND	21	5.2	10
Anthracene	ND	21	5.2	10
Benzo(a)anthracene	ND	21	5.2	10
Benzo(a)pyrene	ND	21	5.2	10
Benzo(b)fluoranthene	ND	21	5.2	10
Benzo(g,h,i)perylene	ND	21	5.2	10
Benzo(k)fluoranthene	ND	21	5.2	10
Benzoic Acid	ND	210	42	83
Benzyl Alcohol	ND	21	5.2	10
bis(2-Chloroisopropyl) ether	ND	21	5.2	10
bis(2-Chloroethoxy)methane	ND	21	5.2	10
bis(2-Chloroethyl) ether	ND	21	5.2	10
bis(2-Ethylhexyl) phthalate	ND	42	10	21
Butylbenzylphthalate	ND	21	5.2	10
Carbazole	ND	21	5.2	10
Chrysene	ND	21	5.2	10
Dibenzo(a,h)anthracene	ND	21	5.2	10
Dibenzofuran	ND	21	5.2	10
Diethylphthalate	ND	21	5.2	10
Dimethylphthalate	ND	21	5.2	10
Di-n-butyl phthalate	ND	21	5.2	10
Di-n-octyl phthalate	ND	21	5.2	10
Fluoranthene	ND	21	5.2	10
Fluorene	ND	21	5.2	10
Hexachlorobenzene	ND	21	5.2	10
Hexachlorobutadiene	ND	21	5.2	10
Hexachloroethane	ND	21	5.2	10
Indeno(1,2,3-cd)pyrene	ND	21	5.2	10
Isophorone	ND	21	5.2	10
Naphthalene	ND	21	5.2	10
Nitrobenzene	ND	21	5.2	10
N-Nitrosodimethylamine	ND	21	5.2	10
n-Nitroso-di-n-propylamine	ND	21	5.2	10
n-Nitrosodiphenylamine	ND	21	5.2	10
Pentachlorophenol	ND	42	5.2	10
Phenanthrene	ND	21	5.2	10
Phenol	ND	21	5.2	10
Pyrene	ND	21	5.2	10
Hexachlorocyclopentadiene	ND	21	5.2	10
Benzidine	ND	83	21	42
2,3,4,6-Tetrachlorophenol	ND	21	5.2	10
2,6-Dichlorophenol	ND	21	5.2	10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	44.8	62.4	72	43-140
2-Fluorobiphenyl	13.9	20.8	67	44-119
2-Fluorophenol	28.5	62.4	46	19-119
Nitrobenzene-d5	11.5	20.8	55	44-120
Phenol-d5	35.4	62.4	57	40-130
Terphenyl-d14	18.8	20.8	91	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW44102023	Date Analyzed:	10/11/23 19:21
Lab Samp ID:	23J027-02	Dilution Factor:	2
Lab File ID:	RJJ240	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	21	5.2	10

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW44102023	Date Analyzed:	10/11/23 19:21
Lab Samp ID:	23J027-02	Dilution Factor:	2
Lab File ID:	RJJ240	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	42	10	21
Benzaldehyde	ND	42	10	21

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 960ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW16102023	Date Analyzed:	10/11/23 19:40
Lab Samp ID:	23J027-03	Dilution Factor:	1
Lab File ID:	RJJ241	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.2	11
1,2-Dichlorobenzene	ND	11	2.6	5.2
1,2-Diphenylhydrazine	ND	11	2.6	5.2
1,3-Dichlorobenzene	ND	11	2.6	5.2
1,4-Dichlorobenzene	ND	11	2.6	5.2
2,4,5-Trichlorophenol	ND	11	2.6	5.2
2,4,6-Trichlorophenol	ND	11	2.6	5.2
2,4-Dichlorophenol	ND	11	2.6	5.2
2,4-Dimethylphenol	ND	11	2.6	5.2
2,4-Dinitrophenol	ND	21	2.6	5.2
2,4-Dinitrotoluene	ND	11	2.6	5.2
2,6-Dinitrotoluene	ND	11	2.6	5.2
2-Chloronaphthalene	ND	11	2.6	5.2
2-Chlorophenol	ND	11	2.6	5.2
2-Methylnaphthalene	ND	11	2.6	5.2
2-Methylphenol	ND	11	2.6	5.2
2-Nitroaniline	ND	11	2.6	5.2
2-Nitrophenol	ND	11	2.6	5.2
3,3'-Dichlorobenzidine	ND	11	2.6	5.2
3/4-Methylphenol	ND	11	2.6	5.2
3-Nitroaniline	ND	11	2.6	5.2
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.2
4-Bromophenyl phenyl ether	ND	11	2.6	5.2
4-Chloro-3-methylphenol	ND	11	2.6	5.2
4-Chloroaniline	ND	21	5.2	11
4-Chlorophenyl-phenyl ether	ND	11	2.6	5.2
4-Nitroaniline	ND	11	2.6	5.2
4-Nitrophenol	ND	21	2.6	5.2
Acenaphthene	ND	11	2.6	5.2
Acenaphthylene	ND	11	2.6	5.2
Anthracene	ND	11	2.6	5.2
Benzo(a)anthracene	ND	11	2.6	5.2
Benzo(a)pyrene	ND	11	2.6	5.2
Benzo(b)fluoranthene	ND	11	2.6	5.2
Benzo(g,h,i)perylene	ND	11	2.6	5.2
Benzo(k)fluoranthene	ND	11	2.6	5.2
Benzoic Acid	ND	100	21	42
Benzyl Alcohol	ND	11	2.6	5.2
bis(2-Chloroisopropyl) ether	ND	11	2.6	5.2
bis(2-Chloroethoxy)methane	ND	11	2.6	5.2
bis(2-Chloroethyl) ether	ND	11	2.6	5.2
bis(2-Ethylhexyl) phthalate	ND	21	5.2	11
Butylbenzylphthalate	ND	11	2.6	5.2
Carbazole	ND	11	2.6	5.2
Chrysene	ND	11	2.6	5.2
Dibenzo(a,h)anthracene	ND	11	2.6	5.2
Dibenzofuran	ND	11	2.6	5.2
Diethylphthalate	ND	11	2.6	5.2
Dimethylphthalate	ND	11	2.6	5.2
Di-n-butyl phthalate	ND	11	2.6	5.2
Di-n-octyl phthalate	ND	11	2.6	5.2
Fluoranthene	ND	11	2.6	5.2
Fluorene	ND	11	2.6	5.2
Hexachlorobenzene	ND	11	2.6	5.2
Hexachlorobutadiene	ND	11	2.6	5.2
Hexachloroethane	ND	11	2.6	5.2
Indeno(1,2,3-cd)pyrene	ND	11	2.6	5.2
Isophorone	ND	11	2.6	5.2
Naphthalene	ND	11	2.6	5.2
Nitrobenzene	ND	11	2.6	5.2
N-Nitrosodimethylamine	ND	11	2.6	5.2
n-Nitroso-di-n-propylamine	ND	11	2.6	5.2
n-Nitrosodiphenylamine	ND	11	2.6	5.2
Pentachlorophenol	ND	21	2.6	5.2
Phenanthrene	ND	11	2.6	5.2
Phenol	ND	11	2.6	5.2
Pyrene	ND	11	2.6	5.2
Hexachlorocyclopentadiene	ND	11	2.6	5.2
Benzidine	ND	42	11	21
2,3,4,6-Tetrachlorophenol	ND	11	2.6	5.2
2,6-Dichlorophenol	ND	11	2.6	5.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	29.3	63.0	47	43-140
2-Fluorobiphenyl	11.4	21.0	54	44-119
2-Fluorophenol	20.4	63.0	32	19-119
Nitrobenzene-d5	11.8	21.0	56	44-120
Phenol-d5	29.0	63.0	46	40-130
Terphenyl-d14	17.3	21.0	82	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW16102023	Date Analyzed:	10/11/23 19:40
Lab Samp ID:	23J027-03	Dilution Factor:	1
Lab File ID:	RJJ241	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.6	5.2

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW16102023	Date Analyzed:	10/11/23 19:40
Lab Samp ID:	23J027-03	Dilution Factor:	1
Lab File ID:	RJJ241	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.2	11
Benzaldehyde	ND	21	5.2	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 950ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:40
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: FDUP01-102023	Date Analyzed:	10/11/23 19:58
Lab Samp ID:	23J027-04	Dilution Factor:	1
Lab File ID:	RJJ242	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	20	5.1	10
1,2-Dichlorobenzene	ND	10	2.5	5.1
1,2-Diphenylhydrazine	ND	10	2.5	5.1
1,3-Dichlorobenzene	ND	10	2.5	5.1
1,4-Dichlorobenzene	ND	10	2.5	5.1
2,4,5-Trichlorophenol	ND	10	2.5	5.1
2,4,6-Trichlorophenol	ND	10	2.5	5.1
2,4-Dichlorophenol	ND	10	2.5	5.1
2,4-Dimethylphenol	ND	10	2.5	5.1
2,4-Dinitrophenol	ND	20	2.5	5.1
2,4-Dinitrotoluene	ND	10	2.5	5.1
2,6-Dinitrotoluene	ND	10	2.5	5.1
2-Chloronaphthalene	ND	10	2.5	5.1
2-Chlorophenol	ND	10	2.5	5.1
2-Methylnaphthalene	ND	10	2.5	5.1
2-Methylphenol	ND	10	2.5	5.1
2-Nitroaniline	ND	10	2.5	5.1
2-Nitrophenol	ND	10	2.5	5.1
3,3'-Dichlorobenzidine	ND	10	2.5	5.1
3/4-Methylphenol	ND	10	2.5	5.1
3-Nitroaniline	ND	10	2.5	5.1
4,6-Dinitro-2-methylphenol	ND	20	2.5	5.1
4-Bromophenyl phenyl ether	ND	10	2.5	5.1
4-Chloro-3-methylphenol	ND	10	2.5	5.1
4-Chloroaniline	ND	20	5.1	10
4-Chlorophenyl-phenyl ether	ND	10	2.5	5.1
4-Nitroaniline	ND	10	2.5	5.1
4-Nitrophenol	ND	20	2.5	5.1
Acenaphthene	ND	10	2.5	5.1
Acenaphthylene	ND	10	2.5	5.1
Anthracene	ND	10	2.5	5.1
Benzo(a)anthracene	ND	10	2.5	5.1
Benzo(a)pyrene	ND	10	2.5	5.1
Benzo(b)fluoranthene	ND	10	2.5	5.1
Benzo(g,h,i)perylene	ND	10	2.5	5.1
Benzo(k)fluoranthene	ND	10	2.5	5.1
Benzoic Acid	ND	100	20	41
Benzyl Alcohol	ND	10	2.5	5.1
bis(2-Chloroisopropyl) ether	ND	10	2.5	5.1
bis(2-Chloroethoxy)methane	ND	10	2.5	5.1
bis(2-Chloroethyl) ether	ND	10	2.5	5.1
bis(2-Ethylhexyl) phthalate	ND	20	5.1	10
Butylbenzylphthalate	ND	10	2.5	5.1
Carbazole	ND	10	2.5	5.1
Chrysene	ND	10	2.5	5.1
Dibenzo(a,h)anthracene	ND	10	2.5	5.1
Dibenzofuran	ND	10	2.5	5.1
Diethylphthalate	ND	10	2.5	5.1
Dimethylphthalate	ND	10	2.5	5.1
Di-n-butyl phthalate	ND	10	2.5	5.1
Di-n-octyl phthalate	ND	10	2.5	5.1
Fluoranthene	ND	10	2.5	5.1
Fluorene	ND	10	2.5	5.1
Hexachlorobenzene	ND	10	2.5	5.1
Hexachlorobutadiene	ND	10	2.5	5.1
Hexachloroethane	ND	10	2.5	5.1
Indeno(1,2,3-cd)pyrene	ND	10	2.5	5.1
Isophorone	ND	10	2.5	5.1
Naphthalene	ND	10	2.5	5.1
Nitrobenzene	ND	10	2.5	5.1
N-Nitrosodimethylamine	ND	10	2.5	5.1
n-Nitroso-di-n-propylamine	ND	10	2.5	5.1
n-Nitrosodiphenylamine	ND	10	2.5	5.1
Pentachlorophenol	ND	20	2.5	5.1
Phenanthrene	ND	10	2.5	5.1
Phenol	ND	10	2.5	5.1
Pyrene	ND	10	2.5	5.1
Hexachlorocyclopentadiene	ND	10	2.5	5.1
Benzidine	ND	41	10	20
2,3,4,6-Tetrachlorophenol	ND	10	2.5	5.1
2,6-Dichlorophenol	ND	10	2.5	5.1

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	27.7	61.2	45	43-140
2-Fluorobiphenyl	9.32	20.4	46	44-119
2-Fluorophenol	9.24	61.2	15*	19-119
Nitrobenzene-d5	9.29	20.4	46	44-120
Phenol-d5	16.9	61.2	28*	40-130
Terphenyl-d14	18.0	20.4	88	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 980ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:40
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: FDUP01-102023	Date Analyzed:	10/11/23 19:58
Lab Samp ID:	23J027-04	Dilution Factor:	1
Lab File ID:	RJJ242	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	10	2.5	5.1

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 980ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:40
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: FDUP01-102023	Date Analyzed:	10/11/23 19:58
Lab Samp ID:	23J027-04	Dilution Factor:	1
Lab File ID:	RJJ242	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	20	5.1	10
Benzaldehyde	ND	20	5.1	10

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 980ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW12102023	Date Analyzed:	10/11/23 20:17
Lab Samp ID:	23J027-05	Dilution Factor:	1
Lab File ID:	RJJ243	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.8	5.7
1,2-Diphenylhydrazine	ND	11	2.8	5.7
1,3-Dichlorobenzene	ND	11	2.8	5.7
1,4-Dichlorobenzene	ND	11	2.8	5.7
2,4,5-Trichlorophenol	ND	11	2.8	5.7
2,4,6-Trichlorophenol	ND	11	2.8	5.7
2,4-Dichlorophenol	ND	11	2.8	5.7
2,4-Dimethylphenol	ND	11	2.8	5.7
2,4-Dinitrophenol	ND	23	2.8	5.7
2,4-Dinitrotoluene	ND	11	2.8	5.7
2,6-Dinitrotoluene	ND	11	2.8	5.7
2-Chloronaphthalene	ND	11	2.8	5.7
2-Chlorophenol	ND	11	2.8	5.7
2-Methylnaphthalene	ND	11	2.8	5.7
2-Methylphenol	ND	11	2.8	5.7
2-Nitroaniline	ND	11	2.8	5.7
2-Nitrophenol	ND	11	2.8	5.7
3,3'-Dichlorobenzidine	ND	11	2.8	5.7
3/4-Methylphenol	ND	11	2.8	5.7
3-Nitroaniline	ND	11	2.8	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.8	5.7
4-Bromophenyl phenyl ether	ND	11	2.8	5.7
4-Chloro-3-methylphenol	ND	11	2.8	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.7
4-Nitroaniline	ND	11	2.8	5.7
4-Nitrophenol	ND	23	2.8	5.7
Acenaphthene	ND	11	2.8	5.7
Acenaphthylene	ND	11	2.8	5.7
Anthracene	ND	11	2.8	5.7
Benzo(a)anthracene	ND	11	2.8	5.7
Benzo(a)pyrene	ND	11	2.8	5.7
Benzo(b)fluoranthene	ND	11	2.8	5.7
Benzo(g,h,i)perylene	ND	11	2.8	5.7
Benzo(k)fluoranthene	ND	11	2.8	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.8	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.7
bis(2-Chloroethoxy)methane	ND	11	2.8	5.7
bis(2-Chloroethyl) ether	ND	11	2.8	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.8	5.7
Carbazole	ND	11	2.8	5.7
Chrysene	ND	11	2.8	5.7
Dibenzo(a,h)anthracene	ND	11	2.8	5.7
Dibenzofuran	ND	11	2.8	5.7
Diethylphthalate	ND	11	2.8	5.7
Dimethylphthalate	ND	11	2.8	5.7
Di-n-butyl phthalate	ND	11	2.8	5.7
Di-n-octyl phthalate	ND	11	2.8	5.7
Fluoranthene	ND	11	2.8	5.7
Fluorene	ND	11	2.8	5.7
Hexachlorobenzene	ND	11	2.8	5.7
Hexachlorobutadiene	ND	11	2.8	5.7
Hexachloroethane	ND	11	2.8	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.7
Isophorone	ND	11	2.8	5.7
Naphthalene	ND	11	2.8	5.7
Nitrobenzene	ND	11	2.8	5.7
N-Nitrosodimethylamine	ND	11	2.8	5.7
n-Nitroso-di-n-propylamine	ND	11	2.8	5.7
n-Nitrosodiphenylamine	ND	11	2.8	5.7
Pentachlorophenol	ND	23	2.8	5.7
Phenanthrene	ND	11	2.8	5.7
Phenol	ND	11	2.8	5.7
Pyrene	ND	11	2.8	5.7
Hexachlorocyclopentadiene	ND	11	2.8	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.7
2,6-Dichlorophenol	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	44.7	68.4	65	43-140
2-Fluorobiphenyl	16.2	22.8	71	44-119
2-Fluorophenol	26.2	68.4	38	19-119
Nitrobenzene-d5	15.5	22.8	68	44-120
Phenol-d5	37.8	68.4	55	40-130
Terphenyl-d14	19.5	22.8	86	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW12102023	Date Analyzed:	10/11/23 20:17
Lab Samp ID:	23J027-05	Dilution Factor:	1
Lab File ID:	RJJ243	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.7

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 880ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW12102023	Date Analyzed:	10/11/23 20:17
Lab Samp ID:	23J027-05	Dilution Factor:	1
Lab File ID:	RJJ243	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW46102023	Date Analyzed:	10/11/23 20:36
Lab Samp ID:	23J027-06	Dilution Factor:	1
Lab File ID:	RJJ244	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	43
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	43	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	36.2	64.8	56	43-140
2-Fluorobiphenyl	15.7	21.6	72	44-119
2-Fluorophenol	14.1	64.8	22	19-119
Nitrobenzene-d5	14.7	21.6	68	44-120
Phenol-d5	24.6	64.8	38*	40-130
Terphenyl-d14	18.4	21.6	85	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW46102023	Date Analyzed:	10/11/23 20:36
Lab Samp ID:	23J027-06	Dilution Factor:	1
Lab File ID:	RJJ244	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
8atch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW46102023	Date Analyzed:	10/11/23 20:36
Lab Samp ID:	23J027-06	Dilution Factor:	1
Lab File ID:	RJJ244	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW19102023	Date Analyzed:	10/11/23 20:55
Lab Samp ID:	23J027-07	Dilution Factor:	1
Lab File ID:	RJJ245	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.8	5.7
1,2-Diphenylhydrazine	ND	11	2.8	5.7
1,3-Dichlorobenzene	ND	11	2.8	5.7
1,4-Dichlorobenzene	ND	11	2.8	5.7
2,4,5-Trichlorophenol	ND	11	2.8	5.7
2,4,6-Trichlorophenol	ND	11	2.8	5.7
2,4-Dichlorophenol	ND	11	2.8	5.7
2,4-Dimethylphenol	ND	11	2.8	5.7
2,4-Dinitrophenol	ND	23	2.8	5.7
2,4-Dinitrotoluene	ND	11	2.8	5.7
2,6-Dinitrotoluene	ND	11	2.8	5.7
2-Chloronaphthalene	ND	11	2.8	5.7
2-Chlorophenol	ND	11	2.8	5.7
2-Methylnaphthalene	ND	11	2.8	5.7
2-Methylphenol	ND	11	2.8	5.7
2-Nitroaniline	ND	11	2.8	5.7
2-Nitrophenol	ND	11	2.8	5.7
3,3'-Dichlorobenzidine	ND	11	2.8	5.7
3/4-Methylphenol	ND	11	2.8	5.7
3-Nitroaniline	ND	11	2.8	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.8	5.7
4-Bromophenyl phenyl ether	ND	11	2.8	5.7
4-Chloro-3-methylphenol	ND	11	2.8	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.7
4-Nitroaniline	ND	11	2.8	5.7
4-Nitrophenol	ND	23	2.8	5.7
Acenaphthene	ND	11	2.8	5.7
Acenaphthylene	ND	11	2.8	5.7
Anthracene	ND	11	2.8	5.7
Benzo(a)anthracene	ND	11	2.8	5.7
Benzo(a)pyrene	ND	11	2.8	5.7
Benzo(b)fluoranthene	ND	11	2.8	5.7
Benzo(g,h,i)perylene	ND	11	2.8	5.7
Benzo(k)fluoranthene	ND	11	2.8	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.8	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.7
bis(2-Chloroethoxy)methane	ND	11	2.8	5.7
bis(2-Chloroethyl) ether	ND	11	2.8	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.8	5.7
Carbazole	ND	11	2.8	5.7
Chrysene	ND	11	2.8	5.7
Dibenzo(a,h)anthracene	ND	11	2.8	5.7
Dibenzofuran	ND	11	2.8	5.7
Diethylphthalate	ND	11	2.8	5.7
Dimethylphthalate	ND	11	2.8	5.7
Di-n-butyl phthalate	ND	11	2.8	5.7
Di-n-octyl phthalate	ND	11	2.8	5.7
Fluoranthene	ND	11	2.8	5.7
Fluorene	ND	11	2.8	5.7
Hexachlorobenzene	ND	11	2.8	5.7
Hexachlorobutadiene	ND	11	2.8	5.7
Hexachloroethane	ND	11	2.8	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.7
Isophorone	ND	11	2.8	5.7
Naphthalene	ND	11	2.8	5.7
Nitrobenzene	ND	11	2.8	5.7
N-Nitrosodimethylamine	ND	11	2.8	5.7
n-Nitroso-di-n-propylamine	ND	11	2.8	5.7
n-Nitrosodiphenylamine	ND	11	2.8	5.7
Pentachlorophenol	ND	23	2.8	5.7
Phenanthrene	ND	11	2.8	5.7
Phenol	ND	11	2.8	5.7
Pyrene	ND	11	2.8	5.7
Hexachlorocyclopentadiene	ND	11	2.8	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.7
2,6-Dichlorophenol	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	40.9	68.4	60	43-140
2-Fluorobiphenyl	11.1	22.8	49	44-119
2-Fluorophenol	25.3	68.4	37	19-119
Nitrobenzene-d5	10.6	22.8	47	44-120
Phenol-d5	32.4	68.4	47	40-130
Terphenyl-d14	19.1	22.8	84	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW19102023	Date Analyzed:	10/11/23 20:55
Lab Samp ID:	23J027-07	Dilution Factor:	1
Lab File ID:	RJJ245	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.7

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 880ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:30
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW19102023	Date Analyzed:	10/11/23 20:55
Lab Samp ID:	23J027-07	Dilution Factor:	1
Lab File ID:	RJJ245	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: MW32102023	Date Analyzed:	10/11/23 21:13
Lab Samp ID:	23J027-08	Dilution Factor:	1
Lab File ID:	RJJ246	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.8	12
1,2-Dichlorobenzene	ND	12	2.9	5.8
1,2-Diphenylhydrazine	ND	12	2.9	5.8
1,3-Dichlorobenzene	ND	12	2.9	5.8
1,4-Dichlorobenzene	ND	12	2.9	5.8
2,4,5-Trichlorophenol	ND	12	2.9	5.8
2,4,6-Trichlorophenol	ND	12	2.9	5.8
2,4-Dichlorophenol	ND	12	2.9	5.8
2,4-Dimethylphenol	ND	12	2.9	5.8
2,4-Dinitrophenol	ND	23	2.9	5.8
2,4-Dinitrotoluene	ND	12	2.9	5.8
2,6-Dinitrotoluene	ND	12	2.9	5.8
2-Chloronaphthalene	ND	12	2.9	5.8
2-Chlorophenol	ND	12	2.9	5.8
2-Methylnaphthalene	ND	12	2.9	5.8
2-Methylphenol	ND	12	2.9	5.8
2-Nitroaniline	ND	12	2.9	5.8
2-Nitrophenol	ND	12	2.9	5.8
3,3'-Dichlorobenzidine	ND	12	2.9	5.8
3/4-Methylphenol	ND	12	2.9	5.8
3-Nitroaniline	ND	12	2.9	5.8
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.8
4-Bromophenyl phenyl ether	ND	12	2.9	5.8
4-Chloro-3-methylphenol	ND	12	2.9	5.8
4-Chloroaniline	ND	23	5.8	12
4-Chlorophenyl-phenyl ether	ND	12	2.9	5.8
4-Nitroaniline	ND	12	2.9	5.8
4-Nitrophenol	ND	23	2.9	5.8
Acenaphthene	ND	12	2.9	5.8
Acenaphthylene	ND	12	2.9	5.8
Anthracene	ND	12	2.9	5.8
Benzo(a)anthracene	ND	12	2.9	5.8
Benzo(a)pyrene	ND	12	2.9	5.8
Benzo(b)fluoranthene	ND	12	2.9	5.8
Benzo(g,h,i)perylene	ND	12	2.9	5.8
Benzo(k)fluoranthene	ND	12	2.9	5.8
Benzoic Acid	ND	120	23	46
Benzyl Alcohol	ND	12	2.9	5.8
bis(2-Chloroisopropyl) ether	ND	12	2.9	5.8
bis(2-Chloroethoxy)methane	ND	12	2.9	5.8
bis(2-Chloroethyl) ether	ND	12	2.9	5.8
bis(2-Ethylhexyl) phthalate	ND	23	5.8	12
Butylbenzylphthalate	ND	12	2.9	5.8
Carbazole	ND	12	2.9	5.8
Chrysene	ND	12	2.9	5.8
Dibenzo(a,h)anthracene	ND	12	2.9	5.8
Dibenzofuran	ND	12	2.9	5.8
Diethylphthalate	ND	12	2.9	5.8
Dimethylphthalate	ND	12	2.9	5.8
Di-n-butyl phthalate	ND	12	2.9	5.8
Di-n-octyl phthalate	ND	12	2.9	5.8
Fluoranthene	ND	12	2.9	5.8
Fluorene	ND	12	2.9	5.8
Hexachlorobenzene	ND	12	2.9	5.8
Hexachlorobutadiene	ND	12	2.9	5.8
Hexachloroethane	ND	12	2.9	5.8
Indeno(1,2,3-cd)pyrene	ND	12	2.9	5.8
Isophorone	ND	12	2.9	5.8
Naphthalene	ND	12	2.9	5.8
Nitrobenzene	ND	12	2.9	5.8
N-Nitrosodimethylamine	ND	12	2.9	5.8
n-Nitroso-di-n-propylamine	ND	12	2.9	5.8
n-Nitrosodiphenylamine	ND	12	2.9	5.8
Pentachlorophenol	ND	23	2.9	5.8
Phenanthrene	ND	12	2.9	5.8
Phenol	ND	12	2.9	5.8
Pyrene	ND	12	2.9	5.8
Hexachlorocyclopentadiene	ND	12	2.9	5.8
Benzidine	ND	46	12	23
2,3,4,6-Tetrachlorophenol	ND	12	2.9	5.8
2,6-Dichlorophenol	ND	12	2.9	5.8

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	46.4	69.6	67	43-140
2-Fluorobiphenyl	17.3	23.2	75	44-119
2-Fluorophenol	38.0	69.6	55	19-119
Nitrobenzene-d5	17.4	23.2	75	44-120
Phenol-d5	46.2	69.6	66	40-130
Terphenyl-d14	19.5	23.2	84	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 860ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: MW32102023	Date Analyzed:	10/11/23 21:13
Lab Samp ID:	23J027-08	Dilution Factor:	1
Lab File ID:	RJJ246	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	2.9	5.8

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 860ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: MW32102023	Date Analyzed:	10/11/23 21:13
Lab Samp ID:	23J027-08	Dilution Factor:	1
Lab File ID:	RJJ246	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.8	12
Benzaldehyde	ND	23	5.8	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 860ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW03102023	Date Analyzed:	10/11/23 21:32
Lab Samp ID:	23J027-09	Dilution Factor:	1
Lab File ID:	RJJ247	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	25	6.2	12
1,2-Dichlorobenzene	ND	12	3.1	6.2
1,2-Diphenylhydrazine	ND	12	3.1	6.2
1,3-Dichlorobenzene	ND	12	3.1	6.2
1,4-Dichlorobenzene	ND	12	3.1	6.2
2,4,5-Trichlorophenol	ND	12	3.1	6.2
2,4,6-Trichlorophenol	ND	12	3.1	6.2
2,4-Dichlorophenol	ND	12	3.1	6.2
2,4-Dimethylphenol	ND	12	3.1	6.2
2,4-Dinitrophenol	ND	25	3.1	6.2
2,4-Dinitrotoluene	ND	12	3.1	6.2
2,6-Dinitrotoluene	ND	12	3.1	6.2
2-Chloronaphthalene	ND	12	3.1	6.2
2-Chlorophenol	ND	12	3.1	6.2
2-Methylnaphthalene	ND	12	3.1	6.2
2-Methylphenol	ND	12	3.1	6.2
2-Nitroaniline	ND	12	3.1	6.2
2-Nitrophenol	ND	12	3.1	6.2
3,3'-Dichlorobenzidine	ND	12	3.1	6.2
3/4-Methylphenol	ND	12	3.1	6.2
3-Nitroaniline	ND	12	3.1	6.2
4,6-Dinitro-2-methylphenol	ND	25	3.1	6.2
4-Bromophenyl phenyl ether	ND	12	3.1	6.2
4-Chloro-3-methylphenol	ND	12	3.1	6.2
4-Chloroaniline	ND	25	6.2	12
4-Chlorophenyl-phenyl ether	ND	12	3.1	6.2
4-Nitroaniline	ND	12	3.1	6.2
4-Nitrophenol	ND	25	3.1	6.2
Acenaphthene	ND	12	3.1	6.2
Acenaphthylene	ND	12	3.1	6.2
Anthracene	ND	12	3.1	6.2
Benzo(a)anthracene	ND	12	3.1	6.2
Benzo(a)pyrene	ND	12	3.1	6.2
Benzo(b)fluoranthene	ND	12	3.1	6.2
Benzo(g,h,i)perylene	ND	12	3.1	6.2
Benzo(k)fluoranthene	ND	12	3.1	6.2
Benzoic Acid	ND	120	25	50
Benzyl Alcohol	ND	12	3.1	6.2
bis(2-Chloroisopropyl) ether	ND	12	3.1	6.2
bis(2-Chloroethoxy)methane	ND	12	3.1	6.2
bis(2-Chloroethyl) ether	ND	12	3.1	6.2
bis(2-Ethylhexyl) phthalate	ND	25	6.2	12
Butylbenzylphthalate	ND	12	3.1	6.2
Carbazole	ND	12	3.1	6.2
Chrysene	ND	12	3.1	6.2
Dibenzo(a,h)anthracene	ND	12	3.1	6.2
Dibenzofuran	ND	12	3.1	6.2
Diethylphthalate	ND	12	3.1	6.2
Dimethylphthalate	ND	12	3.1	6.2
Di-n-butyl phthalate	ND	12	3.1	6.2
Di-n-octyl phthalate	ND	12	3.1	6.2
Fluoranthene	ND	12	3.1	6.2
Fluorene	ND	12	3.1	6.2
Hexachlorobenzene	ND	12	3.1	6.2
Hexachlorobutadiene	ND	12	3.1	6.2
Hexachloroethane	ND	12	3.1	6.2
Indeno(1,2,3-cd)pyrene	ND	12	3.1	6.2
Isophorone	ND	12	3.1	6.2
Naphthalene	ND	12	3.1	6.2
Nitrobenzene	ND	12	3.1	6.2
N-Nitrosodimethylamine	ND	12	3.1	6.2
n-Nitroso-di-n-propylamine	ND	12	3.1	6.2
n-Nitrosodiphenylamine	ND	12	3.1	6.2
Pentachlorophenol	ND	25	3.1	6.2
Phenanthrene	ND	12	3.1	6.2
Phenol	ND	12	3.1	6.2
Pyrene	ND	12	3.1	6.2
Hexachlorocyclopentadiene	ND	12	3.1	6.2
Benzidine	ND	50	12	25
2,3,4,6-Tetrachlorophenol	ND	12	3.1	6.2
2,6-Dichlorophenol	ND	12	3.1	6.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	53.3	75.0	71	43-140
2-Fluorobiphenyl	18.7	25.0	75	44-119
2-Fluorophenol	43.5	75.0	58	19-119
Nitrobenzene-d5	18.9	25.0	76	44-120
Phenol-d5	51.5	75.0	69	40-130
Terphenyl-d14	22.0	25.0	88	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 800ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW03102023	Date Analyzed:	10/11/23 21:32
Lab Samp ID:	23J027-09	Dilution Factor:	1
Lab File ID:	RJJ247	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.1	6.2

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 800ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW03102023	Date Analyzed:	10/11/23 21:32
Lab Samp ID:	23J027-09	Dilution Factor:	1
Lab File ID:	RJJ247	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	25	6.2	12
Benzaldehyde	ND	25	6.2	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 800ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW18102023	Date Analyzed:	10/11/23 21:51
Lab Samp ID:	23J027-10	Dilution Factor:	1
Lab File ID:	RJJ248	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	49.7	71.4	70	43-140
2-Fluorobiphenyl	15.9	23.8	67	44-119
2-Fluorophenol	40.3	71.4	56	19-119
Nitrobenzene-d5	15.4	23.8	65	44-120
Phenol-d5	45.8	71.4	64	40-130
Terphenyl-d14	20.9	23.8	88	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW18102023	Date Analyzed:	10/11/23 21:51
Lab Samp ID:	23J027-10	Dilution Factor:	1
Lab File ID:	RJJ248	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW18102023	Date Analyzed:	10/11/23 21:51
Lab Samp ID:	23J027-10	Dilution Factor:	1
Lab File ID:	RJJ248	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:50
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW08102023	Date Analyzed:	10/11/23 22:09
Lab Samp ID:	23J027-11	Dilution Factor:	1
Lab File ID:	RJJ249	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	20	5.0	10
1,2-Dichlorobenzene	ND	10	2.5	5.0
1,2-Diphenylhydrazine	ND	10	2.5	5.0
1,3-Dichlorobenzene	ND	10	2.5	5.0
1,4-Dichlorobenzene	ND	10	2.5	5.0
2,4,5-Trichlorophenol	ND	10	2.5	5.0
2,4,6-Trichlorophenol	ND	10	2.5	5.0
2,4-Dichlorophenol	ND	10	2.5	5.0
2,4-Dimethylphenol	ND	10	2.5	5.0
2,4-Dinitrophenol	ND	20	2.5	5.0
2,4-Dinitrotoluene	ND	10	2.5	5.0
2,6-Dinitrotoluene	ND	10	2.5	5.0
2-Chloronaphthalene	ND	10	2.5	5.0
2-Chlorophenol	ND	10	2.5	5.0
2-Methylnaphthalene	ND	10	2.5	5.0
2-Methylphenol	ND	10	2.5	5.0
2-Nitroaniline	ND	10	2.5	5.0
2-Nitrophenol	ND	10	2.5	5.0
3,3'-Dichlorobenzidine	ND	10	2.5	5.0
3/4-Methylphenol	ND	10	2.5	5.0
3-Nitroaniline	ND	10	2.5	5.0
4,6-Dinitro-2-methylphenol	ND	20	2.5	5.0
4-Bromophenyl phenyl ether	ND	10	2.5	5.0
4-Chloro-3-methylphenol	ND	10	2.5	5.0
4-Chloroaniline	ND	20	5.0	10
4-Chlorophenyl-phenyl ether	ND	10	2.5	5.0
4-Nitroaniline	ND	10	2.5	5.0
4-Nitrophenol	ND	20	2.5	5.0
Acenaphthene	ND	10	2.5	5.0
Acenaphthylene	ND	10	2.5	5.0
Anthracene	ND	10	2.5	5.0
Benzo(a)anthracene	ND	10	2.5	5.0
Benzo(a)pyrene	ND	10	2.5	5.0
Benzo(b)fluoranthene	ND	10	2.5	5.0
Benzo(g,h,i)perylene	ND	10	2.5	5.0
Benzo(k)fluoranthene	ND	10	2.5	5.0
Benzoic Acid	ND	100	20	40
Benzyl Alcohol	ND	10	2.5	5.0
bis(2-Chloroisopropyl) ether	ND	10	2.5	5.0
bis(2-Chloroethoxy)methane	ND	10	2.5	5.0
bis(2-Chloroethyl) ether	ND	10	2.5	5.0
bis(2-Ethylhexyl) phthalate	ND	20	5.0	10
Butylbenzylphthalate	ND	10	2.5	5.0
Carbazole	ND	10	2.5	5.0
Chrysene	ND	10	2.5	5.0
Dibenzo(a,h)anthracene	ND	10	2.5	5.0
Dibenzofuran	ND	10	2.5	5.0
Diethylphthalate	ND	10	2.5	5.0
Dimethylphthalate	ND	10	2.5	5.0
Di-n-butyl phthalate	ND	10	2.5	5.0
Di-n-octyl phthalate	ND	10	2.5	5.0
Fluoranthene	ND	10	2.5	5.0
Fluorene	ND	10	2.5	5.0
Hexachlorobenzene	ND	10	2.5	5.0
Hexachlorobutadiene	ND	10	2.5	5.0
Hexachloroethane	ND	10	2.5	5.0
Indeno(1,2,3-cd)pyrene	ND	10	2.5	5.0
Isophorone	ND	10	2.5	5.0
Naphthalene	ND	10	2.5	5.0
Nitrobenzene	ND	10	2.5	5.0
N-Nitrosodimethylamine	ND	10	2.5	5.0
n-Nitroso-di-n-propylamine	ND	10	2.5	5.0
n-Nitrosodiphenylamine	ND	10	2.5	5.0
Pentachlorophenol	ND	20	2.5	5.0
Phenanthrene	ND	10	2.5	5.0
Phenol	ND	10	2.5	5.0
Pyrene	ND	10	2.5	5.0
Hexachlorocyclopentadiene	ND	10	2.5	5.0
Benzidine	ND	40	10	20
2,3,4,6-Tetrachlorophenol	ND	10	2.5	5.0
2,6-Dichlorophenol	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	41.4	60.6	68	43-140
2-Fluorobiphenyl	13.5	20.2	67	44-119
2-Fluorophenol	9.02	60.6	15*	19-119
Nitrobenzene-d5	13.7	20.2	68	44-120
Phenol-d5	19.9	60.6	33*	40-130
Terphenyl-d14	16.2	20.2	80	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 990ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:50
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW08102023	Date Analyzed:	10/11/23 22:09
Lab Samp ID:	23J027-11	Dilution Factor:	1
Lab File ID:	RJJ249	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	10	2.5	5.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 990ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:50
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW08102023	Date Analyzed:	10/11/23 22:09
Lab Samp ID:	23J027-11	Dilution Factor:	1
Lab File ID:	RJJ249	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	20	5.0	10
Benzaldehyde	ND	20	5.0	10

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 990ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 11:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW36102023	Date Analyzed:	10/11/23 22:28
Lab Samp ID:	23J027-12	Dilution Factor:	1
Lab File ID:	RJJ250	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	43
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	43	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	45.2	64.8	70	43-140
2-Fluorobiphenyl	14.4	21.6	67	44-119
2-Fluorophenol	39.0	64.8	60	19-119
Nitrobenzene-d5	14.0	21.6	65	44-120
Phenol-d5	42.1	64.8	65	40-130
Terphenyl-d14	19.4	21.6	90	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 11:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW36102023	Date Analyzed:	10/11/23 22:28
Lab Samp ID:	23J027-12	Dilution Factor:	1
Lab File ID:	RJJ250	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 11:15
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/09/23 13:00
Sample ID	: TMW36102023	Date Analyzed:	10/11/23 22:28
Lab Samp ID:	23J027-12	Dilution Factor:	1
Lab File ID:	RJJ250	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of four(4) water samples were received on 10/04/23 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39J05B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VG39J05L/VG39J05C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG39J05B	1	NA	10/06/2312:22	10/06/2312:22	EJ06004A	EJ06003A	23VG39J05	Method Blank
LCS1W	VG39J05L	1	NA	10/06/2313:00	10/06/2313:00	EJ06005A	EJ06003A	23VG39J05	Lab Control Sample (LCS)
LCD1W	VG39J05C	1	NA	10/06/2313:39	10/06/2313:39	EJ06006A	EJ06003A	23VG39J05	LCS Duplicate
BGMW12102023	J027-05	1	NA	10/06/2316:50	10/06/2316:50	EJ06011A	EJ06003A	23VG39J05	Field Sample
TMW46102023	J027-06	1	NA	10/06/2317:29	10/06/2317:29	EJ06012A	EJ06003A	23VG39J05	Field Sample
MW32102023	J027-08	1	NA	10/06/2318:07	10/06/2318:07	EJ06013A	EJ06003A	23VG39J05	Field Sample
QC02102023TB	J027-13	1	NA	10/06/2319:23	10/06/2319:23	EJ06015A	EJ06014A	23VG39J05	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/06/23 16:50
Sample ID	: BGMW12102023	Date Analyzed:	10/06/23 16:50
Lab Samp ID:	J027-05	Dilution Factor:	1
Lab File ID:	EJ06011A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06003A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	14J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	32.8	40.0	82	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/06/23 17:29
Sample ID	: TMW46102023	Date Analyzed:	10/06/23 17:29
Lab Samp ID:	J027-06	Dilution Factor:	1
Lab File ID:	EJ06012A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06003A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	18J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.8	40.0	84	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/06/23 18:07
Sample ID	: MW32102023	Date Analyzed:	10/06/23 18:07
Lab Samp ID:	J027-08	Dilution Factor:	1
Lab File ID:	EJ06013A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06003A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	20J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.2	40.0	83	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/06/23 19:23
Sample ID	: QC02102023TB	Date Analyzed:	10/06/23 19:23
Lab Samp ID:	J027-13	Dilution Factor:	1
Lab File ID:	EJ06015A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06014A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	27J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.8	40.0	85	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume :	5ml
Prepared by	: SCerva	Analyzed by :	SCerva

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of three(3) water samples were received on 10/04/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ005WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSJ005WL/DSJ005WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ005WB	1	NA	10/06/2317:54	10/05/2312:00	LJ05024A	LJ05016A	23DSJ005W	Method Blank
LCS1W	DSJ005WL	1	NA	10/06/2318:13	10/05/2312:00	LJ05025A	LJ05016A	23DSJ005W	Lab Control Sample (LCS)
LCD1W	DSJ005WC	1	NA	10/06/2318:31	10/05/2312:00	LJ05026A	LJ05016A	23DSJ005W	LCS Duplicate
BGMW12102023	J027-05	1	NA	10/07/2302:55	10/05/2312:00	LJ05053A	LJ05037A	23DSJ005W	Field Sample
TMW46102023	J027-06	1	NA	10/07/2303:13	10/05/2312:00	LJ05054A	LJ05037A	23DSJ005W	Field Sample
MW32102023	J027-08	1	NA	10/07/2303:32	10/05/2312:00	LJ05055A	LJ05037A	23DSJ005W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/05/23 12:00
Sample ID	: BGMW12102023	Date Analyzed:	10/07/23 02:55
Lab Samp ID:	23J027-05	Dilution Factor:	1
Lab File ID:	LJ05053A	Matrix:	WATER
Ext Btch ID:	23DSJ005W	% Moisture:	NA
Calib. Ref.:	LJ05037A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.53	0.053	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.850	1.06	80	60-130
Hexacosane	0.267	0.265	101	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/05/23 12:00
Sample ID	: TMW46102023	Date Analyzed:	10/07/23 03:13
Lab Samp ID:	23J027-06	Dilution Factor:	1
Lab File ID:	LJ05054A	Matrix:	WATER
Ext Btch ID:	23DSJ005W	% Moisture:	NA
Calib. Ref.:	LJ05037A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.47	0.047	0.093

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.729	0.930	78	60-130
Hexacosane	0.220	0.233	94	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1070ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/05/23 12:00
Sample ID	: MW32102023	Date Analyzed:	10/07/23 03:32
Lab Samp ID:	23J027-08	Dilution Factor:	1
Lab File ID:	LJ05055A	Matrix:	WATER
Ext Btch ID:	23DSJ005W	% Moisture:	NA
Calib. Ref.:	LJ05037A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.52	0.052	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.814	1.04	78	60-130
Hexacosane	0.249	0.260	96	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 960ml	Final Volume :	10ml
Prepared by	: RGalan	Analyzed by :	SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW3520C/8081B
PESTICIDES

A total of eight(8) water samples were received on 10/04/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ012WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ012WL/CPJ012WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J027
Project : USACE WINGATE Instrument ID : E8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ012WB	1	NA	10/13/2323:11	10/06/2313:30	MJ13029	MJ13025	23CPJ012W	Method Blank
LCS1W	CPJ012WL	1	NA	10/13/2323:35	10/06/2313:30	MJ13030	MJ13025	23CPJ012W	Lab Control Sample (LCS)
LCD1W	CPJ012WC	1	NA	10/13/2323:58	10/06/2313:30	MJ13031	MJ13025	23CPJ012W	LCS Duplicate
MW23102023	J027-01	1	NA	10/24/2319:22	10/06/2313:30	MJ24006	MJ24003	23CPJ012W	Field Sample
TMW44102023	J027-02	1	NA	10/24/2319:45	10/06/2313:30	MJ24007	MJ24003	23CPJ012W	Field Sample
BGMW12102023	J027-05	1	NA	10/24/2320:08	10/06/2313:30	MJ24008	MJ24003	23CPJ012W	Field Sample
TMW46102023	J027-06	1	NA	10/24/2320:31	10/06/2313:30	MJ24009	MJ24003	23CPJ012W	Field Sample
MW32102023	J027-08	1	NA	10/24/2320:54	10/06/2313:30	MJ24010	MJ24003	23CPJ012W	Field Sample
BGMW03102023	J027-09	1	NA	10/24/2321:17	10/06/2313:30	MJ24011	MJ24003	23CPJ012W	Field Sample
BGMW08102023	J027-11	1	NA	10/24/2321:41	10/06/2313:30	MJ24012	MJ24003	23CPJ012W	Field Sample
TMW36102023	J027-12	1	NA	10/24/2322:04	10/06/2313:30	MJ24013	MJ24003	23CPJ012W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/06/23 13:30
Sample ID	: MW23102023	Date Analyzed:	10/24/23 19:22
Lab Samp ID:	J027-01	Dilution Factor:	1
Lab File ID:	MJ24006	Matrix:	WATER
Ext Btch ID:	23CPJ012W	% Moisture:	NA
Calib. Ref.:	MJ24003	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.276) | 0.269	0.444	62	44-124
Decachlorobiphenyl	0.296 | (0.317)	0.444	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	MJ24004		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J027
Sample ID : TMW44102023
Lab Samp ID: J027-02
Lab File ID: MJ24007
Ext Btch ID: 23CPJ012W
Calib. Ref.: MJ24003

Date Collected: 10/02/23 08:20
Date Received: 10/04/23
Date Extracted: 10/06/23 13:30
Date Analyzed: 10/24/23 19:45
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.045
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.045
beta-BHC	(ND) | ND	0.11	0.022	0.045
Heptachlor	(ND) | ND	0.11	0.022	0.045
delta-BHC	(ND) | ND	0.11	0.022	0.045
Aldrin	(ND) | ND	0.11	0.022	0.045
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.045
gamma-Chlordane	(ND) | ND	0.11	0.022	0.045
alpha-Chlordane	(ND) | ND	0.11	0.022	0.045
Endosulfan I	(ND) | ND	0.11	0.022	0.045
4,4'-DDE	(ND) | ND	0.11	0.022	0.045
Dieldrin	(ND) | ND	0.11	0.022	0.045
Endrin	(ND) | ND	0.11	0.022	0.045
4,4'-DDD	(ND) | ND	0.11	0.022	0.045
Endosulfan II	(ND) | ND	0.11	0.022	0.045
4,4'-DDT	(ND) | ND	0.11	0.022	0.045
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.045
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.045
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.045

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.272) | 0.264	0.449	61	44-124
Decachlorobiphenyl	0.300 | (0.322)	0.449	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml
Prepared by : RGalan
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24004

Final Volume : 10ml
Analyzed by : EKim

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/06/23 13:30
Sample ID	: BGMW12102023	Date Analyzed:	10/24/23 20:08
Lab Samp ID:	J027-05	Dilution Factor:	1
Lab File ID:	MJ24008	Matrix:	WATER
Ext Btch ID:	23CPJ012W	% Moisture:	NA
Calib. Ref.:	MJ24003	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.098	0.020	0.039
gamma-BHC (Lindane)	(ND) | ND	0.098	0.020	0.039
beta-BHC	(ND) | ND	0.098	0.020	0.039
Heptachlor	(ND) | ND	0.098	0.020	0.039
delta-BHC	(ND) | ND	0.098	0.020	0.039
Aldrin	(ND) | ND	0.098	0.020	0.039
Heptachlor Epoxide	(ND) | ND	0.098	0.020	0.039
gamma-Chlordane	(ND) | ND	0.098	0.020	0.039
alpha-Chlordane	(ND) | ND	0.098	0.020	0.039
Endosulfan I	(ND) | ND	0.098	0.020	0.039
4,4'-DDE	(ND) | ND	0.098	0.020	0.039
Dieldrin	(ND) | ND	0.098	0.020	0.039
Endrin	(ND) | ND	0.098	0.020	0.039
4,4'-DDD	(ND) | ND	0.098	0.020	0.039
Endosulfan II	(ND) | ND	0.098	0.020	0.039
4,4'-DDT	(ND) | ND	0.098	0.020	0.039
Endrin Aldehyde	(ND) | ND	0.098	0.020	0.039
Endosulfan Sulfate	(ND) | ND	0.098	0.020	0.039
Methoxychlor	(ND) | ND	0.98	0.098	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.49
Endrin Ketone	(ND) | ND	0.098	0.020	0.039

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.222 | (0.243)	0.392	62	44-124
Decachlorobiphenyl	0.261 | (0.276)	0.392	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1020ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	MJ24004		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J027
Sample ID : TMW46102023
Lab Samp ID: J027-06
Lab File ID: MJ24009
Ext Btch ID: 23CPJ012W
Calib. Ref.: MJ24003

Date Collected: 10/02/23 09:10
Date Received: 10/04/23
Date Extracted: 10/06/23 13:30
Date Analyzed: 10/24/23 20:31
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.094	0.019	0.038
gamma-BHC (Lindane)	(ND) | ND	0.094	0.019	0.038
beta-BHC	(ND) | ND	0.094	0.019	0.038
Heptachlor	(ND) | ND	0.094	0.019	0.038
delta-BHC	(ND) | ND	0.094	0.019	0.038
Aldrin	(ND) | ND	0.094	0.019	0.038
Heptachlor Epoxide	(ND) | ND	0.094	0.019	0.038
gamma-Chlordane	(ND) | ND	0.094	0.019	0.038
alpha-Chlordane	(ND) | ND	0.094	0.019	0.038
Endosulfan I	(ND) | ND	0.094	0.019	0.038
4,4'-DDE	(ND) | ND	0.094	0.019	0.038
Dieldrin	(ND) | ND	0.094	0.019	0.038
Endrin	(ND) | ND	0.094	0.019	0.038
4,4'-DDD	(ND) | ND	0.094	0.019	0.038
Endosulfan II	(ND) | ND	0.094	0.019	0.038
4,4'-DDT	(ND) | ND	0.094	0.019	0.038
Endrin Aldehyde	(ND) | ND	0.094	0.019	0.038
Endosulfan Sulfate	(ND) | ND	0.094	0.019	0.038
Methoxychlor	(ND) | ND	0.94	0.094	0.19
Toxaphene	(ND) | ND	1.9	0.24	0.47
Endrin Ketone	(ND) | ND	0.094	0.019	0.038

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.211) | 0.206	0.377	56	44-124
Decachlorobiphenyl	0.251 | (0.269)	0.377	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 1060ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J027
Sample ID : MW32102023
Lab Samp ID: J027-08
Lab File ID: MJ24010
Ext Btch ID: 23CPJ012W
Calib. Ref.: MJ24003

Date Collected: 10/02/23 09:55
Date Received: 10/04/23
Date Extracted: 10/06/23 13:30
Date Analyzed: 10/24/23 20:54
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.099	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.099	0.020	0.040
beta-BHC	(ND) | ND	0.099	0.020	0.040
Heptachlor	(ND) | ND	0.099	0.020	0.040
delta-BHC	(ND) | ND	0.099	0.020	0.040
Aldrin	(ND) | ND	0.099	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.099	0.020	0.040
gamma-Chlordane	(ND) | ND	0.099	0.020	0.040
alpha-Chlordane	(ND) | ND	0.099	0.020	0.040
Endosulfan I	(ND) | ND	0.099	0.020	0.040
4,4'-DDE	(ND) | ND	0.099	0.020	0.040
Dieldrin	(ND) | ND	0.099	0.020	0.040
Endrin	(ND) | ND	0.099	0.020	0.040
4,4'-DDD	(ND) | ND	0.099	0.020	0.040
Endosulfan II	(ND) | ND	0.099	0.020	0.040
4,4'-DDT	(ND) | ND	0.099	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.099	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.099	0.020	0.040
Methoxychlor	(ND) | ND	0.99	0.099	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.099	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.229) | 0.225	0.396	58	44-124
Decachlorobiphenyl	0.273 | (0.286)	0.396	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 1010ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J027
Sample ID : BGMW03102023
Lab Samp ID: J027-09
Lab File ID: MJ24011
Ext Btch ID: 23CPJ012W
Calib. Ref.: MJ24003

Date Collected: 10/02/23 10:15
Date Received: 10/04/23
Date Extracted: 10/06/23 13:30
Date Analyzed: 10/24/23 21:17
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.273 | (0.279)	0.444	63	44-124
Decachlorobiphenyl	0.302 | (0.320)	0.444	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23 10:50
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/06/23 13:30
Sample ID : BGMW08102023	Date Analyzed: 10/24/23 21:41
Lab Samp ID: J027-11	Dilution Factor: 1
Lab File ID: MJ24012	Matrix: WATER
Ext Btch ID: 23CPJ012W	% Moisture: NA
Calib. Ref.: MJ24003	Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.045
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.045
beta-BHC	(ND) | ND	0.11	0.022	0.045
Heptachlor	0.064J | (ND)	0.11	0.022	0.045
delta-BHC	(ND) | ND	0.11	0.022	0.045
Aldrin	(ND) | ND	0.11	0.022	0.045
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.045
gamma-Chlordane	(ND) | ND	0.11	0.022	0.045
alpha-Chlordane	(ND) | ND	0.11	0.022	0.045
Endosulfan I	(ND) | ND	0.11	0.022	0.045
4,4'-DDE	(ND) | ND	0.11	0.022	0.045
Dieldrin	0.12 | (ND)	0.11	0.022	0.045
Endrin	(ND) | ND	0.11	0.022	0.045
4,4'-DDD	(ND) | ND	0.11	0.022	0.045
Endosulfan II	(ND) | ND	0.11	0.022	0.045
4,4'-DDT	(ND) | ND	0.11	0.022	0.045
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.045
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.045
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.045

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.237 | (0.254)	0.449	57	44-124
Decachlorobiphenyl	0.302 | (0.333)	0.449	74	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 890ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: MJ24004	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J027
Sample ID : TMW36102023
Lab Samp ID: J027-12
Lab File ID: MJ24013
Ext Btch ID: 23CPJ012W
Calib. Ref.: MJ24003

Date Collected: 10/02/23 11:15
Date Received: 10/04/23
Date Extracted: 10/06/23 13:30
Date Analyzed: 10/24/23 22:04
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.023	0.046
gamma-BHC (Lindane)	(ND) | ND	0.12	0.023	0.046
beta-BHC	(ND) | ND	0.12	0.023	0.046
Heptachlor	(ND) | ND	0.12	0.023	0.046
delta-BHC	(ND) | ND	0.12	0.023	0.046
Aldrin	(ND) | ND	0.12	0.023	0.046
Heptachlor Epoxide	(ND) | ND	0.12	0.023	0.046
gamma-Chlordane	(ND) | ND	0.12	0.023	0.046
alpha-Chlordane	(ND) | ND	0.12	0.023	0.046
Endosulfan I	(ND) | ND	0.12	0.023	0.046
4,4'-DDE	(ND) | ND	0.12	0.023	0.046
Dieldrin	(ND) | ND	0.12	0.023	0.046
Endrin	(ND) | ND	0.12	0.023	0.046
4,4'-DDD	(ND) | ND	0.12	0.023	0.046
Endosulfan II	(ND) | ND	0.12	0.023	0.046
4,4'-DDT	(ND) | ND	0.12	0.023	0.046
Endrin Aldehyde	(ND) | ND	0.12	0.023	0.046
Endosulfan Sulfate	(ND) | ND	0.12	0.023	0.046
Methoxychlor	(ND) | ND	1.1	0.12	0.23
Toxaphene	(ND) | ND	2.3	0.29	0.58
Endrin Ketone	(ND) | ND	0.12	0.023	0.046

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.261 | (0.261)	0.460	57	44-124
Decachlorobiphenyl	0.303 | (0.323)	0.460	70	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24004

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW3520C/8082A
PCBS

A total of three(3) water samples were received on 10/04/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ012WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 60J012WL/60J012WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PCBs

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : 71

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ012WB	1	NA	10/12/2311:47	10/06/2313:30	KJ12004A	KJ12002A	CPJ012W	Method Blank
LCS1W	60J012WL	1	NA	10/12/2312:07	10/06/2313:30	KJ12005A	KJ12002A	CPJ012W	Lab Control Sample (LCS)
LCD1W	60J012WC	1	NA	10/12/2312:27	10/06/2313:30	KJ12006A	KJ12002A	CPJ012W	LCS Duplicate
BGMW12102023	J027-05	1.11	NA	10/12/2312:47	10/06/2313:30	KJ12007A	KJ12002A	CPJ012W	Field Sample
MW32102023	J027-08	0.98	NA	10/12/2313:07	10/06/2313:30	KJ12008A	KJ12002A	CPJ012W	Field Sample
BGMW08102023	J027-11	1.12	NA	10/12/2313:27	10/06/2313:30	KJ12009A	KJ12002A	CPJ012W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/06/23 13:30
Sample ID: BGMW12102023	Date Analyzed: 10/12/23 12:47
Lab Samp ID: J027-05	Dilution Factor: 1.11
Lab File ID: KJ12007A	Matrix : WATER
Ext Btch ID: CPJ012W	% Moisture : NA
Calib. Ref.: KJ12002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.56
PCB-1221	(ND)|ND	1.1	0.28	0.56
PCB-1232	(ND)|ND	1.1	0.28	0.56
PCB-1242	(ND)|ND	1.1	0.28	0.56
PCB-1248	(ND)|ND	1.1	0.28	0.56
PCB-1254	(ND)|ND	1.1	0.28	0.56
PCB-1260	(ND)|ND	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.4156|(0.4317)	0.4440	93.6|(97.2)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/06/23 13:30
Sample ID: MW32102023	Date Analyzed: 10/12/23 13:07
Lab Samp ID: J027-08	Dilution Factor: 0.98
Lab File ID: KJ12008A	Matrix : WATER
Ext Btch ID: CPJ012W	% Moisture : NA
Calib. Ref.: KJ12002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	0.98	0.25	0.49
PCB-1221	(ND)|ND	0.98	0.25	0.49
PCB-1232	(ND)|ND	0.98	0.25	0.49
PCB-1242	(ND)|ND	0.98	0.25	0.49
PCB-1248	(ND)|ND	0.98	0.25	0.49
PCB-1254	(ND)|ND	0.98	0.25	0.49
PCB-1260	(ND)|ND	0.98	0.25	0.49

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3533|(0.3750)	0.3920	90.1|(95.7)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/06/23 13:30
Sample ID: BGMW08102023	Date Analyzed: 10/12/23 13:27
Lab Samp ID: J027-11	Dilution Factor: 1.12
Lab File ID: KJ12009A	Matrix : WATER
Ext Btch ID: CPJ012W	% Moisture : NA
Calib. Ref.: KJ12002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.56
PCB-1221	(ND)|ND	1.1	0.28	0.56
PCB-1232	(ND)|ND	1.1	0.28	0.56
PCB-1242	(ND)|ND	1.1	0.28	0.56
PCB-1248	(ND)|ND	1.1	0.28	0.56
PCB-1254	(ND)|ND	1.1	0.28	0.56
PCB-1260	(ND)|ND	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.4097|(0.4267)	0.4480	91.4|(95.2)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD 8151A
HERBICIDES

A total of three(3) water samples were received on 10/04/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
Samples J027-05 and J027-08 were re-extracted 4 days out of holding time due to surrogate recovery which was out of QC limits. All other samples were extracted and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. HEJ002WB and HEJ008WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. HEJ002WL/HEJ002WC and HEJ008WL/HEJ008WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : 16

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEJ002WB	1	NA	10/11/2319:47	10/05/2311:45	WJ11003A	WJ11002A	HEJ002W	Method Blank
LCS1W	HEJ002WL	1	NA	10/11/2320:16	10/05/2311:45	WJ11004A	WJ11002A	HEJ002W	Lab Control Sample (LCS)
LCD1W	HEJ002WC	1	NA	10/11/2320:44	10/05/2311:45	WJ11005A	WJ11002A	HEJ002W	LCS Duplicate
MBLK2W	HEJ008WB	1	NA	10/17/2320:13	10/13/2312:30	WJ17003A	WJ17002A	HEJ008W	Method Blank
LCS2W	HEJ008WL	1	NA	10/17/2320:42	10/13/2312:30	WJ17004A	WJ17002A	HEJ008W	Lab Control Sample (LCS)
LCD2W	HEJ008WC	1	NA	10/17/2321:10	10/13/2312:30	WJ17005A	WJ17002A	HEJ008W	LCS Duplicate
BGMW12102023	J027-05R	1	NA	10/17/2323:05	10/13/2312:30	WJ17009A	WJ17002A	HEJ008W	Field Sample
MW32102023	J027-08R	1	NA	10/17/2323:33	10/13/2312:30	WJ17010A	WJ17002A	HEJ008W	Field Sample
BGMW08102023	J027-11	1	NA	10/12/2304:02	10/05/2311:45	WJ11020A	WJ11014A	HEJ002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/13/23 12:30
Sample ID:	BGMW12102023	Date Analyzed:	10/17/23 23:05
Lab Samp ID:	J027-05R	Dilution Factor:	1
Lab File ID:	WJ17009A	Matrix	: WATER
Ext Btch ID:	HEJ008W	% Moisture	: NA
Calib. Ref.:	WJ17002A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	1.0	0.10	0.20
2,4-DB	(ND)|0.12J	1.0	0.10	0.20
2,4,5-T	(ND)|ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND)|ND	1.0	0.10	0.20
DALAPON	(ND)|0.61J	1.0	0.10	0.20
DICAMBA	(ND)|ND	1.0	0.10	0.20
DICHLOROPROP	(ND)|ND	1.0	0.10	0.20
DINOSEB	(ND)|ND	1.0	0.10	0.20
MCPA	32J|(ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.817|(9.008)	10.00	88.2|(90.1)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/13/23 12:30
Sample ID: MW32102023	Date Analyzed: 10/17/23 23:33
Lab Samp ID: J027-08R	Dilution Factor: 1
Lab File ID: WJ17010A	Matrix : WATER
Ext Btch ID: HEJ008W	% Moisture : NA
Calib. Ref.: WJ17002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	66 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.603 | (8.061)	10.00	76.0 | (80.6)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/02/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J027	Date Extracted	: 10/05/23 11:45
Sample ID	: BGMW08102023	Date Analyzed	: 10/12/23 04:02
Lab Samp ID	: J027-11	Dilution Factor	: 1
Lab File ID	: WJ11020A	Matrix	: WATER
Ext Btch ID	: HEJ002W	% Moisture	: NA
Calib. Ref.	: WJ11014A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	0.12J | (ND)	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	94 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.353 | (7.375)	10.00	73.5 | (73.7)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW8330B
EXPLOSIVES

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ001WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ001WL/EXJ001WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW8330B
EXPLOSIVES

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ001WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 35J001WL/35J001WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ001WB	1	NA	10/05/2319:32	10/05/2311:30	XJ05004A	XJ05002A	EXJ001W	Method Blank
LCS1W	EXJ001WL	1	NA	10/05/2320:29	10/05/2311:30	XJ05005A	XJ05002A	EXJ001W	Lab Control Sample (LCS)
LCD1W	EXJ001WC	1	NA	10/05/2321:17	10/05/2311:30	XJ05006A	XJ05002A	EXJ001W	LCS Duplicate
MW23102023	J027-01	1	NA	10/05/2323:59	10/05/2311:30	XJ05009A	XJ05002A	EXJ001W	Field Sample
TMW44102023	J027-02	1	NA	10/06/2300:47	10/05/2311:30	XJ05010A	XJ05002A	EXJ001W	Field Sample
TMW16102023	J027-03	1	NA	10/06/2301:44	10/05/2311:30	XJ05011A	XJ05002A	EXJ001W	Field Sample
FDUP01-102023	J027-04	1	NA	10/06/2302:32	10/05/2311:30	XJ05012A	XJ05002A	EXJ001W	Field Sample
BGMW12102023	J027-05	1	NA	10/06/2303:29	10/05/2311:30	XJ05013A	XJ05002A	EXJ001W	Field Sample
TMW46102023	J027-06	1	NA	10/06/2306:02	10/05/2311:30	XJ05016A	XJ05014A	EXJ001W	Field Sample
TMW19102023	J027-07	1	NA	10/06/2306:59	10/05/2311:30	XJ05017A	XJ05014A	EXJ001W	Field Sample
MW32102023	J027-08	1	NA	10/06/2307:47	10/05/2311:30	XJ05018A	XJ05014A	EXJ001W	Field Sample
BGMW03102023	J027-09	1	NA	10/06/2308:44	10/05/2311:30	XJ05019A	XJ05014A	EXJ001W	Field Sample
TMW18102023	J027-10	1	NA	10/06/2309:32	10/05/2311:30	XJ05020A	XJ05014A	EXJ001W	Field Sample
BGMW08102023	J027-11	1	NA	10/06/2310:29	10/05/2311:30	XJ05021A	XJ05014A	EXJ001W	Field Sample
TMW36102023	J027-12	1	NA	10/06/2311:17	10/05/2311:30	XJ05022A	XJ05014A	EXJ001W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ001WB	1	NA	10/05/2319:32	10/05/2311:30	XJ05004A	XJ05003A	EXJ001W	Method Blank
LCS1W	35J001WL	1	NA	10/05/2322:14	10/05/2311:30	XJ05007A	XJ05003A	EXJ001W	Lab Control Sample (LCS)
LCD1W	35J001WC	1	NA	10/05/2323:02	10/05/2311:30	XJ05008A	XJ05003A	EXJ001W	LCS Duplicate
MW23102023	J027-01	1	NA	10/05/2323:59	10/05/2311:30	XJ05009A	XJ05003A	EXJ001W	Field Sample
TMW44102023	J027-02	1	NA	10/06/2300:47	10/05/2311:30	XJ05010A	XJ05003A	EXJ001W	Field Sample
TMW16102023	J027-03	1	NA	10/06/2301:44	10/05/2311:30	XJ05011A	XJ05003A	EXJ001W	Field Sample
FDUP01-102023	J027-04	1	NA	10/06/2302:32	10/05/2311:30	XJ05012A	XJ05003A	EXJ001W	Field Sample
BGMW12102023	J027-05	1	NA	10/06/2303:29	10/05/2311:30	XJ05013A	XJ05003A	EXJ001W	Field Sample
TMW46102023	J027-06	1	NA	10/06/2306:02	10/05/2311:30	XJ05016A	XJ05015A	EXJ001W	Field Sample
TMW19102023	J027-07	1	NA	10/06/2306:59	10/05/2311:30	XJ05017A	XJ05015A	EXJ001W	Field Sample
MW32102023	J027-08	1	NA	10/06/2307:47	10/05/2311:30	XJ05018A	XJ05015A	EXJ001W	Field Sample
BGMW03102023	J027-09	1	NA	10/06/2308:44	10/05/2311:30	XJ05019A	XJ05015A	EXJ001W	Field Sample
TMW18102023	J027-10	1	NA	10/06/2309:32	10/05/2311:30	XJ05020A	XJ05015A	EXJ001W	Field Sample
BGMW08102023	J027-11	1	NA	10/06/2310:29	10/05/2311:30	XJ05021A	XJ05015A	EXJ001W	Field Sample
TMW36102023	J027-12	1	NA	10/06/2311:17	10/05/2311:30	XJ05022A	XJ05015A	EXJ001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: MW23102023	Date Analyzed: 10/05/23 23:59
Lab Samp ID: J027-01	Dilution Factor: 1
Lab File ID: XJ05009A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.00	4.000	100	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: MW23102023	Date Analyzed: 10/05/23 23:59
Lab Samp ID: J027-01	Dilution Factor: 1
Lab File ID: XJ05009A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05003A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.00	4.000	100	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW44102023	Date Analyzed: 10/06/23 00:47
Lab Samp ID: J027-02	Dilution Factor: 1
Lab File ID: XJ05010A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.96	4.000	98.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW44102023	Date Analyzed: 10/06/23 00:47
Lab Samp ID: J027-02	Dilution Factor: 1
Lab File ID: XJ05010A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05003A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.96	4.000	98.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW16102023	Date Analyzed: 10/06/23 01:44
Lab Samp ID: J027-03	Dilution Factor: 1
Lab File ID: XJ05011A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.80	4.000	94.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW16102023	Date Analyzed: 10/06/23 01:44
Lab Samp ID: J027-03	Dilution Factor: 1
Lab File ID: XJ05011A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05003A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.80	4.000	94.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: FDUP01-102023	Date Analyzed: 10/06/23 02:32
Lab Samp ID: J027-04	Dilution Factor: 1
Lab File ID: XJ05012A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: FDUP01-102023	Date Analyzed: 10/06/23 02:32
Lab Samp ID: J027-04	Dilution Factor: 1
Lab File ID: XJ05012A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05003A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: BGMW12102023	Date Analyzed: 10/06/23 03:29
Lab Samp ID: J027-05	Dilution Factor: 1
Lab File ID: XJ05013A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.04	4.000	101	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: BGMW12102023	Date Analyzed: 10/06/23 03:29
Lab Samp ID: J027-05	Dilution Factor: 1
Lab File ID: XJ05013A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05003A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.04	4.000	101	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW46102023	Date Analyzed: 10/06/23 06:02
Lab Samp ID: J027-06	Dilution Factor: 1
Lab File ID: XJ05016A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.84	4.000	96.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW46102023	Date Analyzed: 10/06/23 06:02
Lab Samp ID: J027-06	Dilution Factor: 1
Lab File ID: XJ05016A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.84	4.000	96.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW19102023	Date Analyzed: 10/06/23 06:59
Lab Samp ID: J027-07	Dilution Factor: 1
Lab File ID: XJ05017A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.83	4.000	95.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW19102023	Date Analyzed: 10/06/23 06:59
Lab Samp ID: J027-07	Dilution Factor: 1
Lab File ID: XJ05017A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.83	4.000	95.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: MW32102023	Date Analyzed: 10/06/23 07:47
Lab Samp ID: J027-08	Dilution Factor: 1
Lab File ID: XJ05018A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.94	4.000	98.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: MW32102023	Date Analyzed: 10/06/23 07:47
Lab Samp ID: J027-08	Dilution Factor: 1
Lab File ID: XJ05018A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.94	4.000	98.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: BGMW03102023	Date Analyzed: 10/06/23 08:44
Lab Samp ID: J027-09	Dilution Factor: 1
Lab File ID: XJ05019A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.93	4.000	98.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: BGMW03102023	Date Analyzed: 10/06/23 08:44
Lab Samp ID: J027-09	Dilution Factor: 1
Lab File ID: XJ05019A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.93	4.000	98.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW18102023	Date Analyzed: 10/06/23 09:32
Lab Samp ID: J027-10	Dilution Factor: 1
Lab File ID: XJ05020A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.88	4.000	97.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW18102023	Date Analyzed: 10/06/23 09:32
Lab Samp ID: J027-10	Dilution Factor: 1
Lab File ID: XJ05020A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.88	4.000	97.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23
Project	: USACE WINGATE	Date Received:	10/04/23
Batch No.	: 23J027	Date Extracted:	10/05/23 11:30
Sample ID:	BGMW08102023	Date Analyzed:	10/06/23 10:29
Lab Samp ID:	J027-11	Dilution Factor:	1
Lab File ID:	XJ05021A	Matrix :	WATER
Ext Btch ID:	EXJ001W	% Moisture :	NA
Calib. Ref.:	XJ05014A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.78	4.000	94.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/02/23
Project	: USACE WINGATE	Date Received	: 10/04/23
Batch No.	: 23J027	Date Extracted	: 10/05/23 11:30
Sample ID	: BGMW08102023	Date Analyzed	: 10/06/23 10:29
Lab Samp ID	: J027-11	Dilution Factor	: 1
Lab File ID	: XJ05021A	Matrix	: WATER
Ext Btch ID	: EXJ001W	% Moisture	: NA
Calib. Ref.	: XJ05015A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.78	4.000	94.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW36102023	Date Analyzed: 10/06/23 11:17
Lab Samp ID: J027-12	Dilution Factor: 1
Lab File ID: XJ05022A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.56	4.000	88.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:30
Sample ID: TMW36102023	Date Analyzed: 10/06/23 11:17
Lab Samp ID: J027-12	Dilution Factor: 1
Lab File ID: XJ05022A	Matrix : WATER
Ext Btch ID: EXJ001W	% Moisture : NA
Calib. Ref.: XJ05015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.56	4.000	88.9	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW8332
NITROGLYCERIN AND PETN

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Nitroglycerin And Petn in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ002WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ002WL/EXJ002WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ002WB	1	NA	10/06/2310:14	10/05/2311:00	NJ06003A	NJ06002A	EXJ002W	Method Blank
LCS1W	EXJ002WL	1	NA	10/06/2310:23	10/05/2311:00	NJ06004A	NJ06002A	EXJ002W	Lab Control Sample (LCS)
LCD1W	EXJ002WC	1	NA	10/06/2310:32	10/05/2311:00	NJ06005A	NJ06002A	EXJ002W	LCS Duplicate
MW23102023	J027-01	1	NA	10/06/2310:41	10/05/2311:00	NJ06006A	NJ06002A	EXJ002W	Field Sample
TMW44102023	J027-02	1	NA	10/06/2310:50	10/05/2311:00	NJ06007A	NJ06002A	EXJ002W	Field Sample
TMW16102023	J027-03	1	NA	10/06/2310:59	10/05/2311:00	NJ06008A	NJ06002A	EXJ002W	Field Sample
FDUP01-102023	J027-04	1	NA	10/06/2311:08	10/05/2311:00	NJ06009A	NJ06002A	EXJ002W	Field Sample
BGMW12102023	J027-05	1	NA	10/06/2311:17	10/05/2311:00	NJ06010A	NJ06002A	EXJ002W	Field Sample
TMW46102023	J027-06	1	NA	10/06/2311:26	10/05/2311:00	NJ06011A	NJ06002A	EXJ002W	Field Sample
TMW19102023	J027-07	1	NA	10/06/2311:36	10/05/2311:00	NJ06012A	NJ06002A	EXJ002W	Field Sample
MW32102023	J027-08	1	NA	10/06/2311:54	10/05/2311:00	NJ06014A	NJ06013A	EXJ002W	Field Sample
BGMW03102023	J027-09	1	NA	10/06/2312:03	10/05/2311:00	NJ06015A	NJ06013A	EXJ002W	Field Sample
TMW18102023	J027-10	1	NA	10/06/2312:12	10/05/2311:00	NJ06016A	NJ06013A	EXJ002W	Field Sample
BGMW08102023	J027-11	1	NA	10/06/2312:21	10/05/2311:00	NJ06017A	NJ06013A	EXJ002W	Field Sample
TMW36102023	J027-12	1	NA	10/06/2312:30	10/05/2311:00	NJ06018A	NJ06013A	EXJ002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: MW23102023	Date Analyzed: 10/06/23 10:41
Lab Samp ID: J027-01	Dilution Factor: 1
Lab File ID: NJ06006A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	551	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: TMW44102023	Date Analyzed: 10/06/23 10:50
Lab Samp ID: J027-02	Dilution Factor: 1
Lab File ID: NJ06007A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	563	500.0	113	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: TMW16102023	Date Analyzed: 10/06/23 10:59
Lab Samp ID: J027-03	Dilution Factor: 1
Lab File ID: NJ06008A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	530	500.0	106	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: FDUP01-102023	Date Analyzed: 10/06/23 11:08
Lab Samp ID: J027-04	Dilution Factor: 1
Lab File ID: NJ06009A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	522	500.0	104	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: BGMW12102023	Date Analyzed: 10/06/23 11:17
Lab Samp ID: J027-05	Dilution Factor: 1
Lab File ID: NJ06010A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	545	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: TMW46102023	Date Analyzed: 10/06/23 11:26
Lab Samp ID: J027-06	Dilution Factor: 1
Lab File ID: NJ06011A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	569	500.0	114	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: TMW19102023	Date Analyzed: 10/06/23 11:36
Lab Samp ID: J027-07	Dilution Factor: 1
Lab File ID: NJ06012A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	527	500.0	105	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: MW32102023	Date Analyzed: 10/06/23 11:54
Lab Samp ID: J027-08	Dilution Factor: 1
Lab File ID: NJ06014A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	554	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: BGMW03102023	Date Analyzed: 10/06/23 12:03
Lab Samp ID: J027-09	Dilution Factor: 1
Lab File ID: NJ06015A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	550	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: TMW18102023	Date Analyzed: 10/06/23 12:12
Lab Samp ID: J027-10	Dilution Factor: 1
Lab File ID: NJ06016A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	526	500.0	105	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: BGMW08102023	Date Analyzed: 10/06/23 12:21
Lab Samp ID: J027-11	Dilution Factor: 1
Lab File ID: NJ06017A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	550	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23
Project : USACE WINGATE	Date Received: 10/04/23
Batch No. : 23J027	Date Extracted: 10/05/23 11:00
Sample ID: TMW36102023	Date Analyzed: 10/06/23 12:30
Lab Samp ID: J027-12	Dilution Factor: 1
Lab File ID: NJ06018A	Matrix : WATER
Ext Btch ID: EXJ002W	% Moisture : NA
Calib. Ref.: NJ06013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	536	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW6020A
METALS BY ICP-MS

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Vanadium(0.30J <1/2 LOQ) was detected at trace level in IMJ017WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ017WL/IMJ017WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J027-01M/J027-01S - Percent recovery for Sodium(164X) was not within MS/MSD QC limits. Percent recovery for Barium(8X) was not within MSD QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ017WB	1	NA	10/20/2313:56	10/19/2309:56	H6J16023	H6J16018	IMJ017W	Method Blank
LCS1W	IMJ017WL	1	NA	10/20/2313:59	10/19/2309:56	H6J16024	H6J16018	IMJ017W	Lab Control Sample (LCS)
LCD1W	IMJ017WC	1	NA	10/20/2314:02	10/19/2309:56	H6J16025	H6J16018	IMJ017W	LCS Duplicate
MW23102023	J027-01A	5	NA	10/20/2314:19	10/19/2309:56	H6J16031	H6J16029	IMJ017W	Analytical Spike Sample
MW23102023	J027-01G	5	NA	10/20/2314:22	10/19/2309:56	H6J16032	H6J16029	IMJ017W	Diluted Sample
MW23102023	J027-01J	25	NA	10/20/2314:25	10/19/2309:56	H6J16033	H6J16029	IMJ017W	Diluted Sample
MW23102023MS	J027-01M	5	NA	10/20/2314:28	10/19/2309:56	H6J16034	H6J16029	IMJ017W	Matrix Spike Sample (MS)
MW23102023MSD	J027-01S	5	NA	10/20/2314:31	10/19/2309:56	H6J16035	H6J16029	IMJ017W	MS Duplicate (MSD)
TMW44102023	J027-02G	5	NA	10/20/2314:34	10/19/2309:56	H6J16036	H6J16029	IMJ017W	Diluted Sample
TMW16102023	J027-03G	5	NA	10/20/2314:37	10/19/2309:56	H6J16037	H6J16029	IMJ017W	Diluted Sample
FDUP01-102023	J027-04G	5	NA	10/20/2314:40	10/19/2309:56	H6J16038	H6J16029	IMJ017W	Diluted Sample
BGMW12102023	J027-05G	5	NA	10/20/2314:43	10/19/2309:56	H6J16039	H6J16029	IMJ017W	Diluted Sample
TMW46102023	J027-06I	10	NA	10/20/2314:45	10/19/2309:56	H6J16040	H6J16029	IMJ017W	Diluted Sample
TMW19102023	J027-07G	5	NA	10/20/2314:54	10/19/2309:56	H6J16043	H6J16041	IMJ017W	Diluted Sample
MW32102023	J027-08I	10	NA	10/20/2314:57	10/19/2309:56	H6J16044	H6J16041	IMJ017W	Diluted Sample
BGMW03102023	J027-09G	5	NA	10/20/2315:00	10/19/2309:56	H6J16045	H6J16041	IMJ017W	Diluted Sample
TMW18102023	J027-10G	5	NA	10/20/2315:03	10/19/2309:56	H6J16046	H6J16041	IMJ017W	Diluted Sample
BGMW08102023	J027-11K	20	NA	10/20/2315:06	10/19/2309:56	H6J16047	H6J16041	IMJ017W	Diluted Sample
TMW36102023	J027-12G	5	NA	10/20/2315:09	10/19/2309:56	H6J16048	H6J16041	IMJ017W	Diluted Sample
MW23102023	J027-01A	50	NA	10/20/2315:18	10/19/2309:56	H6J16051	H6J16049	IMJ017W	Analytical Spike Sample
MW23102023	J027-01T	50	NA	10/20/2315:20	10/19/2309:56	H6J16052	H6J16049	IMJ017W	Diluted Sample
MW23102023	J027-01J	250	NA	10/20/2315:23	10/19/2309:56	H6J16053	H6J16049	IMJ017W	Diluted Sample
MW23102023MS	J027-01M	50	NA	10/20/2315:26	10/19/2309:56	H6J16054	H6J16049	IMJ017W	Matrix Spike Sample (MS)
MW23102023MSD	J027-01S	50	NA	10/20/2315:29	10/19/2309:56	H6J16055	H6J16049	IMJ017W	MS Duplicate (MSD)
TMW44102023	J027-02T	50	NA	10/20/2315:32	10/19/2309:56	H6J16056	H6J16049	IMJ017W	Diluted Sample
TMW16102023	J027-03T	50	NA	10/20/2315:35	10/19/2309:56	H6J16057	H6J16049	IMJ017W	Diluted Sample
FDUP01-102023	J027-04T	50	NA	10/20/2315:38	10/19/2309:56	H6J16058	H6J16049	IMJ017W	Diluted Sample
BGMW12102023	J027-05T	50	NA	10/20/2315:41	10/19/2309:56	H6J16059	H6J16049	IMJ017W	Diluted Sample
TMW46102023	J027-06T	50	NA	10/20/2315:44	10/19/2309:56	H6J16060	H6J16049	IMJ017W	Diluted Sample
TMW19102023	J027-07T	50	NA	10/20/2315:52	10/19/2309:56	H6J16063	H6J16061	IMJ017W	Diluted Sample
MW32102023	J027-08T	50	NA	10/20/2315:55	10/19/2309:56	H6J16064	H6J16061	IMJ017W	Diluted Sample
BGMW03102023	J027-09T	50	NA	10/20/2315:58	10/19/2309:56	H6J16065	H6J16061	IMJ017W	Diluted Sample
TMW18102023	J027-10T	50	NA	10/20/2316:01	10/19/2309:56	H6J16066	H6J16061	IMJ017W	Diluted Sample
BGMW08102023	J027-11T	200	NA	10/20/2316:04	10/19/2309:56	H6J16067	H6J16061	IMJ017W	Diluted Sample
TMW36102023	J027-12T	50	NA	10/20/2316:07	10/19/2309:56	H6J16068	H6J16061	IMJ017W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: MW23102023
Lab Samp ID: J027-01G
Lab File ID: H6J16032
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16029

Date Collected: 10/02/23 08:20
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 14:22
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.2J	5.0	0.62	1.2
Barium	230	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	12000	1000	250	500
Chromium	0.52J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5900	500	100	250
Manganese	49	5.0	1.2	2.5
Nickel	1.4J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW23102023
Lab Samp ID: J027-01T
Lab File ID: H6J16052
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16049

Date Analyzed: 10/20/23 15:20
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	490000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW23102023	Date Analyzed:	10/20/23 14:22
Lab Samp ID:	J027-01G	Dilution Factor:	5
Lab File ID:	H6J16032	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.2J	5.0	0.62	1.2
Barium	230	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	12000	1000	250	500
Chromium	0.52J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5900	500	100	250
Manganese	49	5.0	1.2	2.5
Nickel	1.4J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	490000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW23102023	Date Analyzed:	10/20/23 15:20
Lab Samp ID:	J027-01T	Dilution Factor:	50
Lab File ID:	H6J16052	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	220	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	12000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6100	5000	1000	2500
Manganese	43J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	490000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	17J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW44102023	Date Analyzed:	10/20/23 14:34
Lab Samp ID:	J027-02G	Dilution Factor:	5
Lab File ID:	H6J16036	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	130J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	38000	1000	250	500
Chromium	1.2J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	350J	1000	250	500
Selenium	2.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.4	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW44102023	Date Analyzed:	10/20/23 15:32
Lab Samp ID:	J027-02T	Dilution Factor:	50
Lab File ID:	H6J16056	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	790000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW44102023	Date Analyzed:	10/20/23 14:34
Lab Samp ID:	J027-02G	Dilution Factor:	5
Lab File ID:	H6J16036	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	130J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	38000	1000	250	500
Chromium	1.2J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	350J	1000	250	500
Selenium	2.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	780000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.4	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW44102023	Date Analyzed:	10/20/23 15:32
Lab Samp ID:	J027-02T	Dilution Factor:	50
Lab File ID:	H6J16056	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	58	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	37000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	12000	5000	1000	2500
Manganese	13J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	790000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	18J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW16102023	Date Analyzed:	10/20/23 14:37
Lab Samp ID:	J027-03G	Dilution Factor:	5
Lab File ID:	H6J16037	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	400J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4300	1000	250	500
Chromium	12	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	6.0J	10	2.5	5.0
Iron	210J	1000	120	250
Lead	0.91J	5.0	0.25	0.50
Magnesium	580	500	100	250
Manganese	10	5.0	1.2	2.5
Nickel	9.1	5.0	1.2	2.5
Potassium	650J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.2	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW16102023	Date Analyzed:	10/20/23 15:35
Lab Samp ID:	J027-03T	Dilution Factor:	50
Lab File ID:	H6J16057	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	470000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW16102023	Date Analyzed:	10/20/23 14:37
Lab Samp ID:	J027-03G	Dilution Factor:	5
Lab File ID:	H6J16037	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	400J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4300	1000	250	500
Chromium	12	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	6.0J	10	2.5	5.0
Iron	210J	1000	120	250
Lead	0.91J	5.0	0.25	0.50
Magnesium	580	500	100	250
Manganese	10	5.0	1.2	2.5
Nickel	9.1	5.0	1.2	2.5
Potassium	650J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	460000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.2	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW16102023	Date Analyzed:	10/20/23 15:35
Lab Samp ID:	J027-03T	Dilution Factor:	50
Lab File ID:	H6J16057	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	23J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	4000J	10000	2500	5000
Chromium	12J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	470000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	21J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: FDUP01-102023
Lab Samp ID: J027-04G
Lab File ID: H6J16038
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16029

Date Collected: 10/02/23 08:40
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 14:40
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	430J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	24	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4300	1000	250	500
Chromium	12	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	5.4J	10	2.5	5.0
Iron	240J	1000	120	250
Lead	0.77J	5.0	0.25	0.50
Magnesium	580	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	9.2	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP01-102023
Lab Samp ID: J027-04T
Lab File ID: H6J16058
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16049

Date Analyzed: 10/20/23 15:38
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	450000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	FDUP01-102023	Date Analyzed:	10/20/23 14:40
Lab Samp ID:	J027-04G	Dilution Factor:	5
Lab File ID:	H6J16038	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	430J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	24	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4300	1000	250	500
Chromium	12	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	5.4J	10	2.5	5.0
Iron	240J	1000	120	250
Lead	0.77J	5.0	0.25	0.50
Magnesium	580	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	9.2	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	450000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	FDUP01-102023	Date Analyzed:	10/20/23 15:38
Lab Samp ID:	J027-04T	Dilution Factor:	50
Lab File ID:	H6J16058	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	25J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	4200J	10000	2500	5000
Chromium	12J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	450000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	21J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW12102023	Date Analyzed:	10/20/23 14:43
Lab Samp ID:	J027-05G	Dilution Factor:	5
Lab File ID:	H6J16039	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	2500	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	5.0	0.62	1.2
Barium	59	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	39000	1000	250	500
Chromium	3.0J	5.0	0.50	1.0
Cobalt	1.3J	3.7	0.50	1.0
Copper	3.4J	10	2.5	5.0
Iron	2000	1000	120	250
Lead	1.2J	5.0	0.25	0.50
Magnesium	17000	500	100	250
Manganese	200	5.0	1.2	2.5
Nickel	3.8J	5.0	1.2	2.5
Potassium	920J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	9.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	BGMW12102023	Date Analyzed:	10/20/23 15:41
Lab Samp ID:	J027-05T	Dilution Factor:	50
Lab File ID:	H6J16059	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	480000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW12102023	Date Analyzed:	10/20/23 14:43
Lab Samp ID:	J027-05G	Dilution Factor:	5
Lab File ID:	H6J16039	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	2500	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	5.0	0.62	1.2
Barium	59	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	39000	1000	250	500
Chromium	3.0J	5.0	0.50	1.0
Cobalt	1.3J	3.7	0.50	1.0
Copper	3.4J	10	2.5	5.0
Iron	2000	1000	120	250
Lead	1.2J	5.0	0.25	0.50
Magnesium	17000	500	100	250
Manganese	200	5.0	1.2	2.5
Nickel	3.8J	5.0	1.2	2.5
Potassium	920J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	470000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	9.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: BGMW12102023
Lab Samp ID: J027-05T
Lab File ID: H6J16059
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16049

Date Collected: 10/02/23 09:00
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 15:41
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	2600J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	60	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	39000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	2100J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	17000	5000	1000	2500
Manganese	200	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	480000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	21J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: TMW46102023
Lab Samp ID: J027-06I
Lab File ID: H6J16040
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16029

Date Collected: 10/02/23 09:10
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 14:45
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1000	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	37	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	2.6J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	790J	2000	250	500
Lead	0.67J	10	0.50	1.0
Magnesium	24000	5000	200	500
Manganese	37	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	560J	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	7.8J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW46102023
Lab Samp ID: J027-06T
Lab File ID: H6J16060
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16049

Date Analyzed: 10/20/23 15:44
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1400000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW46102023	Date Analyzed:	10/20/23 14:45
Lab Samp ID:	J027-06I	Dilution Factor:	10
Lab File ID:	H6J16040	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1000	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	37	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	2.6J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	790J	2000	250	500
Lead	0.67J	10	0.50	1.0
Magnesium	24000	1000	200	500
Manganese	37	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	560J	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1400000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	7.8J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW46102023	Date Analyzed:	10/20/23 15:44
Lab Samp ID:	J027-06T	Dilution Factor:	50
Lab File ID:	H6J16060	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1100J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	36J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	100000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	24000	5000	1000	2500
Manganese	35J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	120	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1400000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	19J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW19102023	Date Analyzed:	10/20/23 14:54
Lab Samp ID:	J027-07G	Dilution Factor:	5
Lab File ID:	H6J16043	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	240J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.4	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	13	5.0	0.50	1.0
Cobalt	0.55J	3.7	0.50	1.0
Copper	5.7J	10	2.5	5.0
Iron	210J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1200	500	100	250
Manganese	34	5.0	1.2	2.5
Nickel	29	5.0	1.2	2.5
Potassium	910J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW19102023	Date Analyzed:	10/20/23 15:52
Lab Samp ID:	J027-07T	Dilution Factor:	50
Lab File ID:	H6J16063	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	730000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW19102023	Date Analyzed:	10/20/23 14:54
Lab Samp ID:	J027-07G	Dilution Factor:	5
Lab File ID:	H6J16043	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	240J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.4	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	13	5.0	0.50	1.0
Cobalt	0.55J	3.7	0.50	1.0
Copper	5.7J	10	2.5	5.0
Iron	210J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1200	500	100	250
Manganese	34	5.0	1.2	2.5
Nickel	29	5.0	1.2	2.5
Potassium	910J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	700000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW19102023	Date Analyzed:	10/20/23 15:52
Lab Samp ID:	J027-07T	Dilution Factor:	50
Lab File ID:	H6J16063	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	10000	10000	2500	5000
Chromium	13J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1200J	5000	1000	2500
Manganese	30J	50	12	25
Nickel	26J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	730000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	17J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW32102023	Date Analyzed:	10/20/23 14:57
Lab Samp ID:	J027-08I	Dilution Factor:	10
Lab File ID:	H6J16044	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	4000	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	2.3J	10	1.2	2.5
Barium	110	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	140000	2000	500	1000
Chromium	7.7J	10	1.0	2.0
Cobalt	3.0J	7.5	1.0	2.0
Copper	37	20	5.0	10
Iron	4000	2000	250	500
Lead	2.8J	10	0.50	1.0
Magnesium	29000	1000	200	500
Manganese	380	10	2.5	5.0
Nickel	5.9J	10	2.5	5.0
Potassium	1300J	2000	500	1000
Selenium	110	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	10	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	MW32102023	Date Analyzed:	10/20/23 15:55
Lab Samp ID:	J027-08T	Dilution Factor:	50
Lab File ID:	H6J16064	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1400000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW32102023	Date Analyzed:	10/20/23 14:57
Lab Samp ID:	J027-08I	Dilution Factor:	10
Lab File ID:	H6J16044	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	4000	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	2.3J	10	1.2	2.5
Barium	110	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	140000	2000	500	1000
Chromium	7.7J	10	1.0	2.0
Cobalt	3.0J	7.5	1.0	2.0
Copper	37	20	5.0	10
Iron	4000	2000	250	500
Lead	2.8J	10	0.50	1.0
Magnesium	29000	1000	200	500
Manganese	380	10	2.5	5.0
Nickel	5.9J	10	2.5	5.0
Potassium	1300J	2000	500	1000
Selenium	110	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1400000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	10	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW32102023	Date Analyzed:	10/20/23 15:55
Lab Samp ID:	J027-08T	Dilution Factor:	50
Lab File ID:	H6J16064	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	4200J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	110	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	150000	10000	2500	5000
Chromium	9.6J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	32J	100	25	50
Iron	4100J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	29000	5000	1000	2500
Manganese	380	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	110	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1400000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	20J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: BGMW03102023
Lab Samp ID: J027-09G
Lab File ID: H6J16045
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16041

Date Collected: 10/02/23 10:15
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 15:00
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	910	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.8J	5.0	0.62	1.2
Barium	32	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	59000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	0.60J	3.7	0.50	1.0
Copper	3.6J	10	2.5	5.0
Iron	750J	1000	120	250
Lead	0.75J	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	30	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	1600	1000	250	500
Selenium	9.9	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	13	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW03102023
Lab Samp ID: J027-09T
Lab File ID: H6J16065
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16061

Date Analyzed: 10/20/23 15:58
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD 3W6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW03102023	Date Analyzed:	10/20/23 15:00
Lab Samp ID:	J027-09G	Dilution Factor:	5
Lab File ID:	H6J16045	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	910	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.8J	5.0	0.62	1.2
Barium	32	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	59000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	0.60J	3.7	0.50	1.0
Copper	3.6J	10	2.5	5.0
Iron	750J	1000	120	250
Lead	0.75J	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	30	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	1600	1000	250	500
Selenium	9.9	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	550000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	13	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW03102023	Date Analyzed:	10/20/23 15:58
Lab Samp ID:	J027-09T	Dilution Factor:	50
Lab File ID:	H6J16065	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	33J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	60000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	13000	5000	1000	2500
Manganese	25J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	10J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	570000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	22J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW18102023	Date Analyzed:	10/20/23 15:03
Lab Samp ID:	J027-10G	Dilution Factor:	5
Lab File ID:	H6J16046	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	190J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7700	1000	250	500
Chromium	0.71J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1200	500	100	250
Manganese	7.8	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	2100	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW18102023	Date Analyzed:	10/20/23 16:01
Lab Samp ID:	J027-10T	Dilution Factor:	50
Lab File ID:	H6J16066	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	700000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW18102023	Date Analyzed:	10/20/23 15:03
Lab Samp ID:	J027-10G	Dilution Factor:	5
Lab File ID:	H6J16046	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	190J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7700	1000	250	500
Chromium	0.71J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1200	500	100	250
Manganese	7.8	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	2100	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	680000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW18102023	Date Analyzed:	10/20/23 16:01
Lab Samp ID:	J027-10T	Dilution Factor:	50
Lab File ID:	H6J16066	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7300J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1300J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	700000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	18J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: BGMW08102023
Lab Samp ID: J027-11K
Lab File ID: H6J16047
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16041

Date Collected: 10/02/23 10:50
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 15:06
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	25000	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	4.3J	20	2.5	5.0
Barium	420	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	410000	4000	1000	2000
Chromium	92	20	2.0	4.0
Cobalt	14J	15	2.0	4.0
Copper	35J	40	10	20
Iron	11000	4000	500	1000
Lead	11J	20	1.0	2.0
Magnesium	50000	2000	400	1000
Manganese	2400	20	5.0	10
Nickel	56	20	5.0	10
Potassium	6400	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	44	20	5.0	10
Zinc	110J	400	100	200

Sample ID: BGMW08102023
Lab Samp ID: J027-11T
Lab File ID: H6J16067
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16061

Date Analyzed: 10/20/23 16:04
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	4000000	40000	10000	20000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:50
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW08102023	Date Analyzed:	10/20/23 15:06
Lab Samp ID:	J027-11K	Dilution Factor:	20
Lab File ID:	H6J16047	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	25000	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	4.3J	20	2.5	5.0
Barium	420	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	410000	4000	1000	2000
Chromium	92	20	2.0	4.0
Cobalt	14J	15	2.0	4.0
Copper	35J	40	10	20
Iron	11000	4000	500	1000
Lead	11J	20	1.0	2.0
Magnesium	50000	2000	400	1000
Manganese	2400	20	5.0	10
Nickel	56	20	5.0	10
Potassium	6400	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	3900000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	44	20	5.0	10
Zinc	110J	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:50
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW08102023	Date Analyzed:	10/20/23 16:04
Lab Samp ID:	J027-11T	Dilution Factor:	200
Lab File ID:	H6J16067	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	26000	20000	4000	10000
Antimony	ND	200	50	100
Arsenic	ND	200	25	50
Barium	410	200	50	100
Beryllium	ND	100	20	40
Cadmium	ND	200	20	40
Calcium	410000	40000	10000	20000
Chromium	120J	200	20	40
Cobalt	ND	150	20	40
Copper	ND	400	100	200
Iron	11000J	40000	5000	10000
Lead	ND	200	10	20
Magnesium	52000	20000	4000	10000
Manganese	2500	200	50	100
Nickel	74J	200	50	100
Potassium	ND	40000	10000	20000
Selenium	ND	200	30	60
Silver	ND	200	20	40
Sodium	4000000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	88J	200	50	100
Zinc	ND	4000	1000	2000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: TMW36102023
Lab Samp ID: J027-12G
Lab File ID: H6J16048
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16041

Date Collected: 10/02/23 11:15
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 15:09
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	380J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	15	5.0	0.50	1.0
Cobalt	2.8J	3.7	0.50	1.0
Copper	57	10	2.5	5.0
Iron	600J	1000	120	250
Lead	0.33J	5.0	0.25	0.50
Magnesium	1100	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	110	5.0	1.2	2.5
Potassium	890J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.3J	5.0	1.2	2.5
Zinc	110	100	25	50

Sample ID: TMW36102023
Lab Samp ID: J027-12T
Lab File ID: H6J16068
Ext Btch ID: IMJ017W
Calib. Ref.: H6J16061

Date Analyzed: 10/20/23 16:07
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	710000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 11:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW36102023	Date Analyzed:	10/20/23 15:09
Lab Samp ID:	J027-12G	Dilution Factor:	5
Lab File ID:	H6J16048	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	380J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	15	5.0	0.50	1.0
Cobalt	2.8J	3.7	0.50	1.0
Copper	57	10	2.5	5.0
Iron	600J	1000	120	250
Lead	0.33J	5.0	0.25	0.50
Magnesium	1100	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	110	5.0	1.2	2.5
Potassium	890J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	690000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.3J	5.0	1.2	2.5
Zinc	110	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 11:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW36102023	Date Analyzed:	10/20/23 16:07
Lab Samp ID:	J027-12T	Dilution Factor:	50
Lab File ID:	H6J16068	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	10000	10000	2500	5000
Chromium	17J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	54J	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1200J	5000	1000	2500
Manganese	110	50	12	25
Nickel	110	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	710000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	14J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MBLK1W	Date Analyzed:	10/20/23 13:56
Lab Samp ID:	IMJ017WB	Dilution Factor:	1
Lab File ID:	H6J16023	Matrix:	WATER
Ext Btch ID:	IMJ017W	% Moisture:	NA
Calib. Ref.:	H6J16018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.30J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ018WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ018WL/IMJ018WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J027-01M/J027-01S - Percent recoveries for Barium(8X) and Sodium(168X) were not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ018WB	1	NA	10/20/2314:05	10/19/2309:56	H6J16026	H6J16018	IMJ018W	Method Blank
LCS1W	IMJ018WL	1	NA	10/20/2314:08	10/19/2309:56	H6J16027	H6J16018	IMJ018W	Lab Control Sample (LCS)
LCD1W	IMJ018WC	1	NA	10/20/2314:10	10/19/2309:56	H6J16028	H6J16018	IMJ018W	LCS Duplicate
MW23102023	J027-01A	5	NA	10/20/2316:16	10/19/2309:56	H6J16071	H6J16069	IMJ018W	Analytical Spike Sample
MW23102023	J027-01G	5	NA	10/20/2316:19	10/19/2309:56	H6J16072	H6J16069	IMJ018W	Diluted Sample
MW23102023	J027-01J	25	NA	10/20/2316:22	10/19/2309:56	H6J16073	H6J16069	IMJ018W	Diluted Sample
MW23102023MS	J027-01M	5	NA	10/20/2316:25	10/19/2309:56	H6J16074	H6J16069	IMJ018W	Matrix Spike Sample (MS)
MW23102023MSD	J027-01S	5	NA	10/20/2316:27	10/19/2309:56	H6J16075	H6J16069	IMJ018W	MS Duplicate (MSD)
TMW44102023	J027-02G	5	NA	10/20/2316:30	10/19/2309:56	H6J16076	H6J16069	IMJ018W	Diluted Sample
TMW16102023	J027-03G	5	NA	10/20/2316:33	10/19/2309:56	H6J16077	H6J16069	IMJ018W	Diluted Sample
FDUP01-102023	J027-04G	5	NA	10/20/2316:36	10/19/2309:56	H6J16078	H6J16069	IMJ018W	Diluted Sample
BGMW12102023	J027-05G	5	NA	10/20/2316:39	10/19/2309:56	H6J16079	H6J16069	IMJ018W	Diluted Sample
TMW46102023	J027-06I	10	NA	10/20/2316:42	10/19/2309:56	H6J16080	H6J16069	IMJ018W	Diluted Sample
TMW19102023	J027-07G	5	NA	10/20/2316:51	10/19/2309:56	H6J16083	H6J16081	IMJ018W	Diluted Sample
MW32102023	J027-08I	10	NA	10/20/2316:54	10/19/2309:56	H6J16084	H6J16081	IMJ018W	Diluted Sample
BGMW03102023	J027-09G	5	NA	10/20/2316:57	10/19/2309:56	H6J16085	H6J16081	IMJ018W	Diluted Sample
TMW18102023	J027-10G	5	NA	10/20/2317:00	10/19/2309:56	H6J16086	H6J16081	IMJ018W	Diluted Sample
BGMW08102023	J027-11K	20	NA	10/20/2317:02	10/19/2309:56	H6J16087	H6J16081	IMJ018W	Diluted Sample
TMW36102023	J027-12G	5	NA	10/20/2317:05	10/19/2309:56	H6J16088	H6J16081	IMJ018W	Diluted Sample
MW23102023	J027-01A	50	NA	10/20/2317:14	10/19/2309:56	H6J16091	H6J16089	IMJ018W	Analytical Spike Sample
MW23102023	J027-01T	50	NA	10/20/2317:17	10/19/2309:56	H6J16092	H6J16089	IMJ018W	Diluted Sample
MW23102023	J027-01J	250	NA	10/20/2317:20	10/19/2309:56	H6J16093	H6J16089	IMJ018W	Diluted Sample
MW23102023MS	J027-01M	50	NA	10/20/2317:23	10/19/2309:56	H6J16094	H6J16089	IMJ018W	Matrix Spike Sample (MS)
MW23102023MSD	J027-01S	50	NA	10/20/2317:33	10/19/2309:56	H6J16095	H6J16089	IMJ018W	MS Duplicate (MSD)
TMW44102023	J027-02T	50	NA	10/20/2317:36	10/19/2309:56	H6J16096	H6J16089	IMJ018W	Diluted Sample
TMW16102023	J027-03T	50	NA	10/20/2317:39	10/19/2309:56	H6J16097	H6J16089	IMJ018W	Diluted Sample
FDUP01-102023	J027-04T	50	NA	10/20/2317:42	10/19/2309:56	H6J16098	H6J16089	IMJ018W	Diluted Sample
BGMW12102023	J027-05T	50	NA	10/20/2317:45	10/19/2309:56	H6J16099	H6J16089	IMJ018W	Diluted Sample
TMW46102023	J027-06T	50	NA	10/20/2317:48	10/19/2309:56	H6J16100	H6J16089	IMJ018W	Diluted Sample
TMW19102023	J027-07T	50	NA	10/20/2317:56	10/19/2309:56	H6J16103	H6J16101	IMJ018W	Diluted Sample
MW32102023	J027-08T	50	NA	10/20/2317:59	10/19/2309:56	H6J16104	H6J16101	IMJ018W	Diluted Sample
BGMW03102023	J027-09T	50	NA	10/20/2318:02	10/19/2309:56	H6J16105	H6J16101	IMJ018W	Diluted Sample
TMW18102023	J027-10T	50	NA	10/20/2318:05	10/19/2309:56	H6J16106	H6J16101	IMJ018W	Diluted Sample
BGMW08102023	J027-11T	200	NA	10/20/2318:08	10/19/2309:56	H6J16107	H6J16101	IMJ018W	Diluted Sample
TMW36102023	J027-12T	50	NA	10/20/2318:11	10/19/2309:56	H6J16108	H6J16101	IMJ018W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: MW23102023
Lab Samp ID: J027-01G
Lab File ID: H6J16072
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16069

Date Collected: 10/02/23 08:20
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 16:19
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.3J	5.0	0.62	1.2
Barium	240	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	13000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6200	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	4.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW23102023
Lab Samp ID: J027-01T
Lab File ID: H6J16092
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16089

Date Analyzed: 10/20/23 17:17
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	500000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW23102023	Date Analyzed:	10/20/23 16:19
Lab Samp ID:	J027-01G	Dilution Factor:	5
Lab File ID:	H6J16072	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16069	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.3J	5.0	0.62	1.2
Barium	240	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	13000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6200	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	500000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23 08:20
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J027	Date Extracted: 10/19/23 09:56
Sample ID: MW23102023	Date Analyzed: 10/20/23 17:17
Lab Samp ID: J027-01T	Dilution Factor: 50
Lab File ID: H6J16092	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16089	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	230	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	12000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6200	5000	1000	2500
Manganese	45J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	500000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	15J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: TMW44102023
Lab Samp ID: J027-02G
Lab File ID: H6J16076
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16069

Date Collected: 10/02/23 08:20
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 16:30
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	37000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	2.0J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	320J	1000	250	500
Selenium	2.6J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.2	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW44102023
Lab Samp ID: J027-02T
Lab File ID: H6J16096
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16089

Date Analyzed: 10/20/23 17:36
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	780000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:20
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW44102023	Date Analyzed:	10/20/23 16:30
Lab Samp ID:	J027-02G	Dilution Factor:	5
Lab File ID:	H6J16076	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16069	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	37000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	2.0J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	320J	1000	250	500
Selenium	2.6J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	760000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.2	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23 08:20
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J027	Date Extracted: 10/19/23 09:56
Sample ID: TMW44102023	Date Analyzed: 10/20/23 17:36
Lab Samp ID: J027-02T	Dilution Factor: 50
Lab File ID: H6J16096	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16089	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	16J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	36000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	12000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	780000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	15J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: TMW16102023
Lab Samp ID: J027-03G
Lab File ID: H6J16077
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16069

Date Collected: 10/02/23 08:30
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 16:33
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4300	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	450J	500	100	250
Manganese	3.4J	5.0	1.2	2.5
Nickel	8.7	5.0	1.2	2.5
Potassium	580J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW16102023
Lab Samp ID: J027-03T
Lab File ID: H6J16097
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16089

Date Analyzed: 10/20/23 17:39
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	480000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW16102023	Date Analyzed:	10/20/23 16:33
Lab Samp ID:	J027-03G	Dilution Factor:	5
Lab File ID:	H6J16077	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16069	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4300	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	450J	500	100	250
Manganese	3.4J	5.0	1.2	2.5
Nickel	8.7	5.0	1.2	2.5
Potassium	580J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	470000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:30
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW16102023	Date Analyzed:	10/20/23 17:39
Lab Samp ID:	J027-03T	Dilution Factor:	50
Lab File ID:	H6J16097	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16089	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	3400J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	480000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	18J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: FDUP01-102023
Lab Samp ID: J027-04G
Lab File ID: H6J16078
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16069

Date Collected: 10/02/23 08:40
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 16:36
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.63J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4300	1000	250	500
Chromium	2.1J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	430J	500	100	250
Manganese	8.2	5.0	1.2	2.5
Nickel	7.4	5.0	1.2	2.5
Potassium	590J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP01-102023
Lab Samp ID: J027-04T
Lab File ID: H6J16098
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16089

Date Analyzed: 10/20/23 17:42
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	460000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	FDUP01-102023	Date Analyzed:	10/20/23 16:36
Lab Samp ID:	J027-04G	Dilution Factor:	5
Lab File ID:	H6J16078	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16069	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.63J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4300	1000	250	500
Chromium	2.1J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	430J	500	100	250
Manganese	8.2	5.0	1.2	2.5
Nickel	7.4	5.0	1.2	2.5
Potassium	590J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	450000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 08:40
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	FDUP01-102023	Date Analyzed:	10/20/23 17:42
Lab Samp ID:	J027-04T	Dilution Factor:	50
Lab File ID:	H6J16098	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16089	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	3300J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	460000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	18J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: BGMW12102023
Lab Samp ID: J027-05G
Lab File ID: H6J16079
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16069

Date Collected: 10/02/23 09:00
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 16:39
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.71J	5.0	0.62	1.2
Barium	26	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	0.51J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	16000	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW12102023
Lab Samp ID: J027-05T
Lab File ID: H6J16099
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16089

Date Analyzed: 10/20/23 17:45
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	500000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW12102023	Date Analyzed:	10/20/23 16:39
Lab Samp ID:	J027-05G	Dilution Factor:	5
Lab File ID:	H6J16079	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16069	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.71J	5.0	0.62	1.2
Barium	26	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	0.51J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	16000	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	490000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:00
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW12102023	Date Analyzed:	10/20/23 17:45
Lab Samp ID:	J027-05T	Dilution Factor:	50
Lab File ID:	H6J16099	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16089	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	29J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	30000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	16000	5000	1000	2500
Manganese	22J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	500000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	13J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW46102023	Date Analyzed:	10/20/23 16:42
Lab Samp ID:	J027-06I	Dilution Factor:	10
Lab File ID:	H6J16080	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16069	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	10	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	96000	2000	500	1000
Chromium	3.1J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	23000	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	2.8J	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	6.3J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	TMW46102023	Date Analyzed:	10/20/23 17:48
Lab Samp ID:	J027-06T	Dilution Factor:	50
Lab File ID:	H6J16100	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16089	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1300000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW46102023	Date Analyzed:	10/20/23 16:42
Lab Samp ID:	J027-06I	Dilution Factor:	10
Lab File ID:	H6J16080	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16069	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	10	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	96000	2000	500	1000
Chromium	3.1J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	23000	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	2.8J	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1300000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	6.3J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:10
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW46102023	Date Analyzed:	10/20/23 17:48
Lab Samp ID:	J027-06T	Dilution Factor:	50
Lab File ID:	H6J16100	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16089	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	98000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	23000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	110	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	15J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: TMW19102023
Lab Samp ID: J027-07G
Lab File ID: H6J16083
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16081

Date Collected: 10/02/23 09:30
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 16:51
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	6.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	10000	1000	250	500
Chromium	0.57J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1100	500	100	250
Manganese	23	5.0	1.2	2.5
Nickel	12	5.0	1.2	2.5
Potassium	850J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW19102023
Lab Samp ID: J027-07T
Lab File ID: H6J16103
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16101

Date Analyzed: 10/20/23 17:56
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	720000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23 09:30
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J027	Date Extracted: 10/19/23 09:56
Sample ID: TMW19102023	Date Analyzed: 10/20/23 16:51
Lab Samp ID: J027-07G	Dilution Factor: 5
Lab File ID: H6J16083	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16081	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	6.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	10000	1000	250	500
Chromium	0.57J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1100	500	100	250
Manganese	23	5.0	1.2	2.5
Nickel	12	5.0	1.2	2.5
Potassium	850J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	690000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23 09:30
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J027	Date Extracted: 10/19/23 09:56
Sample ID: TMW19102023	Date Analyzed: 10/20/23 17:56
Lab Samp ID: J027-07T	Dilution Factor: 50
Lab File ID: H6J16103	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16101	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	9700J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1100J	5000	1000	2500
Manganese	18J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	720000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	17J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW32102023	Date Analyzed:	10/20/23 16:54
Lab Samp ID:	J027-08I	Dilution Factor:	10
Lab File ID:	H6J16084	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16081	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	19	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	130000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	27000	1000	200	500
Manganese	35	10	2.5	5.0
Nickel	3.6J	10	2.5	5.0
Potassium	630J	2000	500	1000
Selenium	110	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	3.1J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	MW32102023	Date Analyzed:	10/20/23 17:59
Lab Samp ID:	J027-08T	Dilution Factor:	50
Lab File ID:	H6J16104	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16101	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1400000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW32102023	Date Analyzed:	10/20/23 16:54
Lab Samp ID:	J027-08I	Dilution Factor:	10
Lab File ID:	H6J16084	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16081	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	19	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	130000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	27000	1000	200	500
Manganese	35	10	2.5	5.0
Nickel	3.6J	10	2.5	5.0
Potassium	630J	2000	500	1000
Selenium	110	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1300000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	3.1J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 09:55
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	MW32102023	Date Analyzed:	10/20/23 17:59
Lab Samp ID:	J027-08T	Dilution Factor:	50
Lab File ID:	H6J16104	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16101	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	140000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	28000	5000	1000	2500
Manganese	29J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	110	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1400000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23 10:15
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J027	Date Extracted: 10/19/23 09:56
Sample ID: BGMW03102023	Date Analyzed: 10/20/23 16:57
Lab Samp ID: J027-09G	Dilution Factor: 5
Lab File ID: H6J16085	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16081	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	22	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	54000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	1.7J	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	11	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	12	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW03102023	Date Analyzed: 10/20/23 18:02
Lab Samp ID: J027-09T	Dilution Factor: 50
Lab File ID: H6J16105	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16101	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	600000	10000	2500	5000

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW03102023	Date Analyzed:	10/20/23 16:57
Lab Samp ID:	J027-09G	Dilution Factor:	5
Lab File ID:	H6J16085	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16081	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	22	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	54000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	1.7J	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	11	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	590000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	12	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23 10:15
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J027	Date Extracted: 10/19/23 09:56
Sample ID: BGMW03102023	Date Analyzed: 10/20/23 18:02
Lab Samp ID: J027-09T	Dilution Factor: 50
Lab File ID: H6J16105	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16101	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	22J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	54000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	12000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	10J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	600000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	23J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW18102023	Date Analyzed:	10/20/23 17:00
Lab Samp ID:	J027-10G	Dilution Factor:	5
Lab File ID:	H6J16086	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16081	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	160J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.78J	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8600	1000	250	500
Chromium	2.7J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1200	500	100	250
Manganese	7.3	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	2200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW18102023	Date Analyzed:	10/20/23 18:05
Lab Samp ID:	J027-10T	Dilution Factor:	50
Lab File ID:	H6J16106	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16101	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	710000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW18102023	Date Analyzed:	10/20/23 17:00
Lab Samp ID:	J027-10G	Dilution Factor:	5
Lab File ID:	H6J16086	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16081	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	160J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.78J	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8600	1000	250	500
Chromium	2.7J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1200	500	100	250
Manganese	7.3	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	2200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	740000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW18102023	Date Analyzed:	10/20/23 18:05
Lab Samp ID:	J027-10T	Dilution Factor:	50
Lab File ID:	H6J16106	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16101	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7100J	10000	2500	5000
Chromium	7.0J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1300J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	710000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	17J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J027
Sample ID: BGMW08102023
Lab Samp ID: J027-11K
Lab File ID: H6J16087
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16081

Date Collected: 10/02/23 10:50
Date Received: 10/04/23
Date Extracted: 10/19/23 09:56
Date Analyzed: 10/20/23 17:02
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	13J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	330000	4000	1000	2000
Chromium	2.8J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	41000	2000	400	1000
Manganese	38	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	4500	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	ND	400	100	200

Sample ID: BGMW08102023
Lab Samp ID: J027-11T
Lab File ID: H6J16107
Ext Btch ID: IMJ018W
Calib. Ref.: H6J16101

Date Analyzed: 10/20/23 18:08
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	4100000	40000	10000	20000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:50
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW08102023	Date Analyzed:	10/20/23 17:02
Lab Samp ID:	J027-11K	Dilution Factor:	20
Lab File ID:	H6J16087	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16081	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	13J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	330000	4000	1000	2000
Chromium	2.8J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	41000	2000	400	1000
Manganese	38	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	4500	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	3900000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	ND	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 10:50
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	BGMW08102023	Date Analyzed:	10/20/23 18:08
Lab Samp ID:	J027-11T	Dilution Factor:	200
Lab File ID:	H6J16107	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16101	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	20000	4000	10000
Antimony	ND	200	50	100
Arsenic	ND	200	25	50
Barium	ND	200	50	100
Beryllium	ND	100	20	40
Cadmium	ND	200	20	40
Calcium	340000	40000	10000	20000
Chromium	ND	200	20	40
Cobalt	ND	150	20	40
Copper	ND	400	100	200
Iron	ND	40000	5000	10000
Lead	ND	200	10	20
Magnesium	44000	20000	4000	10000
Manganese	ND	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	ND	200	30	60
Silver	ND	200	20	40
Sodium	4100000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	ND	200	50	100
Zinc	ND	4000	1000	2000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 11:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW36102023	Date Analyzed:	10/20/23 17:05
Lab Samp ID:	J027-12G	Dilution Factor:	5
Lab File ID:	H6J16088	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16081	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	7.8	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	2.0J	5.0	0.50	1.0
Cobalt	6.6	3.7	0.50	1.0
Copper	39	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1300	500	100	250
Manganese	260	5.0	1.2	2.5
Nickel	240	5.0	1.2	2.5
Potassium	900J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.3J	5.0	1.2	2.5
Zinc	150	100	25	50

Sample ID:	TMW36102023	Date Analyzed:	10/20/23 18:11
Lab Samp ID:	J027-12T	Dilution Factor:	50
Lab File ID:	H6J16108	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16101	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	730000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/02/23 11:15
Project	: USACE WINGATE	Date Received:	10/04/23
SDG NO.	: 23J027	Date Extracted:	10/19/23 09:56
Sample ID:	TMW36102023	Date Analyzed:	10/20/23 17:05
Lab Samp ID:	J027-12G	Dilution Factor:	5
Lab File ID:	H6J16088	Matrix:	WATER
Ext Btch ID:	IMJ018W	% Moisture:	NA
Calib. Ref.:	H6J16081	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	7.8	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	2.0J	5.0	0.50	1.0
Cobalt	6.6	3.7	0.50	1.0
Copper	39	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1300	500	100	250
Manganese	260	5.0	1.2	2.5
Nickel	240	5.0	1.2	2.5
Potassium	900J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	710000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.3J	5.0	1.2	2.5
Zinc	150	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/02/23 11:15
Project : USACE WINGATE	Date Received: 10/04/23
SDG NO. : 23J027	Date Extracted: 10/19/23 09:56
Sample ID: TMW36102023	Date Analyzed: 10/20/23 18:11
Lab Samp ID: J027-12T	Dilution Factor: 50
Lab File ID: H6J16108	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16101	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	13000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	6.9J	37	5.0	10
Copper	34J	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1200J	5000	1000	2500
Manganese	260	50	12	25
Nickel	250	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	730000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: NA
Project : USACE WINGATE	Date Received: NA
SDG NO. : 23J027	Date Extracted: 10/19/23 09:56
Sample ID: MBLK1W	Date Analyzed: 10/20/23 14:05
Lab Samp ID: IMJ018WB	Dilution Factor: 1
Lab File ID: H6J16026	Matrix: WATER
Ext Btch ID: IMJ018W	% Moisture: NA
Calib. Ref.: H6J16018	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ014WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ014WL/HGJ014WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ014WB	1	NA	10/19/2317:10	10/19/2312:21	M47J007044	M47J007	23HGJ014W	Method Blank
LCS1W	HGJ014WL	1	NA	10/19/2317:12	10/19/2312:21	M47J007045	M47J007	23HGJ014W	Lab Control Sample (LCS)
LCD1W	HGJ014WC	1	NA	10/19/2317:17	10/19/2312:21	M47J007048	M47J007	23HGJ014W	LCS Duplicate
MW23102023	J027-01	1	NA	10/19/2317:20	10/19/2312:21	M47J007050	M47J007	23HGJ014W	Field Sample
TMW44102023	J027-02	1	NA	10/19/2317:22	10/19/2312:21	M47J007051	M47J007	23HGJ014W	Field Sample
TMW16102023	J027-03	1	NA	10/19/2317:24	10/19/2312:21	M47J007052	M47J007	23HGJ014W	Field Sample
FDUP01-102023	J027-04	1	NA	10/19/2317:26	10/19/2312:21	M47J007053	M47J007	23HGJ014W	Field Sample
BGMW12102023	J027-05	1	NA	10/19/2317:28	10/19/2312:21	M47J007054	M47J007	23HGJ014W	Field Sample
TMW46102023	J027-06	1	NA	10/19/2317:29	10/19/2312:21	M47J007055	M47J007	23HGJ014W	Field Sample
TMW19102023	J027-07	1	NA	10/19/2317:32	10/19/2312:21	M47J007056	M47J007	23HGJ014W	Field Sample
MW32102023	J027-08	1	NA	10/19/2317:33	10/19/2312:21	M47J007057	M47J007	23HGJ014W	Field Sample
BGMW03102023	J027-09	1	NA	10/19/2317:40	10/19/2312:21	M47J007060	M47J007	23HGJ014W	Field Sample
TMW18102023	J027-10	1	NA	10/19/2317:42	10/19/2312:21	M47J007061	M47J007	23HGJ014W	Field Sample
BGMW08102023	J027-11	1	NA	10/19/2317:44	10/19/2312:21	M47J007062	M47J007	23HGJ014W	Field Sample
TMW36102023	J027-12	1	NA	10/19/2317:46	10/19/2312:21	M47J007063	M47J007	23HGJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J027

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ014WB	ND	1	NA	0.50	0.10	0.20	10/19/2317:10	10/19/2312:21	M47J007044	M47J007	23HGJ014W	NA	NA
LCS1W	HGJ014WL	2.6	1	NA	0.50	0.10	0.20	10/19/2317:12	10/19/2312:21	M47J007045	M47J007	23HGJ014W	NA	NA
LCD1W	HGJ014WC	2.6	1	NA	0.50	0.10	0.20	10/19/2317:17	10/19/2312:21	M47J007048	M47J007	23HGJ014W	NA	NA
MW23102023	J027-01	ND	1	NA	0.50	0.10	0.20	10/19/2317:20	10/19/2312:21	M47J007050	M47J007	23HGJ014W	10/02/2308:20	10/04/23
TMW44102023	J027-02	ND	1	NA	0.50	0.10	0.20	10/19/2317:22	10/19/2312:21	M47J007051	M47J007	23HGJ014W	10/02/2308:20	10/04/23
TMW16102023	J027-03	ND	1	NA	0.50	0.10	0.20	10/19/2317:24	10/19/2312:21	M47J007052	M47J007	23HGJ014W	10/02/2308:30	10/04/23
FDUP01-102023	J027-04	ND	1	NA	0.50	0.10	0.20	10/19/2317:26	10/19/2312:21	M47J007053	M47J007	23HGJ014W	10/02/2308:40	10/04/23
BGMW12102023	J027-05	ND	1	NA	0.50	0.10	0.20	10/19/2317:28	10/19/2312:21	M47J007054	M47J007	23HGJ014W	10/02/2309:00	10/04/23
TMW46102023	J027-06	0.11J	1	NA	0.50	0.10	0.20	10/19/2317:29	10/19/2312:21	M47J007055	M47J007	23HGJ014W	10/02/2309:10	10/04/23
TMW19102023	J027-07	ND	1	NA	0.50	0.10	0.20	10/19/2317:32	10/19/2312:21	M47J007056	M47J007	23HGJ014W	10/02/2309:30	10/04/23
MW32102023	J027-08	ND	1	NA	0.50	0.10	0.20	10/19/2317:33	10/19/2312:21	M47J007057	M47J007	23HGJ014W	10/02/2309:55	10/04/23
BGMW03102023	J027-09	ND	1	NA	0.50	0.10	0.20	10/19/2317:40	10/19/2312:21	M47J007060	M47J007	23HGJ014W	10/02/2310:15	10/04/23
TMW18102023	J027-10	ND	1	NA	0.50	0.10	0.20	10/19/2317:42	10/19/2312:21	M47J007061	M47J007	23HGJ014W	10/02/2310:15	10/04/23
BGMW08102023	J027-11	ND	1	NA	0.50	0.10	0.20	10/19/2317:44	10/19/2312:21	M47J007062	M47J007	23HGJ014W	10/02/2310:50	10/04/23
TMW36102023	J027-12	ND	1	NA	0.50	0.10	0.20	10/19/2317:46	10/19/2312:21	M47J007063	M47J007	23HGJ014W	10/02/2311:15	10/04/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ018WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ018WL/HGJ018WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J027-08M/J027-08S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J027
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MW23102023	J027-01	1	NA	10/21/2316:27	10/21/2312:03	M47J009029	M47J009	23HGJ018W	Field Sample
TMW44102023	J027-02	1	NA	10/21/2316:31	10/21/2312:03	M47J009030	M47J009	23HGJ018W	Field Sample
TMW16102023	J027-03	1	NA	10/21/2316:34	10/21/2312:03	M47J009031	M47J009	23HGJ018W	Field Sample
FDUP01-102023	J027-04	1	NA	10/21/2316:36	10/21/2312:03	M47J009032	M47J009	23HGJ018W	Field Sample
BGMW12102023	J027-05	1	NA	10/21/2316:37	10/21/2312:03	M47J009033	M47J009	23HGJ018W	Field Sample
TMW46102023	J027-06	1	NA	10/21/2316:43	10/21/2312:03	M47J009036	M47J009	23HGJ018W	Field Sample
TMW19102023	J027-07	1	NA	10/21/2316:45	10/21/2312:03	M47J009037	M47J009	23HGJ018W	Field Sample
MW32102023MS	J027-08M	1	NA	10/21/2316:46	10/21/2312:03	M47J009038	M47J009	23HGJ018W	Matrix Spike Sample (MS)
MW32102023MSD	J027-08S	1	NA	10/21/2316:48	10/21/2312:03	M47J009039	M47J009	23HGJ018W	MS Duplicate (MSD)
MW32102023	J027-08	1	NA	10/21/2316:52	10/21/2312:03	M47J009041	M47J009	23HGJ018W	Field Sample
BGMW03102023	J027-09	1	NA	10/21/2316:55	10/21/2312:03	M47J009043	M47J009	23HGJ018W	Field Sample
TMW18102023	J027-10	1	NA	10/21/2316:58	10/21/2312:03	M47J009044	M47J009	23HGJ018W	Field Sample
BGMW08102023	J027-11	1	NA	10/21/2317:00	10/21/2312:03	M47J009045	M47J009	23HGJ018W	Field Sample
TMW36102023	J027-12	1	NA	10/21/2317:05	10/21/2312:03	M47J009048	M47J009	23HGJ018W	Field Sample
MBLK1W	HGJ018WB	1	NA	10/21/2317:07	10/21/2312:03	M47J009049	M47J009	23HGJ018W	Method Blank
LCS1W	HGJ018WL	1	NA	10/21/2317:08	10/21/2312:03	M47J009050	M47J009	23HGJ018W	Lab Control Sample (LCS)
LCD1W	HGJ018WC	1	NA	10/21/2317:10	10/21/2312:03	M47J009051	M47J009	23HGJ018W	LCS Duplicate

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J027
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MW23102023	J027-01	0.10J	1	NA	0.50	0.10	0.20	10/21/2316:27	10/21/2312:03	M47J009029	M47J009	23HGJ018W	10/02/2308:20	10/04/23
TMW44102023	J027-02	ND	1	NA	0.50	0.10	0.20	10/21/2316:31	10/21/2312:03	M47J009030	M47J009	23HGJ018W	10/02/2308:20	10/04/23
TMW16102023	J027-03	ND	1	NA	0.50	0.10	0.20	10/21/2316:34	10/21/2312:03	M47J009031	M47J009	23HGJ018W	10/02/2308:30	10/04/23
FDUP01-102023	J027-04	ND	1	NA	0.50	0.10	0.20	10/21/2316:36	10/21/2312:03	M47J009032	M47J009	23HGJ018W	10/02/2308:40	10/04/23
BGMW12102023	J027-05	ND	1	NA	0.50	0.10	0.20	10/21/2316:37	10/21/2312:03	M47J009033	M47J009	23HGJ018W	10/02/2309:00	10/04/23
TMW46102023	J027-06	ND	1	NA	0.50	0.10	0.20	10/21/2316:43	10/21/2312:03	M47J009036	M47J009	23HGJ018W	10/02/2309:10	10/04/23
TMW19102023	J027-07	ND	1	NA	0.50	0.10	0.20	10/21/2316:45	10/21/2312:03	M47J009037	M47J009	23HGJ018W	10/02/2309:30	10/04/23
MW32102023MS	J027-08M	2.6	1	NA	0.50	0.10	0.20	10/21/2316:46	10/21/2312:03	M47J009038	M47J009	23HGJ018W	10/02/2309:55	10/04/23
MW32102023MSD	J027-08S	2.6	1	NA	0.50	0.10	0.20	10/21/2316:48	10/21/2312:03	M47J009039	M47J009	23HGJ018W	10/02/2309:55	10/04/23
MW32102023	J027-08	ND	1	NA	0.50	0.10	0.20	10/21/2316:52	10/21/2312:03	M47J009041	M47J009	23HGJ018W	10/02/2309:55	10/04/23
BGMW03102023	J027-09	ND	1	NA	0.50	0.10	0.20	10/21/2316:55	10/21/2312:03	M47J009043	M47J009	23HGJ018W	10/02/2310:15	10/04/23
TMW18102023	J027-10	ND	1	NA	0.50	0.10	0.20	10/21/2316:58	10/21/2312:03	M47J009044	M47J009	23HGJ018W	10/02/2310:15	10/04/23
BGMW08102023	J027-11	ND	1	NA	0.50	0.10	0.20	10/21/2317:00	10/21/2312:03	M47J009045	M47J009	23HGJ018W	10/02/2310:50	10/04/23
TMW36102023	J027-12	0.46J	1	NA	0.50	0.10	0.20	10/21/2317:05	10/21/2312:03	M47J009048	M47J009	23HGJ018W	10/02/2311:15	10/04/23
MBLK1W	HGJ018WB	ND	1	NA	0.50	0.10	0.20	10/21/2317:07	10/21/2312:03	M47J009049	M47J009	23HGJ018W	NA	NA
LCS1W	HGJ018WL	2.5	1	NA	0.50	0.10	0.20	10/21/2317:08	10/21/2312:03	M47J009050	M47J009	23HGJ018W	NA	NA
LCD1W	HGJ018WC	2.5	1	NA	0.50	0.10	0.20	10/21/2317:10	10/21/2312:03	M47J009051	M47J009	23HGJ018W	NA	NA

Note: Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW6850
PERCHLORATE BY HPLC/MS

SDG#: 23J027

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J027

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of twelve(12) water samples were received on 10/04/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. PLJ005WB and PLJ006WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- PLJ005WL/PLJ005WC were within LCS limits.
- PLJ006WL/PLJ006WC were within LCS limits.
Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J027-01I, -02I, -03I, -04I, -05J, -06I, -08I, -09I, and -12I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J027

Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ005WB	ND	1	NA	0.20	0.050	0.10	10/09/2311:18	NA	23MJ09007	MJ09004	PLJ005W	NA	NA
LCS1W	PLJ005WL	0.23	1	NA	0.20	0.050	0.10	10/09/2311:33	NA	23MJ09008	MJ09004	PLJ005W	NA	NA
LCD1W	PLJ005WC	0.23	1	NA	0.20	0.050	0.10	10/09/2311:48	NA	23MJ09009	MJ09004	PLJ005W	NA	NA
TMW19102023	J027-07	ND	1	NA	0.20	0.050	0.10	10/09/2314:52	NA	23MJ09021	MJ09017	PLJ005W	10/02/2309:30	10/04/23
TMW18102023	J027-10	ND	1	NA	0.20	0.050	0.10	10/09/2315:36	NA	23MJ09024	MJ09017	PLJ005W	10/02/2310:15	10/04/23
BGMW08102023	J027-11	ND	1	NA	0.20	0.050	0.10	10/09/2315:51	NA	23MJ09025	MJ09017	PLJ005W	10/02/2310:50	10/04/23
MBLK2W	PLJ006WB	ND	1	NA	0.20	0.050	0.10	10/10/2311:08	NA	23MJ10008	MJ10004	PLJ006W	NA	NA
LCS2W	PLJ006WL	0.22	1	NA	0.20	0.050	0.10	10/10/2311:24	NA	23MJ10009	MJ10004	PLJ006W	NA	NA
LCD2W	PLJ006WC	0.20	1	NA	0.20	0.050	0.10	10/10/2311:38	NA	23MJ10010	MJ10004	PLJ006W	NA	NA
MW23102023	J027-01I	ND	5	NA	1.0	0.25	0.50	10/10/2313:03	NA	23MJ10015	MJ10004	PLJ006W	10/02/2308:20	10/04/23
TMW44102023	J027-02I	ND	5	NA	1.0	0.25	0.50	10/10/2313:17	NA	23MJ10016	MJ10004	PLJ006W	10/02/2308:20	10/04/23
TMW16102023	J027-03I	ND	5	NA	1.0	0.25	0.50	10/10/2313:47	NA	23MJ10018	MJ10017	PLJ006W	10/02/2308:30	10/04/23
FDUP01-102023	J027-04I	ND	5	NA	1.0	0.25	0.50	10/10/2314:01	NA	23MJ10019	MJ10017	PLJ006W	10/02/2308:40	10/04/23
BGMW12102023	J027-05J	ND	10	NA	2.0	0.50	1.0	10/10/2315:31	NA	23MJ10025	MJ10017	PLJ006W	10/02/2309:00	10/04/23
TMW46102023	J027-06I	ND	5	NA	1.0	0.25	0.50	10/10/2314:31	NA	23MJ10021	MJ10017	PLJ006W	10/02/2309:10	10/04/23
MW32102023	J027-08I	ND	5	NA	1.0	0.25	0.50	10/10/2314:45	NA	23MJ10022	MJ10017	PLJ006W	10/02/2309:55	10/04/23
BGMW03102023	J027-09I	ND	5	NA	1.0	0.25	0.50	10/10/2315:00	NA	23MJ10023	MJ10017	PLJ006W	10/02/2310:15	10/04/23
TMW36102023	J027-12I	ND	5	NA	1.0	0.25	0.50	10/10/2315:15	NA	23MJ10024	MJ10017	PLJ006W	10/02/2311:15	10/04/23

Note: Detection limits are reported relative to sample result significant figures.

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-29-2023
EMAX Batch No.: 23J039

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/05/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW30102023	J039-01	10/04/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC
TMW58102023	J039-02	10/04/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
TMW26102023	J039-03	10/04/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS ANIONS BY IC
TMW50102023	J039-04	10/04/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
SMW01102023	J039-05	10/04/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				SEMIVOLATILES + APP 9
				ANIONS BY IC
BGMW11102023	J039-06	10/04/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
TMW63102023	J039-07	10/04/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
QC04102023EB	J039-08	10/04/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW04102023	J039-09	10/04/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 ANIONS BY IC
TMW27102023	J039-10	10/04/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS
FDUP03-102023	J039-11	10/04/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS
QC04102023TB	J039-12	10/04/23	WATER	VOCS BY 8260C TPH GASOLINE
TMW63102023MS	J039-07M	10/04/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
TMW63102023MSD	J039-07S	10/04/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of twelve(12) water samples were received on 10/05/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All calibration requirements were satisfied, except for 2,2-Dichloropropane in CCV(data file ID RJW316) and in CCV(data file ID RJW346) was detected bias high. However, note that 2,2-Dichloropropane was not detected in the associated field samples. Note that" Minimum Response Factor" for all analytes was within method recommended response factors with the exception of Acetone and 2-Butanone. However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV for details

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. VO06J13B and VO06J14B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. All analytes were within LCS limits in VO06J13L/VO06J13C, except for percent recoveries for 2,2-Dichloropropane and Methylene Chloride in LCS. RPD for 2,2-Dichloropropane(RPD=24*) was not within QC limits. All analytes were within LCS limits in VO06J14X/VO06J14Y, except for percent recoveries for 1,1-Dichloroethene, 2,2-Dichloropropane, and Methylene Chloride in LCS/LCD, percent recoveries for Chloroethane and Chloromethane in LCS and percent recovery for 1,1,2-Trichloro-1,2,2-Trifluoroethane in LCD. However, analytes in question were not detected in associated samples. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD (23J039-07M/23J039-07S) was analyzed. All analytes were within project QC limits except for results qualified with [*]. Presence of matrix interference was suspected. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. For this SDG, all surrogate recoveries were within QC limits except for 1,2-Dichloroethane-D4 in J039-12. It

was noted that Dibromofluoromethane surrogate, an alternate surrogate for 1,2-Dichloroethane-D4, was in control. Hence, result was reported. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : 06

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V006J13L	1	NA	10/17/2310:29	10/17/2310:29	RJW317	RJW093	V006J13	Lab Control Sample (LCS)
LCD1W	V006J13C	1	NA	10/17/2310:55	10/17/2310:55	RJW318	RJW093	V006J13	LCS Duplicate
MBLK1W	V006J13B	1	NA	10/17/2312:09	10/17/2312:09	RJW320	RJW093	V006J13	Method Blank
QC04102023TB	23J039-12	1	NA	10/17/2312:52	10/17/2312:52	RJW321	RJW093	V006J13	Field Sample
TMW30102023	23J039-01	1	NA	10/17/2314:10	10/17/2314:10	RJW324	RJW093	V006J13	Field Sample
TMW58102023	23J039-02	1	NA	10/17/2314:37	10/17/2314:37	RJW325	RJW093	V006J13	Field Sample
TMW50102023	23J039-04	1	NA	10/17/2315:03	10/17/2315:03	RJW326	RJW093	V006J13	Field Sample
BGMW11102023	23J039-06	1	NA	10/17/2315:29	10/17/2315:29	RJW327	RJW093	V006J13	Field Sample
TMW63102023	23J039-07	1	NA	10/17/2315:56	10/17/2315:56	RJW328	RJW093	V006J13	Field Sample
TMW26102023	23J039-03	1	NA	10/17/2316:22	10/17/2316:22	RJW329	RJW093	V006J13	Field Sample
SMW01102023	23J039-05	1	NA	10/17/2316:48	10/17/2316:48	RJW330	RJW093	V006J13	Field Sample
TMW04102023	23J039-09	1	NA	10/17/2317:14	10/17/2317:14	RJW331	RJW093	V006J13	Field Sample
TMW27102023	23J039-10	1	NA	10/17/2317:41	10/17/2317:41	RJW332	RJW093	V006J13	Field Sample
FDUP03-102023	23J039-11	1	NA	10/17/2318:07	10/17/2318:07	RJW333	RJW093	V006J13	Field Sample
TMW63102023MS	23J039-07M	1	NA	10/17/2320:18	10/17/2320:18	RJW338	RJW093	V006J13	Matrix Spike Sample (MS)
TMW63102023MSD	23J039-07S	1	NA	10/17/2320:44	10/17/2320:44	RJW339	RJW093	V006J13	MS Duplicate (MSD)
LCS2W	V006J14X	1	NA	10/18/2311:40	10/18/2311:40	RJW349	RJW093	V006J14	Lab Control Sample (LCS)
LCD2W	V006J14Y	1	NA	10/18/2312:19	10/18/2312:19	RJW350	RJW093	V006J14	LCS Duplicate
MBLK2W	V006J14B	1	NA	10/18/2313:15	10/18/2313:15	RJW352	RJW093	V006J14	Method Blank
QC04102023EB	23J039-08	1	NA	10/18/2314:34	10/18/2314:34	RJW355	RJW093	V006J14	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 14:10
Sample ID	: TMW30102023	Date Analyzed:	10/17/23 14:10
Lab Samp ID:	23J039-01	Dilution Factor:	1
Lab File ID:	RJW324	Matrix:	WATER
Ext Btch ID:	V006J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.39	10.0	94	81-118
4-Bromofluorobenzene	9.72	10.0	97	85-114
Toluene-d8	9.43	10.0	94	89-112
Dibromofluoromethane	9.88	10.0	99	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 14:37
Sample ID	: TMW58102023	Date Analyzed:	10/17/23 14:37
Lab Samp ID:	23J039-02	Dilution Factor:	1
Lab File ID:	RJW325	Matrix:	WATER
Ext Btch ID:	VO06J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.44	10.0	94	81-118
4-Bromofluorobenzene	9.91	10.0	99	85-114
Toluene-d8	9.40	10.0	94	89-112
Dibromofluoromethane	9.90	10.0	99	80-119

Notes:
Sample Amount : 25ml
Prepared by : JLee
Final Volume : 25ml
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 16:22
Sample ID	: TMW26102023	Date Analyzed:	10/17/23 16:22
Lab Samp ID:	23J039-03	Dilution Factor:	1
Lab File ID:	RJW329	Matrix:	WATER
Ext Btch ID:	VQ06J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.50	10.0	95	81-118
4-Bromofluorobenzene	9.66	10.0	97	85-114
Toluene-d8	9.41	10.0	94	89-112
Dibromofluoromethane	9.92	10.0	99	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 15:03
Sample ID	: TMW50102023	Date Analyzed:	10/17/23 15:03
Lab Samp ID:	23J039-04	Dilution Factor:	1
Lab File ID:	RJW326	Matrix:	WATER
Ext Btch ID:	V006J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.27	10.0	93	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	9.48	10.0	95	89-112
Dibromofluoromethane	9.82	10.0	98	80-119

Notes:
Sample Amount : 25ml
Prepared by : JLee
Final Volume : 25ml
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 10:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 16:48
Sample ID	: SMW01102023	Date Analyzed:	10/17/23 16:48
Lab Samp ID:	23J039-05	Dilution Factor:	1
Lab File ID:	RJW330	Matrix:	WATER
Ext Btch ID:	VO06J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.31	10.0	93	81-118
4-Bromofluorobenzene	9.87	10.0	99	85-114
Toluene-d8	9.44	10.0	94	89-112
Dibromofluoromethane	9.89	10.0	99	80-119

Notes:
Sample Amount : 25ml
Prepared by : JLee
Final Volume : 25ml
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 15:29
Sample ID	: BGMW1102023	Date Analyzed:	10/17/23 15:29
Lab Samp ID:	23J039-06	Dilution Factor:	1
Lab File ID:	RJW327	Matrix:	WATER
Ext Btch ID:	V006J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.62	10.0	96	81-118
4-Bromofluorobenzene	9.76	10.0	98	85-114
Toluene-d8	9.39	10.0	94	89-112
Dibromofluoromethane	9.97	10.0	100	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 15:56
Sample ID	: TMW63102023	Date Analyzed:	10/17/23 15:56
Lab Samp ID:	23J039-07	Dilution Factor:	1
Lab File ID:	RJW328	Matrix:	WATER
Ext Btch ID:	VO06J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.35	10.0	94	81-118
4-Bromofluorobenzene	9.91	10.0	99	85-114
Toluene-d8	9.41	10.0	94	89-112
Dibromofluoromethane	9.68	10.0	97	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/18/23 14:34
Sample ID	: QC04102023EB	Date Analyzed:	10/18/23 14:34
Lab Samp ID:	23J039-08	Dilution Factor:	1
Lab File ID:	RJW355	Matrix:	WATER
Ext Btch ID:	VOO6J14	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	1.7	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	2.5	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	0.71J	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.15	10.0	91	81-118
4-Bromofluorobenzene	9.82	10.0	98	85-114
Toluene-d8	9.43	10.0	94	89-112
Dibromofluoromethane	9.74	10.0	97	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 17:14
Sample ID	: TMW04102023	Date Analyzed:	10/17/23 17:14
Lab Samp ID:	23J039-09	Dilution Factor:	1
Lab File ID:	RJW331	Matrix:	WATER
Ext Btch ID:	VQ06J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.08	10.0	91	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.53	10.0	95	89-112
Dibromofluoromethane	9.65	10.0	97	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 17:41
Sample ID	: TMW27102023	Date Analyzed:	10/17/23 17:41
Lab Samp ID:	23J039-10	Dilution Factor:	1
Lab File ID:	RJW332	Matrix:	WATER
Ext Btch ID:	VOO6J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.30	10.0	93	81-118
4-Bromofluorobenzene	9.79	10.0	98	85-114
Toluene-d8	9.46	10.0	95	89-112
Dibromofluoromethane	9.84	10.0	98	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:15
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 18:07
Sample ID	: FDUP03-102023	Date Analyzed:	10/17/23 18:07
Lab Samp ID:	23J039-11	Dilution Factor:	1
Lab File ID:	RJW333	Matrix:	WATER
Ext Btch ID:	V006J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	9.37	10.0	94	81-118
4-Bromofluorobenzene	9.94	10.0	99	85-114
Toluene-d8	9.50	10.0	95	89-112
Dibromofluoromethane	9.79	10.0	98	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/17/23 12:52
Sample ID	: QC04102023TB	Date Analyzed:	10/17/23 12:52
Lab Samp ID:	23J039-12	Dilution Factor:	1
Lab File ID:	RJW321	Matrix:	WATER
Ext Btch ID:	VO06J13	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	7.98	10.0	80*	81-118
4-Bromofluorobenzene	10.3	10.0	103	85-114
Toluene-d8	9.90	10.0	99	89-112
Dibromofluoromethane	9.12	10.0	91	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : JLee
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS + APPENDIX 9

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of eight(8) water samples were received on 10/05/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were four(4)CCVs (Data file IDs: RJJ218, RJJ219, RJJ252 and RJJ253) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ015WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. SVJ015WL/SVJ015WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 23J039-07M/23J039-07S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J039-09 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of eight(8) water samples were received on 10/05/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ220 and RJJ251) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ015WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ015WL/CLJ015WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 1,2,4,5-Tetrachlorobenzene was within MS QC limits in 23J039-07M/23J039-07S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J039-09 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of eight(8) water samples were received on 10/05/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method 3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ219 and RJJ252) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ015WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ015WL/CLJ015WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 23J039-07M/23J039-07S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J039-09 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ015WB	1	NA	10/11/2313:44	10/09/2313:00	RJJ222	RGJ087	23SVJ015W	Method Blank
LCS1W	SVJ015WL	1	NA	10/11/2314:02	10/09/2313:00	RJJ223	RGJ087	23SVJ015W	Lab Control Sample (LCS)
LCD1W	SVJ015WC	1	NA	10/11/2314:21	10/09/2313:00	RJJ224	RGJ087	23SVJ015W	LCS Duplicate
TMW63102023MS	23J039-07M	1	NA	10/11/2315:17	10/09/2313:00	RJJ227	RGJ087	23SVJ015W	Matrix Spike Sample (MS)
TMW63102023MSD	23J039-07S	1	NA	10/11/2315:36	10/09/2313:00	RJJ228	RGJ087	23SVJ015W	MS Duplicate (MSD)
TMW30102023	23J039-01	1	NA	10/11/2316:32	10/09/2313:00	RJJ231	RGJ087	23SVJ015W	Field Sample
TMW58102023	23J039-02	1	NA	10/11/2316:51	10/09/2313:00	RJJ232	RGJ087	23SVJ015W	Field Sample
TMW50102023	23J039-04	1	NA	10/11/2317:10	10/09/2313:00	RJJ233	RGJ087	23SVJ015W	Field Sample
SMW01102023	23J039-05	1	NA	10/11/2317:29	10/09/2313:00	RJJ234	RGJ087	23SVJ015W	Field Sample
BGMW11102023	23J039-06	1	NA	10/11/2317:47	10/09/2313:00	RJJ235	RGJ087	23SVJ015W	Field Sample
TMW63102023	23J039-07	1	NA	10/11/2318:06	10/09/2313:00	RJJ236	RGJ087	23SVJ015W	Field Sample
QC04102023EB	23J039-08	1	NA	10/11/2318:25	10/09/2313:00	RJJ237	RGJ087	23SVJ015W	Field Sample
TMW04102023	23J039-09	2	NA	10/11/2318:43	10/09/2313:00	RJJ238	RGJ087	23SVJ015W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ015WB	1	NA	10/11/2313:44	10/09/2313:00	RJJ222	RGJ100	23SVJ015W	Method Blank
LCS1W	CLJ015WL	1	NA	10/11/2314:40	10/09/2313:00	RJJ225	RGJ100	23SVJ015W	Lab Control Sample (LCS)
LCD1W	CLJ015WC	1	NA	10/11/2314:59	10/09/2313:00	RJJ226	RGJ100	23SVJ015W	LCS Duplicate
TMW63102023MS	23J039-07M	1	NA	10/11/2315:55	10/09/2313:00	RJJ229	RGJ100	23SVJ015W	Matrix Spike Sample (MS)
TMW63102023MSD	23J039-07S	1	NA	10/11/2316:14	10/09/2313:00	RJJ230	RGJ100	23SVJ015W	MS Duplicate (MSD)
TMW30102023	23J039-01	1	NA	10/11/2316:32	10/09/2313:00	RJJ231	RGJ100	23SVJ015W	Field Sample
TMW58102023	23J039-02	1	NA	10/11/2316:51	10/09/2313:00	RJJ232	RGJ100	23SVJ015W	Field Sample
TMW50102023	23J039-04	1	NA	10/11/2317:10	10/09/2313:00	RJJ233	RGJ100	23SVJ015W	Field Sample
SMW01102023	23J039-05	1	NA	10/11/2317:29	10/09/2313:00	RJJ234	RGJ100	23SVJ015W	Field Sample
BGMW11102023	23J039-06	1	NA	10/11/2317:47	10/09/2313:00	RJJ235	RGJ100	23SVJ015W	Field Sample
TMW63102023	23J039-07	1	NA	10/11/2318:06	10/09/2313:00	RJJ236	RGJ100	23SVJ015W	Field Sample
QC04102023EB	23J039-08	1	NA	10/11/2318:25	10/09/2313:00	RJJ237	RGJ100	23SVJ015W	Field Sample
TMW04102023	23J039-09	2	NA	10/11/2318:43	10/09/2313:00	RJJ238	RGJ100	23SVJ015W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ015WB	1	NA	10/11/2313:44	10/09/2313:00	RJJ222	RGJ079	23SVJ015W	Method Blank
LCS1W	CLJ015WL	1	NA	10/11/2314:40	10/09/2313:00	RJJ225	RGJ079	23SVJ015W	Lab Control Sample (LCS)
LCD1W	CLJ015WC	1	NA	10/11/2314:59	10/09/2313:00	RJJ226	RGJ079	23SVJ015W	LCS Duplicate
TMW63102023MS	23J039-07M	1	NA	10/11/2315:55	10/09/2313:00	RJJ229	RGJ079	23SVJ015W	Matrix Spike Sample (MS)
TMW63102023MSD	23J039-07S	1	NA	10/11/2316:14	10/09/2313:00	RJJ230	RGJ079	23SVJ015W	MS Duplicate (MSD)
TMW30102023	23J039-01	1	NA	10/11/2316:32	10/09/2313:00	RJJ231	RGJ079	23SVJ015W	Field Sample
TMW58102023	23J039-02	1	NA	10/11/2316:51	10/09/2313:00	RJJ232	RGJ079	23SVJ015W	Field Sample
TMW50102023	23J039-04	1	NA	10/11/2317:10	10/09/2313:00	RJJ233	RGJ079	23SVJ015W	Field Sample
SMW01102023	23J039-05	1	NA	10/11/2317:29	10/09/2313:00	RJJ234	RGJ079	23SVJ015W	Field Sample
BGMW11102023	23J039-06	1	NA	10/11/2317:47	10/09/2313:00	RJJ235	RGJ079	23SVJ015W	Field Sample
TMW63102023	23J039-07	1	NA	10/11/2318:06	10/09/2313:00	RJJ236	RGJ079	23SVJ015W	Field Sample
QC04102023EB	23J039-08	1	NA	10/11/2318:25	10/09/2313:00	RJJ237	RGJ079	23SVJ015W	Field Sample
TMW04102023	23J039-09	2	NA	10/11/2318:43	10/09/2313:00	RJJ238	RGJ079	23SVJ015W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW30102023	Date Analyzed:	10/11/23 16:32
Lab Samp ID:	23J039-01	Dilution Factor:	1
Lab File ID:	RJJ231	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.9	5.7
1,2-Diphenylhydrazine	ND	11	2.9	5.7
1,3-Dichlorobenzene	ND	11	2.9	5.7
1,4-Dichlorobenzene	ND	11	2.9	5.7
2,4,5-Trichlorophenol	ND	11	2.9	5.7
2,4,6-Trichlorophenol	ND	11	2.9	5.7
2,4-Dichlorophenol	ND	11	2.9	5.7
2,4-Dimethylphenol	ND	11	2.9	5.7
2,4-Dinitrophenol	ND	23	2.9	5.7
2,4-Dinitrotoluene	ND	11	2.9	5.7
2,6-Dinitrotoluene	ND	11	2.9	5.7
2-Chloronaphthalene	ND	11	2.9	5.7
2-Chlorophenol	ND	11	2.9	5.7
2-Methylnaphthalene	ND	11	2.9	5.7
2-Methylphenol	ND	11	2.9	5.7
2-Nitroaniline	ND	11	2.9	5.7
2-Nitrophenol	ND	11	2.9	5.7
3,3'-Dichlorobenzidine	ND	11	2.9	5.7
3/4-Methylphenol	ND	11	2.9	5.7
3-Nitroaniline	ND	11	2.9	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.7
4-Bromophenyl phenyl ether	ND	11	2.9	5.7
4-Chloro-3-methylphenol	ND	11	2.9	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.9	5.7
4-Nitroaniline	ND	11	2.9	5.7
4-Nitrophenol	ND	23	2.9	5.7
Acenaphthene	ND	11	2.9	5.7
Acenaphthylene	ND	11	2.9	5.7
Anthracene	ND	11	2.9	5.7
Benzo(a)anthracene	ND	11	2.9	5.7
Benzo(a)pyrene	ND	11	2.9	5.7
Benzo(b)fluoranthene	ND	11	2.9	5.7
Benzo(g,h,i)perylene	ND	11	2.9	5.7
Benzo(k)fluoranthene	ND	11	2.9	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.9	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.9	5.7
bis(2-Chloroethoxy)methane	ND	11	2.9	5.7
bis(2-Chloroethyl) ether	ND	11	2.9	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.9	5.7
Carbazole	ND	11	2.9	5.7
Chrysene	ND	11	2.9	5.7
Dibenzo(a,h)anthracene	ND	11	2.9	5.7
Dibenzofuran	ND	11	2.9	5.7
Diethylphthalate	ND	11	2.9	5.7
Dimethylphthalate	ND	11	2.9	5.7
Di-n-butyl phthalate	ND	11	2.9	5.7
Di-n-octyl phthalate	ND	11	2.9	5.7
Fluoranthene	ND	11	2.9	5.7
Fluorene	ND	11	2.9	5.7
Hexachlorobenzene	ND	11	2.9	5.7
Hexachlorobutadiene	ND	11	2.9	5.7
Hexachloroethane	ND	11	2.9	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.9	5.7
Isophorone	ND	11	2.9	5.7
Naphthalene	ND	11	2.9	5.7
Nitrobenzene	ND	11	2.9	5.7
N-Nitrosodimethylamine	ND	11	2.9	5.7
n-Nitroso-di-n-propylamine	ND	11	2.9	5.7
n-Nitrosodiphenylamine	ND	11	2.9	5.7
Pentachlorophenol	ND	23	2.9	5.7
Phenanthrene	ND	11	2.9	5.7
Phenol	ND	11	2.9	5.7
Pyrene	ND	11	2.9	5.7
Hexachlorocyclopentadiene	ND	11	2.9	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.9	5.7
2,6-Dichlorophenol	ND	11	2.9	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	47.8	69.0	69	43-140
2-Fluorobiphenyl	16.9	23.0	73	44-119
2-Fluorophenol	41.7	69.0	60	19-119
Nitrobenzene-d5	16.1	23.0	70	44-120
Phenol-d5	46.2	69.0	67	40-130
Terphenyl-d14	19.8	23.0	86	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW30102023	Date Analyzed:	10/11/23 16:32
Lab Samp ID:	23J039-01	Dilution Factor:	1
Lab File ID:	RJJ231	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.9	5.7

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW30102023	Date Analyzed:	10/11/23 16:32
Lab Samp ID:	23J039-01	Dilution Factor:	1
Lab File ID:	RJJ231	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW58102023	Date Analyzed:	10/11/23 16:51
Lab Samp ID:	23J039-02	Dilution Factor:	1
Lab File ID:	RJJ232	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	38.9	66.6	58	43-140
2-Fluorobiphenyl	11.1	22.2	50	44-119
2-Fluorophenol	30.4	66.6	46	19-119
Nitrobenzene-d5	11.5	22.2	52	44-120
Phenol-d5	33.4	66.6	50	40-130
Terphenyl-d14	20.5	22.2	92	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW58102023	Date Analyzed:	10/11/23 16:51
Lab Samp ID:	23J039-02	Dilution Factor:	1
Lab File ID:	RJJ232	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW58102023	Date Analyzed:	10/11/23 16:51
Lab Samp ID:	23J039-02	Dilution Factor:	1
Lab File ID:	RJJ232	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW50102023	Date Analyzed:	10/11/23 17:10
Lab Samp ID:	23J039-04	Dilution Factor:	1
Lab File ID:	RJJ233	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	20	5.0	10
1,2-Dichlorobenzene	ND	10	2.5	5.0
1,2-Diphenylhydrazine	ND	10	2.5	5.0
1,3-Dichlorobenzene	ND	10	2.5	5.0
1,4-Dichlorobenzene	ND	10	2.5	5.0
2,4,5-Trichlorophenol	ND	10	2.5	5.0
2,4,6-Trichlorophenol	ND	10	2.5	5.0
2,4-Dichlorophenol	ND	10	2.5	5.0
2,4-Dimethylphenol	ND	10	2.5	5.0
2,4-Dinitrophenol	ND	20	2.5	5.0
2,4-Dinitrotoluene	ND	10	2.5	5.0
2,6-Dinitrotoluene	ND	10	2.5	5.0
2-Chloronaphthalene	ND	10	2.5	5.0
2-Chlorophenol	ND	10	2.5	5.0
2-Methylnaphthalene	ND	10	2.5	5.0
2-Methylphenol	ND	10	2.5	5.0
2-Nitroaniline	ND	10	2.5	5.0
2-Nitrophenol	ND	10	2.5	5.0
3,3'-Dichlorobenzidine	ND	10	2.5	5.0
3/4-Methylphenol	ND	10	2.5	5.0
3-Nitroaniline	ND	10	2.5	5.0
4,6-Dinitro-2-methylphenol	ND	20	2.5	5.0
4-Bromophenyl phenyl ether	ND	10	2.5	5.0
4-Chloro-3-methylphenol	ND	10	2.5	5.0
4-Chloroaniline	ND	20	5.0	10
4-Chlorophenyl-phenyl ether	ND	10	2.5	5.0
4-Nitroaniline	ND	10	2.5	5.0
4-Nitrophenol	ND	20	2.5	5.0
Acenaphthene	ND	10	2.5	5.0
Acenaphthylene	ND	10	2.5	5.0
Anthracene	ND	10	2.5	5.0
Benzo(a)anthracene	ND	10	2.5	5.0
Benzo(a)pyrene	ND	10	2.5	5.0
Benzo(b)fluoranthene	ND	10	2.5	5.0
Benzo(g,h,i)perylene	ND	10	2.5	5.0
Benzo(k)fluoranthene	ND	10	2.5	5.0
Benzoic Acid	ND	100	20	40
Benzyl Alcohol	ND	10	2.5	5.0
bis(2-Chloroisopropyl) ether	ND	10	2.5	5.0
bis(2-Chloroethoxy)methane	ND	10	2.5	5.0
bis(2-Chloroethyl) ether	ND	10	2.5	5.0
bis(2-Ethylhexyl) phthalate	ND	20	5.0	10
Butylbenzylphthalate	ND	10	2.5	5.0
Carbazole	ND	10	2.5	5.0
Chrysene	ND	10	2.5	5.0
Dibenzo(a,h)anthracene	ND	10	2.5	5.0
Dibenzofuran	ND	10	2.5	5.0
Diethylphthalate	ND	10	2.5	5.0
Dimethylphthalate	ND	10	2.5	5.0
Di-n-butyl phthalate	ND	10	2.5	5.0
Di-n-octyl phthalate	ND	10	2.5	5.0
Fluoranthene	ND	10	2.5	5.0
Fluorene	ND	10	2.5	5.0
Hexachlorobenzene	ND	10	2.5	5.0
Hexachlorobutadiene	ND	10	2.5	5.0
Hexachloroethane	ND	10	2.5	5.0
Indeno(1,2,3-cd)pyrene	ND	10	2.5	5.0
Isophorone	ND	10	2.5	5.0
Naphthalene	ND	10	2.5	5.0
Nitrobenzene	ND	10	2.5	5.0
N-Nitrosodimethylamine	ND	10	2.5	5.0
n-Nitroso-di-n-propylamine	ND	10	2.5	5.0
n-Nitrosodiphenylamine	ND	10	2.5	5.0
Pentachlorophenol	ND	20	2.5	5.0
Phenanthrene	ND	10	2.5	5.0
Phenol	ND	10	2.5	5.0
Pyrene	ND	10	2.5	5.0
Hexachlorocyclopentadiene	ND	10	2.5	5.0
Benzidine	ND	40	10	20
2,3,4,6-Tetrachlorophenol	ND	10	2.5	5.0
2,6-Dichlorophenol	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	35.0	60.6	58	43-140
2-Fluorobiphenyl	10.3	20.2	51	44-119
2-Fluorophenol	26.1	60.6	43	19-119
Nitrobenzene-d5	9.49	20.2	47	44-120
Phenol-d5	29.9	60.6	49	40-130
Terphenyl-d14	12.3	20.2	61	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 990ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW50102023	Date Analyzed:	10/11/23 17:10
Lab Samp ID:	23J039-04	Dilution Factor:	1
Lab File ID:	RJJ233	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	10	2.5	5.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 990ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW50102023	Date Analyzed:	10/11/23 17:10
Lab Samp ID:	23J039-04	Dilution Factor:	1
Lab File ID:	RJJ233	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	20	5.0	10
Benzaldehyde	ND	20	5.0	10

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 990ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 10:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: SMW01102023	Date Analyzed:	10/11/23 17:29
Lab Samp ID:	23J039-05	Dilution Factor:	1
Lab File ID:	RJJ234	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.8	5.7
1,2-Diphenylhydrazine	ND	11	2.8	5.7
1,3-Dichlorobenzene	ND	11	2.8	5.7
1,4-Dichlorobenzene	ND	11	2.8	5.7
2,4,5-Trichlorophenol	ND	11	2.8	5.7
2,4,6-Trichlorophenol	ND	11	2.8	5.7
2,4-Dichlorophenol	ND	11	2.8	5.7
2,4-Dimethylphenol	ND	11	2.8	5.7
2,4-Dinitrophenol	ND	23	2.8	5.7
2,4-Dinitrotoluene	ND	11	2.8	5.7
2,6-Dinitrotoluene	ND	11	2.8	5.7
2-Chloronaphthalene	ND	11	2.8	5.7
2-Chlorophenol	ND	11	2.8	5.7
2-Methylnaphthalene	ND	11	2.8	5.7
2-Methylphenol	ND	11	2.8	5.7
2-Nitroaniline	ND	11	2.8	5.7
2-Nitrophenol	ND	11	2.8	5.7
3,3'-Dichlorobenzidine	ND	11	2.8	5.7
3/4-Methylphenol	ND	11	2.8	5.7
3-Nitroaniline	ND	11	2.8	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.8	5.7
4-Bromophenyl phenyl ether	ND	11	2.8	5.7
4-Chloro-3-methylphenol	ND	11	2.8	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.7
4-Nitroaniline	ND	11	2.8	5.7
4-Nitrophenol	ND	23	2.8	5.7
Acenaphthene	ND	11	2.8	5.7
Acenaphthylene	ND	11	2.8	5.7
Anthracene	ND	11	2.8	5.7
Benzo(a)anthracene	ND	11	2.8	5.7
Benzo(a)pyrene	ND	11	2.8	5.7
Benzo(b)fluoranthene	ND	11	2.8	5.7
Benzo(g,h,i)perylene	ND	11	2.8	5.7
Benzo(k)fluoranthene	ND	11	2.8	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.8	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.7
bis(2-Chloroethoxy)methane	ND	11	2.8	5.7
bis(2-Chloroethyl) ether	ND	11	2.8	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.8	5.7
Carbazole	ND	11	2.8	5.7
Chrysene	ND	11	2.8	5.7
Dibenzo(a,h)anthracene	ND	11	2.8	5.7
Dibenzofuran	ND	11	2.8	5.7
Diethylphthalate	ND	11	2.8	5.7
Dimethylphthalate	ND	11	2.8	5.7
Di-n-butyl phthalate	ND	11	2.8	5.7
Di-n-octyl phthalate	ND	11	2.8	5.7
Fluoranthene	ND	11	2.8	5.7
Fluorene	ND	11	2.8	5.7
Hexachlorobenzene	ND	11	2.8	5.7
Hexachlorobutadiene	ND	11	2.8	5.7
Hexachloroethane	ND	11	2.8	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.7
Isophorone	ND	11	2.8	5.7
Naphthalene	ND	11	2.8	5.7
Nitrobenzene	ND	11	2.8	5.7
N-Nitrosodimethylamine	ND	11	2.8	5.7
n-Nitroso-di-n-propylamine	ND	11	2.8	5.7
n-Nitrosodiphenylamine	ND	11	2.8	5.7
Pentachlorophenol	ND	23	2.8	5.7
Phenanthrene	ND	11	2.8	5.7
Phenol	ND	11	2.8	5.7
Pyrene	ND	11	2.8	5.7
Hexachlorocyclopentadiene	ND	11	2.8	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.7
2,6-Dichlorophenol	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	44.9	68.4	66	43-140
2-Fluorobiphenyl	11.5	22.8	50	44-119
2-Fluorophenol	27.1	68.4	40	19-119
Nitrobenzene-d5	10.3	22.8	45	44-120
Phenol-d5	33.0	68.4	48	40-130
Terphenyl-d14	16.8	22.8	74	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 10:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: SMW01102023	Date Analyzed:	10/11/23 17:29
Lab Samp ID:	23J039-05	Dilution Factor:	1
Lab File ID:	RJJ234	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.7

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 880ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 10:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: SMW01102023	Date Analyzed:	10/11/23 17:29
Lab Samp ID:	23J039-05	Dilution Factor:	1
Lab File ID:	RJJ234	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 880ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW11102023	Date Analyzed:	10/11/23 17:47
Lab Samp ID:	23J039-06	Dilution Factor:	1
Lab File ID:	RJJ235	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.9	5.7
1,2-Diphenylhydrazine	ND	11	2.9	5.7
1,3-Dichlorobenzene	ND	11	2.9	5.7
1,4-Dichlorobenzene	ND	11	2.9	5.7
2,4,5-Trichlorophenol	ND	11	2.9	5.7
2,4,6-Trichlorophenol	ND	11	2.9	5.7
2,4-Dichlorophenol	ND	11	2.9	5.7
2,4-Dimethylphenol	ND	11	2.9	5.7
2,4-Dinitrophenol	ND	23	2.9	5.7
2,4-Dinitrotoluene	ND	11	2.9	5.7
2,6-Dinitrotoluene	ND	11	2.9	5.7
2-Chloronaphthalene	ND	11	2.9	5.7
2-Chlorophenol	ND	11	2.9	5.7
2-Methylnaphthalene	ND	11	2.9	5.7
2-Methylphenol	ND	11	2.9	5.7
2-Nitroaniline	ND	11	2.9	5.7
2-Nitrophenol	ND	11	2.9	5.7
3,3'-Dichlorobenzidine	ND	11	2.9	5.7
3/4-Methylphenol	ND	11	2.9	5.7
3-Nitroaniline	ND	11	2.9	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.7
4-Bromophenyl phenyl ether	ND	11	2.9	5.7
4-Chloro-3-methylphenol	ND	11	2.9	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.9	5.7
4-Nitroaniline	ND	11	2.9	5.7
4-Nitrophenol	ND	23	2.9	5.7
Acenaphthene	ND	11	2.9	5.7
Acenaphthylene	ND	11	2.9	5.7
Anthracene	ND	11	2.9	5.7
Benzo(a)anthracene	ND	11	2.9	5.7
Benzo(a)pyrene	ND	11	2.9	5.7
Benzo(b)fluoranthene	ND	11	2.9	5.7
Benzo(g,h,i)perylene	ND	11	2.9	5.7
Benzo(k)fluoranthene	ND	11	2.9	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.9	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.9	5.7
bis(2-Chloroethoxy)methane	ND	11	2.9	5.7
bis(2-Chloroethyl) ether	ND	11	2.9	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.9	5.7
Carbazole	ND	11	2.9	5.7
Chrysene	ND	11	2.9	5.7
Dibenzo(a,h)anthracene	ND	11	2.9	5.7
Dibenzofuran	ND	11	2.9	5.7
Diethylphthalate	ND	11	2.9	5.7
Dimethylphthalate	ND	11	2.9	5.7
Di-n-butyl phthalate	ND	11	2.9	5.7
Di-n-octyl phthalate	ND	11	2.9	5.7
Fluoranthene	ND	11	2.9	5.7
Fluorene	ND	11	2.9	5.7
Hexachlorobenzene	ND	11	2.9	5.7
Hexachlorobutadiene	ND	11	2.9	5.7
Hexachloroethane	ND	11	2.9	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.9	5.7
Isophorone	ND	11	2.9	5.7
Naphthalene	ND	11	2.9	5.7
Nitrobenzene	ND	11	2.9	5.7
N-Nitrosodimethylamine	ND	11	2.9	5.7
n-Nitroso-di-n-propylamine	ND	11	2.9	5.7
n-Nitrosodiphenylamine	ND	11	2.9	5.7
Pentachlorophenol	ND	23	2.9	5.7
Phenanthrene	ND	11	2.9	5.7
Phenol	ND	11	2.9	5.7
Pyrene	ND	11	2.9	5.7
Hexachlorocyclopentadiene	ND	11	2.9	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.9	5.7
2,6-Dichlorophenol	ND	11	2.9	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	46.0	69.0	67	43-140
2-Fluorobiphenyl	14.5	23.0	63	44-119
2-Fluorophenol	33.1	69.0	48	19-119
Nitrobenzene-d5	13.2	23.0	57	44-120
Phenol-d5	38.5	69.0	56	40-130
Terphenyl-d14	17.9	23.0	78	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW11102023	Date Analyzed:	10/11/23 17:47
Lab Samp ID:	23J039-06	Dilution Factor:	1
Lab File ID:	RJJ235	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.9	5.7

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: BGMW11102023	Date Analyzed:	10/11/23 17:47
Lab Samp ID:	23J039-06	Dilution Factor:	1
Lab File ID:	RJJ235	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW63102023	Date Analyzed:	10/11/23 18:06
Lab Samp ID:	23J039-07	Dilution Factor:	1
Lab File ID:	RJJ236	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	38.8	66.6	58	43-140
2-Fluorobiphenyl	11.9	22.2	54	44-119
2-Fluorophenol	33.9	66.6	51	19-119
Nitrobenzene-d5	11.7	22.2	53	44-120
Phenol-d5	35.3	66.6	53	40-130
Terphenyl-d14	18.3	22.2	82	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW63102023	Date Analyzed:	10/11/23 18:06
Lab Samp ID:	23J039-07	Dilution Factor:	1
Lab File ID:	RJJ236	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW63102023	Date Analyzed:	10/11/23 18:06
Lab Samp ID:	23J039-07	Dilution Factor:	1
Lab File ID:	RJJ236	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: QC04102023EB	Date Analyzed:	10/11/23 18:25
Lab Samp ID:	23J039-08	Dilution Factor:	1
Lab File ID:	RJJ237	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	35.2	65.4	54	43-140
2-Fluorobiphenyl	12.5	21.8	57	44-119
2-Fluorophenol	30.2	65.4	46	19-119
Nitrobenzene-d5	12.5	21.8	58	44-120
Phenol-d5	35.2	65.4	54	40-130
Terphenyl-d14	19.3	21.8	88	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: QC04102023EB	Date Analyzed:	10/11/23 18:25
Lab Samp ID:	23J039-08	Dilution Factor:	1
Lab File ID:	RJJ237	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 920ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: QC04102023EB	Date Analyzed:	10/11/23 18:25
Lab Samp ID:	23J039-08	Dilution Factor:	1
Lab File ID:	RJJ237	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 920ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW04102023	Date Analyzed:	10/11/23 18:43
Lab Samp ID:	23J039-09	Dilution Factor:	2
Lab File ID:	RJJ238	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	42	11	21
1,2-Dichlorobenzene	ND	21	5.3	11
1,2-Diphenylhydrazine	ND	21	5.3	11
1,3-Dichlorobenzene	ND	21	5.3	11
1,4-Dichlorobenzene	ND	21	5.3	11
2,4,5-Trichlorophenol	ND	21	5.3	11
2,4,6-Trichlorophenol	ND	21	5.3	11
2,4-Dichlorophenol	ND	21	5.3	11
2,4-Dimethylphenol	ND	21	5.3	11
2,4-Dinitrophenol	ND	42	5.3	11
2,4-Dinitrotoluene	ND	21	5.3	11
2,6-Dinitrotoluene	ND	21	5.3	11
2-Chloronaphthalene	ND	21	5.3	11
2-Chlorophenol	ND	21	5.3	11
2-Methylnaphthalene	ND	21	5.3	11
2-Methylphenol	ND	21	5.3	11
2-Nitroaniline	ND	21	5.3	11
2-Nitrophenol	ND	21	5.3	11
3,3'-Dichlorobenzidine	ND	21	5.3	11
3/4-Methylphenol	ND	21	5.3	11
3-Nitroaniline	ND	21	5.3	11
4,6-Dinitro-2-methylphenol	ND	42	5.3	11
4-Bromophenyl phenyl ether	ND	21	5.3	11
4-Chloro-3-methylphenol	ND	21	5.3	11
4-Chloroaniline	ND	42	11	21
4-Chlorophenyl-phenyl ether	ND	21	5.3	11
4-Nitroaniline	ND	21	5.3	11
4-Nitrophenol	ND	42	5.3	11
Acenaphthene	ND	21	5.3	11
Acenaphthylene	ND	21	5.3	11
Anthracene	ND	21	5.3	11
Benzo(a)anthracene	ND	21	5.3	11
Benzo(a)pyrene	ND	21	5.3	11
Benzo(b)fluoranthene	ND	21	5.3	11
Benzo(g,h,i)perylene	ND	21	5.3	11
Benzo(k)fluoranthene	ND	21	5.3	11
Benzoic Acid	ND	210	42	85
Benzyl Alcohol	ND	21	5.3	11
bis(2-Chloroisopropyl) ether	ND	21	5.3	11
bis(2-Chloroethoxy)methane	ND	21	5.3	11
bis(2-Chloroethyl) ether	ND	21	5.3	11
bis(2-Ethylhexyl) phthalate	ND	42	11	21
Butylbenzylphthalate	ND	21	5.3	11
Carbazole	ND	21	5.3	11
Chrysene	ND	21	5.3	11
Dibenzo(a,h)anthracene	ND	21	5.3	11
Dibenzofuran	ND	21	5.3	11
Diethylphthalate	ND	21	5.3	11
Dimethylphthalate	ND	21	5.3	11
Di-n-butyl phthalate	ND	21	5.3	11
Di-n-octyl phthalate	ND	21	5.3	11
Fluoranthene	ND	21	5.3	11
Fluorene	ND	21	5.3	11
Hexachlorobenzene	ND	21	5.3	11
Hexachlorobutadiene	ND	21	5.3	11
Hexachloroethane	ND	21	5.3	11
Indeno(1,2,3-cd)pyrene	ND	21	5.3	11
Isophorone	ND	21	5.3	11
Naphthalene	ND	21	5.3	11
Nitrobenzene	ND	21	5.3	11
N-Nitrosodimethylamine	ND	21	5.3	11
n-Nitroso-di-n-propylamine	ND	21	5.3	11
n-Nitrosodiphenylamine	ND	21	5.3	11
Pentachlorophenol	ND	42	5.3	11
Phenanthrene	ND	21	5.3	11
Phenol	ND	21	5.3	11
Pyrene	ND	21	5.3	11
Hexachlorocyclopentadiene	ND	21	5.3	11
Benzidine	ND	85	21	42
2,3,4,6-Tetrachlorophenol	ND	21	5.3	11
2,6-Dichlorophenol	ND	21	5.3	11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	43.1	63.6	68	43-140
2-Fluorobiphenyl	16.2	21.2	76	44-119
2-Fluorophenol	37.1	63.6	58	19-119
Nitrobenzene-d5	14.7	21.2	69	44-120
Phenol-d5	44.0	63.6	69	40-130
Terphenyl-d14	18.3	21.2	86	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ219

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW04102023	Date Analyzed:	10/11/23 18:43
Lab Samp ID:	23J039-09	Dilution Factor:	2
Lab File ID:	RJJ238	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	21	5.3	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 13:00
Sample ID	: TMW04102023	Date Analyzed:	10/11/23 18:43
Lab Samp ID:	23J039-09	Dilution Factor:	2
Lab File ID:	RJJ238	Matrix:	WATER
Ext Btch ID:	23SVJ015W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	42	11	21
Benzaldehyde	ND	42	11	21

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 940ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of six(6) water samples were received on 10/05/23 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39J05B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VG39J05L/VG39J05C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Tph-Gasoline was within MS QC limits in J039-07M/J039-07S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG39J05B	1	NA	10/06/2312:22	10/06/2312:22	EJ06004A	EJ06003A	23VG39J05	Method Blank
LCS1W	VG39J05L	1	NA	10/06/2313:00	10/06/2313:00	EJ06005A	EJ06003A	23VG39J05	Lab Control Sample (LCS)
LCD1W	VG39J05C	1	NA	10/06/2313:39	10/06/2313:39	EJ06006A	EJ06003A	23VG39J05	LCS Duplicate
TMW58102023	J039-02	1	NA	10/06/2320:01	10/06/2320:01	EJ06016A	EJ06014A	23VG39J05	Field Sample
TMW50102023	J039-04	1	NA	10/06/2320:39	10/06/2320:39	EJ06017A	EJ06014A	23VG39J05	Field Sample
BGMW11102023	J039-06	1	NA	10/06/2321:17	10/06/2321:17	EJ06018A	EJ06014A	23VG39J05	Field Sample
TMW63102023	J039-07	1	NA	10/06/2321:56	10/06/2321:56	EJ06019A	EJ06014A	23VG39J05	Field Sample
TMW63102023MS	J039-07M	1	NA	10/06/2322:34	10/06/2322:34	EJ06020A	EJ06014A	23VG39J05	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/06/2323:12	10/06/2323:12	EJ06021A	EJ06014A	23VG39J05	MS Duplicate (MSD)
QC04102023EB	J039-08	1	NA	10/06/2323:50	10/06/2323:50	EJ06022A	EJ06014A	23VG39J05	Field Sample
QC04102023TB	J039-12	1	NA	10/07/2300:28	10/07/2300:28	EJ06023A	EJ06014A	23VG39J05	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 20:01
Sample ID	: TMW58102023	Date Analyzed:	10/06/23 20:01
Lab Samp ID:	J039-02	Dilution Factor:	1
Lab File ID:	EJ06016A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06014A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	18J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	34.2	40.0	85	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 20:39
Sample ID	: TMW50102023	Date Analyzed:	10/06/23 20:39
Lab Samp ID:	J039-04	Dilution Factor:	1
Lab File ID:	EJ06017A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06014A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	34.2	40.0	86	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 21:17
Sample ID	: BGMW11102023	Date Analyzed:	10/06/23 21:17
Lab Samp ID:	J039-06	Dilution Factor:	1
Lab File ID:	EJ06018A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06014A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	10J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	34.0	40.0	85	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 21:56
Sample ID	: TMW63102023	Date Analyzed:	10/06/23 21:56
Lab Samp ID:	J039-07	Dilution Factor:	1
Lab File ID:	EJ06019A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06014A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	13J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.2	40.0	83	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume :	5ml
Prepared by	: SCerva	Analyzed by :	SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 23:50
Sample ID	: QC04102023EB	Date Analyzed:	10/06/23 23:50
Lab Samp ID:	J039-08	Dilution Factor:	1
Lab File ID:	EJ06022A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06014A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	20J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	32.8	40.0	82	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/07/23 00:28
Sample ID	: QC04102023TB	Date Analyzed:	10/07/23 00:28
Lab Samp ID:	J039-12	Dilution Factor:	1
Lab File ID:	EJ06023A	Matrix:	WATER
Ext Btch ID:	23VG39J05	% Moisture:	NA
Calib. Ref.:	EJ06014A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	17J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	27.9	40.0	70	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of five(5) water samples were received on 10/05/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ006WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSJ006WL/DSJ006WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. TPH-Diesel was within MS QC limits in 23J039-07M/23J039-07S. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ006WB	1	NA	10/10/2318:13	10/06/2315:00	LJ10022A	LJ10018A	23DSJ006W	Method Blank
LCS1W	DSJ006WL	1	NA	10/10/2318:32	10/06/2315:00	LJ10023A	LJ10018A	23DSJ006W	Lab Control Sample (LCS)
LCD1W	DSJ006WC	1	NA	10/10/2318:50	10/06/2315:00	LJ10024A	LJ10018A	23DSJ006W	LCS Duplicate
TMW58102023	J039-02	1	NA	10/10/2319:28	10/06/2315:00	LJ10026A	LJ10018A	23DSJ006W	Field Sample
TMW50102023	J039-04	1	NA	10/10/2319:46	10/06/2315:00	LJ10027A	LJ10018A	23DSJ006W	Field Sample
BGMW11102023	J039-06	1	NA	10/10/2320:05	10/06/2315:00	LJ10028A	LJ10018A	23DSJ006W	Field Sample
TMW63102023	J039-07	1	NA	10/10/2320:24	10/06/2315:00	LJ10029A	LJ10018A	23DSJ006W	Field Sample
TMW63102023MS	J039-07M	1	NA	10/10/2320:43	10/06/2315:00	LJ10030A	LJ10018A	23DSJ006W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/10/2321:01	10/06/2315:00	LJ10031A	LJ10018A	23DSJ006W	MS Duplicate (MSD)
QC04102023EB	J039-08	1	NA	10/10/2321:20	10/06/2315:00	LJ10032A	LJ10018A	23DSJ006W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 15:00
Sample ID	: TMW58102023	Date Analyzed:	10/10/23 19:28
Lab Samp ID:	23J039-02	Dilution Factor:	1
Lab File ID:	LJ10026A	Matrix:	WATER
Ext Btch ID:	23DSJ006W	% Moisture:	NA
Calib. Ref.:	LJ10018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.50	0.050	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.771	1.00	77	60-130
Hexacosane	0.227	0.250	91	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 15:00
Sample ID	: TMW50102023	Date Analyzed:	10/10/23 19:46
Lab Samp ID:	23J039-04	Dilution Factor:	1
Lab File ID:	LJ10027A	Matrix:	WATER
Ext Btch ID:	23DSJ006W	% Moisture:	NA
Calib. Ref.:	LJ10018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.54	0.054	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.831	1.08	77	60-130
Hexacosane	0.247	0.270	92	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 15:00
Sample ID	: BGMW11102023	Date Analyzed:	10/10/23 20:05
Lab Samp ID:	23J039-06	Dilution Factor:	1
Lab File ID:	LJ10028A	Matrix:	WATER
Ext Btch ID:	23DSJ006W	% Moisture:	NA
Calib. Ref.:	LJ10018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.57	0.057	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.857	1.14	75	60-130
Hexacosane	0.252	0.285	88	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 880ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 15:00
Sample ID	: TMW63102023	Date Analyzed:	10/10/23 20:24
Lab Samp ID:	23J039-07	Dilution Factor:	1
Lab File ID:	LJ10029A	Matrix:	WATER
Ext Btch ID:	23DSJ006W	% Moisture:	NA
Calib. Ref.:	LJ10018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.54	0.054	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.830	1.08	77	60-130
Hexacosane	0.254	0.270	94	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:00
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 15:00
Sample ID	: QC04102023EB	Date Analyzed:	10/10/23 21:20
Lab Samp ID:	23J039-08	Dilution Factor:	1
Lab File ID:	LJ10032A	Matrix:	WATER
Ext Btch ID:	23DSJ006W	% Moisture:	NA
Calib. Ref.:	LJ10018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.50	0.050	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.812	1.00	81	60-130
Hexacosane	0.242	0.250	97	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1000ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW3520C/8081B
PESTICIDES

A total of six(6) water samples were received on 10/05/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ012WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ012WL/CPJ012WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J039-07M/J039-07S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J039
Project : USACE WINGATE Instrument ID : E8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ012WB	1	NA	10/13/2323:11	10/06/2313:30	MJ13029	MJ13025	23CPJ012W	Method Blank
LCS1W	CPJ012WL	1	NA	10/13/2323:35	10/06/2313:30	MJ13030	MJ13025	23CPJ012W	Lab Control Sample (LCS)
LCD1W	CPJ012WC	1	NA	10/13/2323:58	10/06/2313:30	MJ13031	MJ13025	23CPJ012W	LCS Duplicate
TMW30102023	J039-01	1	NA	10/24/2323:36	10/06/2313:30	MJ24017	MJ24015	23CPJ012W	Field Sample
TMW58102023	J039-02	1	NA	10/25/2300:00	10/06/2313:30	MJ24018	MJ24015	23CPJ012W	Field Sample
TMW50102023	J039-04	1	NA	10/25/2300:23	10/06/2313:30	MJ24019	MJ24015	23CPJ012W	Field Sample
BGMW11102023	J039-06	1	NA	10/25/2300:46	10/06/2313:30	MJ24020	MJ24015	23CPJ012W	Field Sample
TMW63102023	J039-07	1	NA	10/25/2301:09	10/06/2313:30	MJ24021	MJ24015	23CPJ012W	Field Sample
TMW63102023MS	J039-07M	1	NA	10/25/2301:33	10/06/2313:30	MJ24022	MJ24015	23CPJ012W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/25/2301:56	10/06/2313:30	MJ24023	MJ24015	23CPJ012W	MS Duplicate (MSD)
QC04102023EB	J039-08	1	NA	10/25/2303:06	10/06/2313:30	MJ24026	MJ24015	23CPJ012W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:10
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 13:30
Sample ID	: TMW30102023	Date Analyzed:	10/24/23 23:36
Lab Samp ID:	J039-01	Dilution Factor:	1
Lab File ID:	MJ24017	Matrix:	WATER
Ext Btch ID:	23CPJ012W	% Moisture:	NA
Calib. Ref.:	MJ24015	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.099	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.099	0.020	0.040
beta-BHC	(ND) | ND	0.099	0.020	0.040
Heptachlor	(ND) | ND	0.099	0.020	0.040
delta-BHC	(ND) | ND	0.099	0.020	0.040
Aldrin	(ND) | ND	0.099	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.099	0.020	0.040
gamma-Chlordane	(ND) | ND	0.099	0.020	0.040
alpha-Chlordane	(ND) | ND	0.099	0.020	0.040
Endosulfan I	(ND) | ND	0.099	0.020	0.040
4,4'-DDE	(ND) | ND	0.099	0.020	0.040
Dieldrin	(ND) | ND	0.099	0.020	0.040
Endrin	(ND) | ND	0.099	0.020	0.040
4,4'-DDD	(ND) | ND	0.099	0.020	0.040
Endosulfan II	(ND) | ND	0.099	0.020	0.040
4,4'-DDT	(ND) | ND	0.099	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.099	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.099	0.020	0.040
Methoxychlor	(ND) | ND	0.99	0.099	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.099	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.242) | 0.240	0.396	61	44-124
Decachlorobiphenyl	0.261 | (0.280)	0.396	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1010ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	MJ24016		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23 08:30
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/06/23 13:30
Sample ID : TMW58102023	Date Analyzed: 10/25/23 00:00
Lab Samp ID: J039-02	Dilution Factor: 1
Lab File ID: MJ24018	Matrix: WATER
Ext Btch ID: 23CPJ012W	% Moisture: NA
Calib. Ref.: MJ24015	Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.043
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.043
beta-BHC	(ND) | ND	0.11	0.022	0.043
Heptachlor	(ND) | ND	0.11	0.022	0.043
delta-BHC	(ND) | ND	0.11	0.022	0.043
Aldrin	(ND) | ND	0.11	0.022	0.043
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.043
gamma-Chlordane	(ND) | ND	0.11	0.022	0.043
alpha-Chlordane	(ND) | ND	0.11	0.022	0.043
Endosulfan I	(ND) | ND	0.11	0.022	0.043
4,4'-DDE	(ND) | ND	0.11	0.022	0.043
Dieldrin	(ND) | ND	0.11	0.022	0.043
Endrin	(ND) | ND	0.11	0.022	0.043
4,4'-DDD	(ND) | ND	0.11	0.022	0.043
Endosulfan II	(ND) | ND	0.11	0.022	0.043
4,4'-DDT	(ND) | ND	0.11	0.022	0.043
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.043
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.043
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.27	0.54
Endrin Ketone	(ND) | ND	0.11	0.022	0.043

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.345) | 0.342	0.430	80	44-124
Decachlorobiphenyl	0.310 | (0.329)	0.430	77	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24016

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039
Sample ID : TMW50102023
Lab Samp ID: J039-04
Lab File ID: MJ24019
Ext Btch ID: 23CPJ012W
Calib. Ref.: MJ24015

Date Collected: 10/04/23 09:15
Date Received: 10/05/23
Date Extracted: 10/06/23 13:30
Date Analyzed: 10/25/23 00:23
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | ND	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.316) | 0.295	0.400	79	44-124
Decachlorobiphenyl	0.288 | (0.308)	0.400	77	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24016

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23 11:40
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/06/23 13:30
Sample ID : BGMW11102023	Date Analyzed: 10/25/23 00:46
Lab Samp ID: J039-06	Dilution Factor: 1
Lab File ID: MJ24020	Matrix: WATER
Ext Btch ID: 23CPJ012W	% Moisture: NA
Calib. Ref.: MJ24015	Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.041
beta-BHC	(ND) | ND	0.10	0.021	0.041
Heptachlor	(ND) | ND	0.10	0.021	0.041
delta-BHC	(ND) | ND	0.10	0.021	0.041
Aldrin	(ND) | ND	0.10	0.021	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.041
gamma-Chlordane	(ND) | ND	0.10	0.021	0.041
alpha-Chlordane	(ND) | ND	0.10	0.021	0.041
Endosulfan I	(ND) | ND	0.10	0.021	0.041
4,4'-DDE	(ND) | ND	0.10	0.021	0.041
Dieldrin	(ND) | ND	0.10	0.021	0.041
Endrin	(ND) | ND	0.10	0.021	0.041
4,4'-DDD	(ND) | ND	0.10	0.021	0.041
Endosulfan II	(ND) | ND	0.10	0.021	0.041
4,4'-DDT	(ND) | ND	0.10	0.021	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.261) | 0.260	0.412	63	44-124
Decachlorobiphenyl	0.311 | (0.334)	0.412	81	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 970ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24016

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/06/23 13:30
Sample ID	: TMW63102023	Date Analyzed:	10/25/23 01:09
Lab Samp ID:	J039-07	Dilution Factor:	1
Lab File ID:	MJ24021	Matrix:	WATER
Ext Btch ID:	23CPJ012W	% Moisture:	NA
Calib. Ref.:	MJ24015	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	0.022J | (ND)	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.290 | (0.291)	0.421	69	44-124
Decachlorobiphenyl	0.301 | (0.319)	0.421	76	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 950ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	MJ24016		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039
Sample ID : QC04102023EB
Lab Samp ID: J039-08
Lab File ID: MJ24026
Ext Btch ID: 23CPJ012W
Calib. Ref.: MJ24015

Date Collected: 10/04/23 14:00
Date Received: 10/05/23
Date Extracted: 10/06/23 13:30
Date Analyzed: 10/25/23 03:06
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.264 | (0.265)	0.421	63	44-124
Decachlorobiphenyl	0.311 | (0.332)	0.421	79	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml
Prepared by : RGalan
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MJ24016

Final Volume : 10ml
Analyzed by : EKim

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW3520C/8082A
PCBS

A total of five(5) water samples were received on 10/05/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ012WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 60J012WL/60J012WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J039-07M/J039-07S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PCBs

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : 71

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ012WB	1	NA	10/12/2311:47	10/06/2313:30	KJ12004A	KJ12002A	CPJ012W	Method Blank
LCS1W	60J012WL	1	NA	10/12/2312:07	10/06/2313:30	KJ12005A	KJ12002A	CPJ012W	Lab Control Sample (LCS)
LCD1W	60J012WC	1	NA	10/12/2312:27	10/06/2313:30	KJ12006A	KJ12002A	CPJ012W	LCS Duplicate
TMW58102023	J039-02	1.08	NA	10/12/2313:47	10/06/2313:30	KJ12010A	KJ12002A	CPJ012W	Field Sample
TMW50102023	J039-04	1	NA	10/12/2314:07	10/06/2313:30	KJ12011A	KJ12002A	CPJ012W	Field Sample
BGMW11102023	J039-06	1.03	NA	10/12/2314:27	10/06/2313:30	KJ12012A	KJ12002A	CPJ012W	Field Sample
TMW63102023	J039-07	1.05	NA	10/12/2314:47	10/06/2313:30	KJ12013A	KJ12002A	CPJ012W	Field Sample
QC04102023EB	J039-08	1.05	NA	10/12/2316:57	10/06/2313:30	KJ12019A	KJ12015A	CPJ012W	Field Sample
TMW63102023MS	J039-07M	1.04	NA	10/12/2316:17	10/06/2313:30	KJ12017A	KJ12015A	CPJ012W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1.04	NA	10/12/2316:37	10/06/2313:30	KJ12018A	KJ12015A	CPJ012W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/06/23 13:30
Sample ID: TMW58102023	Date Analyzed: 10/12/23 13:47
Lab Samp ID: J039-02	Dilution Factor: 1.08
Lab File ID: KJ12010A	Matrix : WATER
Ext Btch ID: CPJ012W	% Moisture : NA
Calib. Ref.: KJ12002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.27	0.54
PCB-1221	(ND)|ND	1.1	0.27	0.54
PCB-1232	(ND)|ND	1.1	0.27	0.54
PCB-1242	(ND)|ND	1.1	0.27	0.54
PCB-1248	(ND)|ND	1.1	0.27	0.54
PCB-1254	(ND)|ND	1.1	0.27	0.54
PCB-1260	(ND)|ND	1.1	0.27	0.54

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3979|(0.4213)	0.4320	92.1|(97.5)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/04/23
Project	: USACE WINGATE	Date Received	: 10/05/23
Batch No.	: 23J039	Date Extracted	: 10/06/23 13:30
Sample ID	: TMW50102023	Date Analyzed	: 10/12/23 14:07
Lab Samp ID	: J039-04	Dilution Factor	: 1
Lab File ID	: KJ12011A	Matrix	: WATER
Ext Btch ID	: CPJ012W	% Moisture	: NA
Calib. Ref.	: KJ12002A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.50
PCB-1221	(ND)|ND	1.0	0.25	0.50
PCB-1232	(ND)|ND	1.0	0.25	0.50
PCB-1242	(ND)|ND	1.0	0.25	0.50
PCB-1248	(ND)|ND	1.0	0.25	0.50
PCB-1254	(ND)|ND	1.0	0.25	0.50
PCB-1260	(ND)|ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3773|(0.3950)	0.4000	94.3|(98.7)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/04/23
Project	: USACE WINGATE	Date Received	: 10/05/23
Batch No.	: 23J039	Date Extracted	: 10/06/23 13:30
Sample ID	: BGMW11102023	Date Analyzed	: 10/12/23 14:27
Lab Samp ID	: J039-06	Dilution Factor	: 1.03
Lab File ID	: KJ12012A	Matrix	: WATER
Ext Btch ID	: CPJ012W	% Moisture	: NA
Calib. Ref.	: KJ12002A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3926|(0.4184)	0.4120	95.3|(102)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/06/23 13:30
Sample ID: TMW63102023	Date Analyzed: 10/12/23 14:47
Lab Samp ID: J039-07	Dilution Factor: 1.05
Lab File ID: KJ12013A	Matrix : WATER
Ext Btch ID: CPJ012W	% Moisture : NA
Calib. Ref.: KJ12002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.4016|(0.4179)	0.4200	95.6|(99.5)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/04/23
Project	: USACE WINGATE	Date Received	: 10/05/23
Batch No.	: 23J039	Date Extracted	: 10/06/23 13:30
Sample ID	: QC04102023EB	Date Analyzed	: 10/12/23 16:57
Lab Samp ID	: J039-08	Dilution Factor	: 1.05
Lab File ID	: KJ12019A	Matrix	: WATER
Ext Btch ID	: CPJ012W	% Moisture	: NA
Calib. Ref.	: KJ12015A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3914|(0.4197)	0.4200	93.2|(99.9)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD 8151A
HERBICIDES

A total of five(5) water samples were received on 10/05/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
Sample J039-06 was re-extracted 2 days out of holding time due to low surrogate recovery which was below QC limits. All other samples were extracted and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. HEJ003WB and HEJ008WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. HEJ003WL/HEJ003WC and HEJ008WL/HEJ008WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J039-07M/J039-07S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J039
Project : USACE WINGATE Instrument ID : 16

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEJ003WB	1	NA	10/11/2321:22	10/07/2313:05	WJ11006A	WJ11002A	HEJ003W	Method Blank
LCS1W	HEJ003WL	1	NA	10/11/2321:50	10/07/2313:05	WJ11007A	WJ11002A	HEJ003W	Lab Control Sample (LCS)
LCD1W	HEJ003WC	1	NA	10/11/2322:19	10/07/2313:05	WJ11008A	WJ11002A	HEJ003W	LCS Duplicate
MBLK2W	HEJ008WB	1	NA	10/17/2320:13	10/13/2312:30	WJ17003A	WJ17002A	HEJ008W	Method Blank
LCS2W	HEJ008WL	1	NA	10/17/2320:42	10/13/2312:30	WJ17004A	WJ17002A	HEJ008W	Lab Control Sample (LCS)
LCD2W	HEJ008WC	1	NA	10/17/2321:10	10/13/2312:30	WJ17005A	WJ17002A	HEJ008W	LCS Duplicate
TMW58102023	J039-02	1	NA	10/12/2306:52	10/07/2313:05	WJ11026A	WJ11024A	HEJ003W	Field Sample
TMW50102023	J039-04	1	NA	10/12/2307:20	10/07/2313:05	WJ11027A	WJ11024A	HEJ003W	Field Sample
BGMW11102023	J039-06R	1	NA	10/18/2300:02	10/13/2312:30	WJ17011A	WJ17002A	HEJ008W	Field Sample
TMW63102023	J039-07	1	NA	10/12/2308:17	10/07/2313:05	WJ11029A	WJ11024A	HEJ003W	Field Sample
TMW63102023MS	J039-07M	1	NA	10/12/2308:46	10/07/2313:05	WJ11030A	WJ11024A	HEJ003W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/12/2309:14	10/07/2313:05	WJ11031A	WJ11024A	HEJ003W	MS Duplicate (MSD)
QC04102023EB	J039-08	1	NA	10/12/2309:43	10/07/2313:05	WJ11032A	WJ11024A	HEJ003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/07/23 13:05
Sample ID: TMW58102023	Date Analyzed: 10/12/23 06:52
Lab Samp ID: J039-02	Dilution Factor: 1
Lab File ID: WJ11026A	Matrix : WATER
Ext Btch ID: HEJ003W	% Moisture : NA
Calib. Ref.: WJ11024A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	34J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.991 | (8.283)	10.00	79.9 | (82.8)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/04/23
Project	: USACE WINGATE	Date Received	: 10/05/23
Batch No.	: 23J039	Date Extracted	: 10/07/23 13:05
Sample ID	: TMW50102023	Date Analyzed	: 10/12/23 07:20
Lab Samp ID	: J039-04	Dilution Factor	: 1
Lab File ID	: WJ11027A	Matrix	: WATER
Ext Btch ID	: HEJ003W	% Moisture	: NA
Calib. Ref.	: WJ11024A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	47 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.485 | (8.674)	10.00	84.8 | (86.7)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/13/23 12:30
Sample ID: BGMW11102023	Date Analyzed: 10/18/23 00:02
Lab Samp ID: J039-06R	Dilution Factor: 1
Lab File ID: WJ17011A	Matrix : WATER
Ext Btch ID: HEJ008W	% Moisture : NA
Calib. Ref.: WJ17002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 2.2	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	17J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.628 | (8.133)	10.00	76.3 | (81.3)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/04/23
Project	: USACE WINGATE	Date Received	: 10/05/23
Batch No.	: 23J039	Date Extracted	: 10/07/23 13:05
Sample ID	: TMW63102023	Date Analyzed	: 10/12/23 08:17
Lab Samp ID	: J039-07	Dilution Factor	: 1
Lab File ID	: WJ11029A	Matrix	: WATER
Ext Btch ID	: HEJ003W	% Moisture	: NA
Calib. Ref.	: WJ11024A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.11J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	10J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(6.512) | 6.258	10.00	(65.1) | 62.6	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/04/23
Project	: USACE WINGATE	Date Received	: 10/05/23
Batch No.	: 23J039	Date Extracted	: 10/07/23 13:05
Sample ID	: QC04102023EB	Date Analyzed	: 10/12/23 09:43
Lab Samp ID	: J039-08	Dilution Factor	: 1
Lab File ID	: WJ11032A	Matrix	: WATER
Ext Btch ID	: HEJ003W	% Moisture	: NA
Calib. Ref.	: WJ11024A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	28J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.278 | (8.646)	10.00	82.8 | (86.5)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW8330B
EXPLOSIVES

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ005WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ005WL/EXJ005WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J039-07M/J039-07S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW8330B
EXPLOSIVES

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ005WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 35J005WL/35J005WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 3,5-Dinitroaniline was within MS QC limits in J039-07M/J039-07S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ005WB	1	NA	10/11/2313:01	10/09/2311:00	XJ10031A	XJ10028A	EXJ005W	Method Blank
LCS1W	EXJ005WL	1	NA	10/11/2314:46	10/09/2311:00	XJ10033A	XJ10028A	EXJ005W	Lab Control Sample (LCS)
LCD1W	EXJ005WC	1	NA	10/11/2315:34	10/09/2311:00	XJ10034A	XJ10028A	EXJ005W	LCS Duplicate
TMW30102023	J039-01	1	NA	10/11/2318:16	10/09/2311:00	XJ10037A	XJ10028A	EXJ005W	Field Sample
TMW58102023	J039-02	1	NA	10/11/2319:04	10/09/2311:00	XJ10038A	XJ10028A	EXJ005W	Field Sample
TMW26102023	J039-03	1	NA	10/11/2320:01	10/09/2311:00	XJ10039A	XJ10028A	EXJ005W	Field Sample
TMW50102023	J039-04	1	NA	10/11/2320:49	10/09/2311:00	XJ10040A	XJ10028A	EXJ005W	Field Sample
SMW01102023	J039-05	1	NA	10/11/2323:31	10/09/2311:00	XJ10043A	XJ10041A	EXJ005W	Field Sample
BGMW11102023	J039-06	1	NA	10/12/2300:19	10/09/2311:00	XJ10044A	XJ10041A	EXJ005W	Field Sample
TMW63102023	J039-07	1	NA	10/12/2301:16	10/09/2311:00	XJ10045A	XJ10041A	EXJ005W	Field Sample
QC04102023EB	J039-08	1	NA	10/12/2305:34	10/09/2311:00	XJ10050A	XJ10041A	EXJ005W	Field Sample
TMW04102023	J039-09	1	NA	10/12/2306:31	10/09/2311:00	XJ10051A	XJ10041A	EXJ005W	Field Sample
TMW63102023MS	J039-07M	1	NA	10/12/2302:04	10/09/2311:00	XJ10046A	XJ10041A	EXJ005W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/12/2303:01	10/09/2311:00	XJ10047A	XJ10041A	EXJ005W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ005WB	1	NA	10/11/2313:01	10/09/2311:00	XJ10031A	XJ10029A	EXJ005W	Method Blank
LCS1W	35J005WL	1	NA	10/11/2316:31	10/09/2311:00	XJ10035A	XJ10029A	EXJ005W	Lab Control Sample (LCS)
LCD1W	35J005WC	1	NA	10/11/2317:19	10/09/2311:00	XJ10036A	XJ10029A	EXJ005W	LCS Duplicate
TMW30102023	J039-01	1	NA	10/11/2318:16	10/09/2311:00	XJ10037A	XJ10029A	EXJ005W	Field Sample
TMW58102023	J039-02	1	NA	10/11/2319:04	10/09/2311:00	XJ10038A	XJ10029A	EXJ005W	Field Sample
TMW26102023	J039-03	1	NA	10/11/2320:01	10/09/2311:00	XJ10039A	XJ10029A	EXJ005W	Field Sample
TMW50102023	J039-04	1	NA	10/11/2320:49	10/09/2311:00	XJ10040A	XJ10029A	EXJ005W	Field Sample
SMW01102023	J039-05	1	NA	10/11/2323:31	10/09/2311:00	XJ10043A	XJ10042A	EXJ005W	Field Sample
BGMW11102023	J039-06	1	NA	10/12/2300:19	10/09/2311:00	XJ10044A	XJ10042A	EXJ005W	Field Sample
TMW63102023	J039-07	1	NA	10/12/2301:16	10/09/2311:00	XJ10045A	XJ10042A	EXJ005W	Field Sample
QC04102023EB	J039-08	1	NA	10/12/2305:34	10/09/2311:00	XJ10050A	XJ10042A	EXJ005W	Field Sample
TMW04102023	J039-09	1	NA	10/12/2306:31	10/09/2311:00	XJ10051A	XJ10042A	EXJ005W	Field Sample
TMW63102023MS	J039-07M	1	NA	10/12/2303:49	10/09/2311:00	XJ10048A	XJ10042A	EXJ005W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/12/2304:46	10/09/2311:00	XJ10049A	XJ10042A	EXJ005W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW30102023	Date Analyzed: 10/11/23 18:16
Lab Samp ID: J039-01	Dilution Factor: 1
Lab File ID: XJ10037A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10028A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.77	4.000	94.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW30102023	Date Analyzed: 10/11/23 18:16
Lab Samp ID: J039-01	Dilution Factor: 1
Lab File ID: XJ10037A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10029A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	0.28J	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.77	4.000	94.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW58102023	Date Analyzed: 10/11/23 19:04
Lab Samp ID: J039-02	Dilution Factor: 1
Lab File ID: XJ10038A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10028A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.79	4.000	94.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW58102023	Date Analyzed: 10/11/23 19:04
Lab Samp ID: J039-02	Dilution Factor: 1
Lab File ID: XJ10038A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10029A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.79	4.000	94.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW26102023	Date Analyzed: 10/11/23 20:01
Lab Samp ID: J039-03	Dilution Factor: 1
Lab File ID: XJ10039A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10028A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.96	4.000	99.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW26102023	Date Analyzed: 10/11/23 20:01
Lab Samp ID: J039-03	Dilution Factor: 1
Lab File ID: XJ10039A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10029A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.96	4.000	99.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW50102023	Date Analyzed: 10/11/23 20:49
Lab Samp ID: J039-04	Dilution Factor: 1
Lab File ID: XJ10040A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10028A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 11:00
Sample ID:	TMW50102023	Date Analyzed:	10/11/23 20:49
Lab Samp ID:	J039-04	Dilution Factor:	1
Lab File ID:	XJ10040A	Matrix :	WATER
Ext Btch ID:	EXJ005W	% Moisture :	NA
Calib. Ref.:	XJ10029A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: SMW01102023	Date Analyzed: 10/11/23 23:31
Lab Samp ID: J039-05	Dilution Factor: 1
Lab File ID: XJ10043A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10041A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.78	4.000	94.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: SMW01102023	Date Analyzed: 10/11/23 23:31
Lab Samp ID: J039-05	Dilution Factor: 1
Lab File ID: XJ10043A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10042A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	0.13J	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.78	4.000	94.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: BGMW11102023	Date Analyzed: 10/12/23 00:19
Lab Samp ID: J039-06	Dilution Factor: 1
Lab File ID: XJ10044A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10041A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.75	4.000	93.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: BGMW11102023	Date Analyzed: 10/12/23 00:19
Lab Samp ID: J039-06	Dilution Factor: 1
Lab File ID: XJ10044A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10042A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.75	4.000	93.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 11:00
Sample ID:	TMW63102023	Date Analyzed:	10/12/23 01:16
Lab Samp ID:	J039-07	Dilution Factor:	1
Lab File ID:	XJ10045A	Matrix :	WATER
Ext Btch ID:	EXJ005W	% Moisture :	NA
Calib. Ref.:	XJ10041A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.61	4.000	90.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW63102023	Date Analyzed: 10/12/23 01:16
Lab Samp ID: J039-07	Dilution Factor: 1
Lab File ID: XJ10045A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10042A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.61	4.000	90.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: QC04102023EB	Date Analyzed: 10/12/23 05:34
Lab Samp ID: J039-08	Dilution Factor: 1
Lab File ID: XJ10050A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10041A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: QC04102023EB	Date Analyzed: 10/12/23 05:34
Lab Samp ID: J039-08	Dilution Factor: 1
Lab File ID: XJ10050A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10042A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 11:00
Sample ID: TMW04102023	Date Analyzed: 10/12/23 06:31
Lab Samp ID: J039-09	Dilution Factor: 1
Lab File ID: XJ10051A	Matrix : WATER
Ext Btch ID: EXJ005W	% Moisture : NA
Calib. Ref.: XJ10041A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	1.0	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	1.1	1.0	0.10	0.20
1,3-DINITROBENZENE	0.12J	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	0.83J	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	0.85J	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.61	4.000	90.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23
Project	: USACE WINGATE	Date Received:	10/05/23
Batch No.	: 23J039	Date Extracted:	10/09/23 11:00
Sample ID:	TMW04102023	Date Analyzed:	10/12/23 06:31
Lab Samp ID:	J039-09	Dilution Factor:	1
Lab File ID:	XJ10051A	Matrix :	WATER
Ext Btch ID:	EXJ005W	% Moisture :	NA
Calib. Ref.:	XJ10042A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	0.53	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.61	4.000	90.3	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW8332
NITROGLYCERIN AND PETN

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Nitroglycerin And Petn in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ006WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ006WL/EXJ006WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J039-07M/J039-07S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ006WB	1	NA	10/10/2315:22	10/09/2315:00	NJ10020A	NJ10013A	EXJ006W	Method Blank
LCS1W	EXJ006WL	1	NA	10/10/2315:31	10/09/2315:00	NJ10021A	NJ10013A	EXJ006W	Lab Control Sample (LCS)
LCD1W	EXJ006WC	1	NA	10/10/2315:40	10/09/2315:00	NJ10022A	NJ10013A	EXJ006W	LCS Duplicate
TMW30102023	J039-01	1	NA	10/10/2315:49	10/09/2315:00	NJ10023A	NJ10013A	EXJ006W	Field Sample
TMW58102023	J039-02	1	NA	10/10/2316:07	10/09/2315:00	NJ10025A	NJ10024A	EXJ006W	Field Sample
TMW26102023	J039-03	1	NA	10/10/2316:16	10/09/2315:00	NJ10026A	NJ10024A	EXJ006W	Field Sample
TMW50102023	J039-04	1	NA	10/10/2316:25	10/09/2315:00	NJ10027A	NJ10024A	EXJ006W	Field Sample
SMW01102023	J039-05	1	NA	10/10/2316:34	10/09/2315:00	NJ10028A	NJ10024A	EXJ006W	Field Sample
BGMW11102023	J039-06	1	NA	10/10/2316:43	10/09/2315:00	NJ10029A	NJ10024A	EXJ006W	Field Sample
TMW63102023	J039-07	1	NA	10/10/2316:52	10/09/2315:00	NJ10030A	NJ10024A	EXJ006W	Field Sample
QC04102023EB	J039-08	1	NA	10/10/2317:19	10/09/2315:00	NJ10033A	NJ10024A	EXJ006W	Field Sample
TMW04102023	J039-09	1	NA	10/10/2317:28	10/09/2315:00	NJ10034A	NJ10024A	EXJ006W	Field Sample
TMW63102023MS	J039-07M	1	NA	10/10/2317:01	10/09/2315:00	NJ10031A	NJ10024A	EXJ006W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/10/2317:10	10/09/2315:00	NJ10032A	NJ10024A	EXJ006W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 15:00
Sample ID: TMW30102023	Date Analyzed: 10/10/23 15:49
Lab Samp ID: J039-01	Dilution Factor: 1
Lab File ID: NJ10023A	Matrix : WATER
Ext Btch ID: EXJ006W	% Moisture : NA
Calib. Ref.: NJ10013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	563	500.0	113	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 15:00
Sample ID: TMW58102023	Date Analyzed: 10/10/23 16:07
Lab Samp ID: J039-02	Dilution Factor: 1
Lab File ID: NJ10025A	Matrix : WATER
Ext Btch ID: EXJ006W	% Moisture : NA
Calib. Ref.: NJ10024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	553	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 15:00
Sample ID: TMW26102023	Date Analyzed: 10/10/23 16:16
Lab Samp ID: J039-03	Dilution Factor: 1
Lab File ID: NJ10026A	Matrix : WATER
Ext Btch ID: EXJ006W	% Moisture : NA
Calib. Ref.: NJ10024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	556	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 15:00
Sample ID: TMW50102023	Date Analyzed: 10/10/23 16:25
Lab Samp ID: J039-04	Dilution Factor: 1
Lab File ID: NJ10027A	Matrix : WATER
Ext Btch ID: EXJ006W	% Moisture : NA
Calib. Ref.: NJ10024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	557	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 15:00
Sample ID: SMW01102023	Date Analyzed: 10/10/23 16:34
Lab Samp ID: J039-05	Dilution Factor: 1
Lab File ID: NJ10028A	Matrix : WATER
Ext Btch ID: EXJ006W	% Moisture : NA
Calib. Ref.: NJ10024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	555	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 15:00
Sample ID: BGMW11102023	Date Analyzed: 10/10/23 16:43
Lab Samp ID: J039-06	Dilution Factor: 1
Lab File ID: NJ10029A	Matrix : WATER
Ext Btch ID: EXJ006W	% Moisture : NA
Calib. Ref.: NJ10024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	556	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 15:00
Sample ID: TMW63102023	Date Analyzed: 10/10/23 16:52
Lab Samp ID: J039-07	Dilution Factor: 1
Lab File ID: NJ10030A	Matrix : WATER
Ext Btch ID: EXJ006W	% Moisture : NA
Calib. Ref.: NJ10024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	563	500.0	113	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23
Project : USACE WINGATE	Date Received: 10/05/23
Batch No. : 23J039	Date Extracted: 10/09/23 15:00
Sample ID: QC04102023EB	Date Analyzed: 10/10/23 17:19
Lab Samp ID: J039-08	Dilution Factor: 1
Lab File ID: NJ10033A	Matrix : WATER
Ext Btch ID: EXJ006W	% Moisture : NA
Calib. Ref.: NJ10024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	568	500.0	114	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/04/23
Project	: USACE WINGATE	Date Received	: 10/05/23
Batch No.	: 23J039	Date Extracted	: 10/09/23 15:00
Sample ID	: TMW04102023	Date Analyzed	: 10/10/23 17:28
Lab Samp ID	: J039-09	Dilution Factor	: 1
Lab File ID	: NJ10034A	Matrix	: WATER
Ext Btch ID	: EXJ006W	% Moisture	: NA
Calib. Ref.	: NJ10024A	Instrument ID	: E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	555	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW6020A
METALS BY ICP-MS

A total of eleven(11) water samples were received on 10/05/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Vanadium(0.40J <1/2 LOQ) was detected at trace level in IMJ021WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ021WL/IMJ021WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J039-07M/J039-07S - Percent recoveries for Sodium(233X) and Zinc were not within MS/MSD QC limits. Percent recoveries for Barium, Manganese and Silver were not within MSD QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ021WB	1	NA	10/24/2318:18	10/20/2309:42	H6J18047	H6J18045	IMJ021W	Method Blank
LCS1W	IMJ021WL	1	NA	10/24/2318:21	10/20/2309:42	H6J18048	H6J18045	IMJ021W	Lab Control Sample (LCS)
LCD1W	IMJ021WC	1	NA	10/24/2318:24	10/20/2309:42	H6J18049	H6J18045	IMJ021W	LCS Duplicate
TMW30102023	J039-01G	5	NA	10/24/2318:27	10/20/2309:42	H6J18050	H6J18045	IMJ021W	Diluted Sample
TMW58102023	J039-02G	5	NA	10/24/2318:30	10/20/2309:42	H6J18051	H6J18045	IMJ021W	Diluted Sample
TMW26102023	J039-03G	5	NA	10/24/2318:33	10/20/2309:42	H6J18052	H6J18045	IMJ021W	Diluted Sample
TMW50102023	J039-04G	5	NA	10/24/2318:36	10/20/2309:42	H6J18053	H6J18045	IMJ021W	Diluted Sample
SMW01102023	J039-05G	5	NA	10/24/2318:39	10/20/2309:42	H6J18054	H6J18045	IMJ021W	Diluted Sample
BGMW11102023	J039-06G	5	NA	10/24/2318:42	10/20/2309:42	H6J18055	H6J18045	IMJ021W	Diluted Sample
TMW63102023	J039-07A	5	NA	10/24/2318:50	10/20/2309:42	H6J18058	H6J18056	IMJ021W	Analytical Spike Sample
TMW63102023	J039-07G	5	NA	10/24/2318:53	10/20/2309:42	H6J18059	H6J18056	IMJ021W	Diluted Sample
TMW63102023	J039-07J	25	NA	10/24/2318:56	10/20/2309:42	H6J18060	H6J18056	IMJ021W	Diluted Sample
TMW63102023MS	J039-07M	5	NA	10/24/2318:59	10/20/2309:42	H6J18061	H6J18056	IMJ021W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	5	NA	10/24/2319:02	10/20/2309:42	H6J18062	H6J18056	IMJ021W	MS Duplicate (MSD)
QC04102023EB	J039-08	1	NA	10/24/2319:05	10/20/2309:42	H6J18063	H6J18056	IMJ021W	Field Sample
TMW04102023	J039-09G	5	NA	10/24/2319:08	10/20/2309:42	H6J18064	H6J18056	IMJ021W	Diluted Sample
TMW27102023	J039-10G	5	NA	10/24/2319:11	10/20/2309:42	H6J18065	H6J18056	IMJ021W	Diluted Sample
FDUP03-102023	J039-11G	5	NA	10/24/2319:14	10/20/2309:42	H6J18066	H6J18056	IMJ021W	Diluted Sample
TMW30102023	J039-01T	50	NA	10/24/2319:22	10/20/2309:42	H6J18069	H6J18067	IMJ021W	Diluted Sample
TMW58102023	J039-02T	50	NA	10/24/2319:25	10/20/2309:42	H6J18070	H6J18067	IMJ021W	Diluted Sample
TMW26102023	J039-03T	50	NA	10/24/2319:28	10/20/2309:42	H6J18071	H6J18067	IMJ021W	Diluted Sample
TMW50102023	J039-04T	50	NA	10/24/2319:31	10/20/2309:42	H6J18072	H6J18067	IMJ021W	Diluted Sample
SMW01102023	J039-05T	50	NA	10/24/2319:34	10/20/2309:42	H6J18073	H6J18067	IMJ021W	Diluted Sample
BGMW11102023	J039-06T	50	NA	10/24/2319:37	10/20/2309:42	H6J18074	H6J18067	IMJ021W	Diluted Sample
TMW63102023	J039-07A	50	NA	10/24/2319:46	10/20/2309:42	H6J18077	H6J18075	IMJ021W	Analytical Spike Sample
TMW63102023	J039-07T	50	NA	10/24/2319:49	10/20/2309:42	H6J18078	H6J18075	IMJ021W	Diluted Sample
TMW63102023	J039-07J	250	NA	10/24/2319:51	10/20/2309:42	H6J18079	H6J18075	IMJ021W	Diluted Sample
TMW63102023MS	J039-07M	50	NA	10/24/2319:54	10/20/2309:42	H6J18080	H6J18075	IMJ021W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	50	NA	10/24/2319:57	10/20/2309:42	H6J18081	H6J18075	IMJ021W	MS Duplicate (MSD)
TMW04102023	J039-09T	50	NA	10/24/2320:00	10/20/2309:42	H6J18082	H6J18075	IMJ021W	Diluted Sample
TMW27102023	J039-10T	50	NA	10/24/2320:03	10/20/2309:42	H6J18083	H6J18075	IMJ021W	Diluted Sample
FDUP03-102023	J039-11T	50	NA	10/24/2320:06	10/20/2309:42	H6J18084	H6J18075	IMJ021W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW30102023
Lab Samp ID: J039-01G
Lab File ID: H6J18050
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18045

Date Collected: 10/04/23 08:10
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 18:27
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	210J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	59000	1000	250	500
Chromium	1.8J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	5.3J	10	2.5	5.0
Iron	210J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	6.0	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	810J	1000	250	500
Selenium	8.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	16	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW30102023
Lab Samp ID: J039-01T
Lab File ID: H6J18069
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18067

Date Analyzed: 10/24/23 19:22
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	480000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW30102023	Date Analyzed:	10/24/23 18:27
Lab Samp ID:	J039-01G	Dilution Factor:	5
Lab File ID:	H6J18050	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	210J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	59000	1000	250	500
Chromium	1.8J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	5.3J	10	2.5	5.0
Iron	210J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	6.0	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	810J	1000	250	500
Selenium	8.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	470000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	16	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW30102023	Date Analyzed:	10/24/23 19:22
Lab Samp ID:	J039-01T	Dilution Factor:	50
Lab File ID:	H6J18069	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	61000	10000	2500	5000
Chromium	9.8J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	13000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	7.9J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	480000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	33J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW58102023
Lab Samp ID: J039-02G
Lab File ID: H6J18051
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18045

Date Collected: 10/04/23 08:30
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 18:30
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	230J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.8J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8000	1000	250	500
Chromium	1.7J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.3J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1000	500	100	250
Manganese	31	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	840J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.2	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW58102023
Lab Samp ID: J039-02T
Lab File ID: H6J18070
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18067

Date Analyzed: 10/24/23 19:25
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	640000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW58102023	Date Analyzed:	10/24/23 18:30
Lab Samp ID:	J039-02G	Dilution Factor:	5
Lab File ID:	H6J18051	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	230J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.8J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8000	1000	250	500
Chromium	1.7J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.3J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1000	500	100	250
Manganese	31	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	840J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	620000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.2	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW58102023	Date Analyzed:	10/24/23 19:25
Lab Samp ID:	J039-02T	Dilution Factor:	50
Lab File ID:	H6J18070	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	8.0J	50	6.2	12
Barium	19J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	9500J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1100J	5000	1000	2500
Manganese	31J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	640000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	26J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:00
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW26102023	Date Analyzed:	10/24/23 18:33
Lab Samp ID:	J039-03G	Dilution Factor:	5
Lab File ID:	H6J18052	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	360J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	24	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	20000	1000	250	500
Chromium	0.64J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.2J	10	2.5	5.0
Iron	160J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	370J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW26102023	Date Analyzed:	10/24/23 19:28
Lab Samp ID:	J039-03T	Dilution Factor:	50
Lab File ID:	H6J18071	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	910000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:00
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW26102023	Date Analyzed:	10/24/23 18:33
Lab Samp ID:	J039-03G	Dilution Factor:	5
Lab File ID:	H6J18052	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	360J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	24	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	20000	1000	250	500
Chromium	0.64J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.2J	10	2.5	5.0
Iron	160J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	370J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	870000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:00
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW26102023	Date Analyzed:	10/24/23 19:28
Lab Samp ID:	J039-03T	Dilution Factor:	50
Lab File ID:	H6J18071	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	6.4J	50	6.2	12
Barium	23J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	21000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8400	5000	1000	2500
Manganese	140	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	910000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	26J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW50102023	Date Analyzed:	10/24/23 18:36
Lab Samp ID:	J039-04G	Dilution Factor:	5
Lab File ID:	H6J18053	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	7400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	3.3J	5.0	0.62	1.2
Barium	330	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	13	5.0	0.50	1.0
Cobalt	3.3J	3.7	0.50	1.0
Copper	8.7J	10	2.5	5.0
Iron	3200	1000	120	250
Lead	1.6J	5.0	0.25	0.50
Magnesium	4000	500	100	250
Manganese	330	5.0	1.2	2.5
Nickel	6.5	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	45	5.0	1.2	2.5
Zinc	25J	100	25	50

Sample ID:	TMW50102023	Date Analyzed:	10/24/23 19:31
Lab Samp ID:	J039-04T	Dilution Factor:	50
Lab File ID:	H6J18072	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	560000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW50102023	Date Analyzed:	10/24/23 18:36
Lab Samp ID:	J039-04G	Dilution Factor:	5
Lab File ID:	H6J18053	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	7400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	3.3J	5.0	0.62	1.2
Barium	330	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	13	5.0	0.50	1.0
Cobalt	3.3J	3.7	0.50	1.0
Copper	8.7J	10	2.5	5.0
Iron	3200	1000	120	250
Lead	1.6J	5.0	0.25	0.50
Magnesium	4000	500	100	250
Manganese	330	5.0	1.2	2.5
Nickel	6.5	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	520000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	45	5.0	1.2	2.5
Zinc	25J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW50102023	Date Analyzed:	10/24/23 19:31
Lab Samp ID:	J039-04T	Dilution Factor:	50
Lab File ID:	H6J18072	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	7600	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	9.0J	50	6.2	12
Barium	320	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	12000	10000	2500	5000
Chromium	16J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	3400J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4200J	5000	1000	2500
Manganese	340	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	560000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	68	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: SMW01102023
Lab Samp ID: J039-05G
Lab File ID: H6J18054
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18045

Date Collected: 10/04/23 10:40
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 18:39
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	660	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	3.2J	5.0	0.62	1.2
Barium	64	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	20000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	2.0J	3.7	0.50	1.0
Copper	6.1J	10	2.5	5.0
Iron	380J	1000	120	250
Lead	0.44J	5.0	0.25	0.50
Magnesium	6900	500	100	250
Manganese	750	5.0	1.2	2.5
Nickel	3.9J	5.0	1.2	2.5
Potassium	320J	1000	250	500
Selenium	0.79J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: SMW01102023
Lab Samp ID: J039-05T
Lab File ID: H6J18073
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18067

Date Analyzed: 10/24/23 19:34
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 10:40
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	SMW01102023	Date Analyzed:	10/24/23 18:39
Lab Samp ID:	J039-05G	Dilution Factor:	5
Lab File ID:	H6J18054	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	660	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	3.2J	5.0	0.62	1.2
Barium	64	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	20000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	2.0J	3.7	0.50	1.0
Copper	6.1J	10	2.5	5.0
Iron	380J	1000	120	250
Lead	0.44J	5.0	0.25	0.50
Magnesium	6900	500	100	250
Manganese	750	5.0	1.2	2.5
Nickel	3.9J	5.0	1.2	2.5
Potassium	320J	1000	250	500
Selenium	0.79J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 10:40
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	SMW01102023	Date Analyzed:	10/24/23 19:34
Lab Samp ID:	J039-05T	Dilution Factor:	50
Lab File ID:	H6J18073	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	9.4J	50	6.2	12
Barium	62	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	21000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7100	5000	1000	2500
Manganese	770	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	32J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: BGMW11102023
Lab Samp ID: J039-06G
Lab File ID: H6J18055
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18045

Date Collected: 10/04/23 11:40
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 18:42
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	550	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	81000	1000	250	500
Chromium	1.3J	5.0	0.50	1.0
Cobalt	0.58J	3.7	0.50	1.0
Copper	4.8J	10	2.5	5.0
Iron	460J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	35000	500	100	250
Manganese	220	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	770J	1000	250	500
Selenium	0.79J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	4.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW11102023
Lab Samp ID: J039-06T
Lab File ID: H6J18074
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18067

Date Analyzed: 10/24/23 19:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	BGMW11102023	Date Analyzed:	10/24/23 18:42
Lab Samp ID:	J039-06G	Dilution Factor:	5
Lab File ID:	H6J18055	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	550	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	81000	1000	250	500
Chromium	1.3J	5.0	0.50	1.0
Cobalt	0.58J	3.7	0.50	1.0
Copper	4.8J	10	2.5	5.0
Iron	460J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	35000	500	100	250
Manganese	220	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	770J	1000	250	500
Selenium	0.79J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	BGMW11102023	Date Analyzed:	10/24/23 19:37
Lab Samp ID:	J039-06T	Dilution Factor:	50
Lab File ID:	H6J18074	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	82000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	36000	5000	1000	2500
Manganese	220	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	27J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW63102023	Date Analyzed:	10/24/23 18:53
Lab Samp ID:	J039-07G	Dilution Factor:	5
Lab File ID:	H6J18059	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1800	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	5.0	0.62	1.2
Barium	100	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	3.0J	5.0	0.50	1.0
Cobalt	0.87J	3.7	0.50	1.0
Copper	3.8J	10	2.5	5.0
Iron	1500	1000	120	250
Lead	0.91J	5.0	0.25	0.50
Magnesium	1800	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.7J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW63102023	Date Analyzed:	10/24/23 19:49
Lab Samp ID:	J039-07T	Dilution Factor:	50
Lab File ID:	H6J18078	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18075	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	700000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW63102023	Date Analyzed:	10/24/23 18:53
Lab Samp ID:	J039-07G	Dilution Factor:	5
Lab File ID:	H6J18059	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1800	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	5.0	0.62	1.2
Barium	100	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	3.0J	5.0	0.50	1.0
Cobalt	0.87J	3.7	0.50	1.0
Copper	3.8J	10	2.5	5.0
Iron	1500	1000	120	250
Lead	0.91J	5.0	0.25	0.50
Magnesium	1800	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.7J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	670000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW63102023	Date Analyzed:	10/24/23 19:49
Lab Samp ID:	J039-07T	Dilution Factor:	50
Lab File ID:	H6J18078	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18075	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1900J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	98	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	17000	10000	2500	5000
Chromium	5.4J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	1600J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2000J	5000	1000	2500
Manganese	140	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	700000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	23J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:00
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	QC04102023EB	Date Analyzed:	10/24/23 19:05
Lab Samp ID:	J039-08	Dilution Factor:	1
Lab File ID:	H6J18063	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	0.18J	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	0.26J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	81J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.63J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW04102023
Lab Samp ID: J039-09G
Lab File ID: H6J18064
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18056

Date Collected: 10/04/23 14:10
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 19:08
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	8.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	3.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5700	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	80	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	20	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW04102023
Lab Samp ID: J039-09T
Lab File ID: H6J18082
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18075

Date Analyzed: 10/24/23 20:00
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	940000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW04102023	Date Analyzed:	10/24/23 19:08
Lab Samp ID:	J039-09G	Dilution Factor:	5
Lab File ID:	H6J18064	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	8.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	3.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5700	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	80	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	870000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	20	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW04102023	Date Analyzed:	10/24/23 20:00
Lab Samp ID:	J039-09T	Dilution Factor:	50
Lab File ID:	H6J18082	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18075	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	32000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6300	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	74	50	7.5	15
Silver	ND	50	5.0	10
Sodium	940000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	41J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW27102023	Date Analyzed:	10/24/23 19:11
Lab Samp ID:	J039-10G	Dilution Factor:	5
Lab File ID:	H6J18065	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	23	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	25000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	580J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6500	500	100	250
Manganese	570	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW27102023	Date Analyzed:	10/24/23 20:03
Lab Samp ID:	J039-10T	Dilution Factor:	50
Lab File ID:	H6J18083	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18075	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	350000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW27102023
Lab Samp ID: J039-10G
Lab File ID: H6J18065
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18056

Date Collected: 10/04/23 12:10
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 19:11
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	23	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	25000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	580J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6500	500	100	250
Manganese	570	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	350000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW27102023	Date Analyzed:	10/24/23 20:03
Lab Samp ID:	J039-10T	Dilution Factor:	50
Lab File ID:	H6J18083	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18075	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	29J	50	6.2	12
Barium	120	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	25000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6700	5000	1000	2500
Manganese	590	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	350000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	24J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: FDUP03-102023
Lab Samp ID: J039-11G
Lab File ID: H6J18066
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18056

Date Collected: 10/04/23 12:15
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 19:14
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	23	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	25000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	610J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6700	500	100	250
Manganese	570	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	490J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP03-102023
Lab Samp ID: J039-11T
Lab File ID: H6J18084
Ext Btch ID: IMJ021W
Calib. Ref.: H6J18075

Date Analyzed: 10/24/23 20:06
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	360000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	FDUP03-102023	Date Analyzed:	10/24/23 19:14
Lab Samp ID:	J039-11G	Dilution Factor:	5
Lab File ID:	H6J18066	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	23	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	25000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	610J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6700	500	100	250
Manganese	570	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	490J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	350000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	FDUP03-102023	Date Analyzed:	10/24/23 20:06
Lab Samp ID:	J039-11T	Dilution Factor:	50
Lab File ID:	H6J18084	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18075	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	30J	50	6.2	12
Barium	130	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	25000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6900	5000	1000	2500
Manganese	600	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	360000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	25J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	MBLK1W	Date Analyzed:	10/24/23 18:18
Lab Samp ID:	IMJ021WB	Dilution Factor:	1
Lab File ID:	H6J18047	Matrix:	WATER
Ext Btch ID:	IMJ021W	% Moisture:	NA
Calib. Ref.:	H6J18045	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.40J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of eleven(11) water samples were received on 10/05/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Vanadium(0.38J <1/2 LOQ) and Zinc(5.6J <1/2 LOQ) were detected at trace level in IMJ022WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ022WL/IMJ022WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J039-07M/J039-07S - Percent recoveries for Sodium(218X) and Zinc were not within MS/MSD QC limits. Percent recovery for Silver was not within MSD QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ022WB	1	NA	10/24/2320:15	10/20/2309:42	H6J18087	H6J18085	IMJ022W	Method Blank
LCS1W	IMJ022WL	1	NA	10/24/2320:18	10/20/2309:42	H6J18088	H6J18085	IMJ022W	Lab Control Sample (LCS)
LCD1W	IMJ022WC	1	NA	10/24/2320:21	10/20/2309:42	H6J18089	H6J18085	IMJ022W	LCS Duplicate
TMW30102023	J039-01G	5	NA	10/24/2320:23	10/20/2309:42	H6J18090	H6J18085	IMJ022W	Diluted Sample
TMW58102023	J039-02G	5	NA	10/24/2320:26	10/20/2309:42	H6J18091	H6J18085	IMJ022W	Diluted Sample
TMW26102023	J039-03G	5	NA	10/24/2320:29	10/20/2309:42	H6J18092	H6J18085	IMJ022W	Diluted Sample
TMW50102023	J039-04G	5	NA	10/24/2320:32	10/20/2309:42	H6J18093	H6J18085	IMJ022W	Diluted Sample
SMW01102023	J039-05G	5	NA	10/24/2320:35	10/20/2309:42	H6J18094	H6J18085	IMJ022W	Diluted Sample
BGMW11102023	J039-06G	5	NA	10/24/2320:38	10/20/2309:42	H6J18095	H6J18085	IMJ022W	Diluted Sample
TMW63102023	J039-07A	5	NA	10/24/2320:47	10/20/2309:42	H6J18098	H6J18096	IMJ022W	Analytical Spike Sample
TMW63102023	J039-07G	5	NA	10/24/2320:50	10/20/2309:42	H6J18099	H6J18096	IMJ022W	Diluted Sample
TMW63102023	J039-07J	25	NA	10/24/2320:53	10/20/2309:42	H6J18100	H6J18096	IMJ022W	Diluted Sample
TMW63102023MS	J039-07M	5	NA	10/24/2320:56	10/20/2309:42	H6J18101	H6J18096	IMJ022W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	5	NA	10/24/2320:58	10/20/2309:42	H6J18102	H6J18096	IMJ022W	MS Duplicate (MSD)
QC04102023EB	J039-08	1	NA	10/24/2321:01	10/20/2309:42	H6J18103	H6J18096	IMJ022W	Field Sample
TMW04102023	J039-09G	5	NA	10/24/2321:04	10/20/2309:42	H6J18104	H6J18096	IMJ022W	Diluted Sample
TMW27102023	J039-10G	5	NA	10/24/2321:07	10/20/2309:42	H6J18105	H6J18096	IMJ022W	Diluted Sample
FDUP03-102023	J039-11G	5	NA	10/24/2321:10	10/20/2309:42	H6J18106	H6J18096	IMJ022W	Diluted Sample
TMW30102023	J039-01T	50	NA	10/24/2321:19	10/20/2309:42	H6J18109	H6J18107	IMJ022W	Diluted Sample
TMW58102023	J039-02T	50	NA	10/24/2321:22	10/20/2309:42	H6J18110	H6J18107	IMJ022W	Diluted Sample
TMW26102023	J039-03T	50	NA	10/24/2321:25	10/20/2309:42	H6J18111	H6J18107	IMJ022W	Diluted Sample
TMW50102023	J039-04T	50	NA	10/24/2321:28	10/20/2309:42	H6J18112	H6J18107	IMJ022W	Diluted Sample
SMW01102023	J039-05T	50	NA	10/24/2321:31	10/20/2309:42	H6J18113	H6J18107	IMJ022W	Diluted Sample
BGMW11102023	J039-06T	50	NA	10/24/2321:33	10/20/2309:42	H6J18114	H6J18107	IMJ022W	Diluted Sample
TMW04102023	J039-09T	50	NA	10/24/2321:57	10/20/2309:42	H6J18122	H6J18115	IMJ022W	Diluted Sample
TMW27102023	J039-10T	50	NA	10/24/2322:00	10/20/2309:42	H6J18123	H6J18115	IMJ022W	Diluted Sample
FDUP03-102023	J039-11T	50	NA	10/24/2322:03	10/20/2309:42	H6J18124	H6J18115	IMJ022W	Diluted Sample
TMW63102023	J039-07A	50	NA	10/25/2315:24	10/20/2309:42	H6J19019	H6J19017	IMJ022W	Analytical Spike Sample
TMW63102023	J039-07T	50	NA	10/25/2315:27	10/20/2309:42	H6J19020	H6J19017	IMJ022W	Diluted Sample
TMW63102023	J039-07J	250	NA	10/25/2315:30	10/20/2309:42	H6J19021	H6J19017	IMJ022W	Diluted Sample
TMW63102023MS	J039-07M	50	NA	10/25/2315:33	10/20/2309:42	H6J19022	H6J19017	IMJ022W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	50	NA	10/25/2315:36	10/20/2309:42	H6J19023	H6J19017	IMJ022W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW30102023
Lab Samp ID: J039-01G
Lab File ID: H6J18090
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18085

Date Collected: 10/04/23 08:10
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 20:23
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	9.3	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	58000	1000	250	500
Chromium	0.89J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.0J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	1.6J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	760J	1000	250	500
Selenium	7.9	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	15	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW30102023
Lab Samp ID: J039-01T
Lab File ID: H6J18109
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18107

Date Analyzed: 10/24/23 21:19
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	470000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23 08:10
Project : USACE WINGATE	Date Received: 10/05/23
SDG NO. : 23J039	Date Extracted: 10/20/23 09:42
Sample ID: TMW30102023	Date Analyzed: 10/24/23 20:23
Lab Samp ID: J039-01G	Dilution Factor: 5
Lab File ID: H6J18090	Matrix: WATER
Ext Btch ID: IMJ022W	% Moisture: NA
Calib. Ref.: H6J18085	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	9.3	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	58000	1000	250	500
Chromium	0.89J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.0J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	1.6J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	760J	1000	250	500
Selenium	7.9	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	460000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	15	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW30102023	Date Analyzed:	10/24/23 21:19
Lab Samp ID:	J039-01T	Dilution Factor:	50
Lab File ID:	H6J18109	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18107	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	60000	10000	2500	5000
Chromium	5.2J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	13000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	8.7J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	470000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	31J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW58102023
Lab Samp ID: J039-02G
Lab File ID: H6J18091
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18085

Date Collected: 10/04/23 08:30
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 20:26
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7700	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	930	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	790J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW58102023
Lab Samp ID: J039-02T
Lab File ID: H6J18110
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18107

Date Analyzed: 10/24/23 21:22
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	630000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23 08:30
Project : USACE WINGATE	Date Received: 10/05/23
SDG NO. : 23J039	Date Extracted: 10/20/23 09:42
Sample ID: TMW58102023	Date Analyzed: 10/24/23 20:26
Lab Samp ID: J039-02G	Dilution Factor: 5
Lab File ID: H6J18091	Matrix: WATER
Ext Btch ID: IMJ022W	% Moisture: NA
Calib. Ref.: H6J18085	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7700	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	930	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	790J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	620000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 08:30
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW58102023	Date Analyzed:	10/24/23 21:22
Lab Samp ID:	J039-02T	Dilution Factor:	50
Lab File ID:	H6J18110	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18107	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	6.6J	50	6.2	12
Barium	14J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7900J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1000J	5000	1000	2500
Manganese	19J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	630000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	24J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW26102023
Lab Samp ID: J039-03G
Lab File ID: H6J18092
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18085

Date Collected: 10/04/23 09:00
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 20:29
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	19000	1000	250	500
Chromium	0.54J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.1J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.9J	5.0	1.2	2.5
Potassium	290J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW26102023
Lab Samp ID: J039-03T
Lab File ID: H6J18111
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18107

Date Analyzed: 10/24/23 21:25
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	910000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:00
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW26102023	Date Analyzed:	10/24/23 20:29
Lab Samp ID:	J039-03G	Dilution Factor:	5
Lab File ID:	H6J18092	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	19000	1000	250	500
Chromium	0.54J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.1J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.9J	5.0	1.2	2.5
Potassium	290J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	880000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:00
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW26102023	Date Analyzed:	10/24/23 21:25
Lab Samp ID:	J039-03T	Dilution Factor:	50
Lab File ID:	H6J18111	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18107	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	6.7J	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	19000	10000	2500	5000
Chromium	7.5J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8000	5000	1000	2500
Manganese	130	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	910000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	25J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW50102023
Lab Samp ID: J039-04G
Lab File ID: H6J18093
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18085

Date Collected: 10/04/23 09:15
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 20:32
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.1J	5.0	0.62	1.2
Barium	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	5200	1000	250	500
Chromium	0.94J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	580	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	26	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW50102023
Lab Samp ID: J039-04T
Lab File ID: H6J18112
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18107

Date Analyzed: 10/24/23 21:28
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	530000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW50102023	Date Analyzed:	10/24/23 20:32
Lab Samp ID:	J039-04G	Dilution Factor:	5
Lab File ID:	H6J18093	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.1J	5.0	0.62	1.2
Barium	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	5200	1000	250	500
Chromium	0.94J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	580	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	530000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	26	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 09:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW50102023	Date Analyzed:	10/24/23 21:28
Lab Samp ID:	J039-04T	Dilution Factor:	50
Lab File ID:	H6J18112	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18107	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	6.9J	50	6.2	12
Barium	14J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	5400J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	530000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	44J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: SMW01102023
Lab Samp ID: J039-05G
Lab File ID: H6J18094
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18085

Date Collected: 10/04/23 10:40
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 20:35
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.9J	5.0	0.62	1.2
Barium	30	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	18000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6400	500	100	250
Manganese	43	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: SMW01102023
Lab Samp ID: J039-05T
Lab File ID: H6J18113
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18107

Date Analyzed: 10/24/23 21:31
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 10:40
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	SMW01102023	Date Analyzed:	10/24/23 20:35
Lab Samp ID:	J039-05G	Dilution Factor:	5
Lab File ID:	H6J18094	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.9J	5.0	0.62	1.2
Barium	30	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	18000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6400	500	100	250
Manganese	43	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23 10:40
Project : USACE WINGATE	Date Received: 10/05/23
SDG NO. : 23J039	Date Extracted: 10/20/23 09:42
Sample ID: SMW01102023	Date Analyzed: 10/24/23 21:31
Lab Samp ID: J039-05T	Dilution Factor: 50
Lab File ID: H6J18113	Matrix: WATER
Ext Btch ID: IMJ022W	% Moisture: NA
Calib. Ref.: H6J18107	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	7.2J	50	6.2	12
Barium	28J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	18000	10000	2500	5000
Chromium	8.5J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6600	5000	1000	2500
Manganese	42J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	26J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: BGMW11102023
Lab Samp ID: J039-06G
Lab File ID: H6J18095
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18085

Date Collected: 10/04/23 11:40
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 20:38
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.96J	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	79000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.1J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	34000	500	100	250
Manganese	200	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW11102023
Lab Samp ID: J039-06T
Lab File ID: H6J18114
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18107

Date Analyzed: 10/24/23 21:33
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/04/23 11:40
Project : USACE WINGATE	Date Received: 10/05/23
SDG NO. : 23J039	Date Extracted: 10/20/23 09:42
Sample ID: BGMW11102023	Date Analyzed: 10/24/23 20:38
Lab Samp ID: J039-06G	Dilution Factor: 5
Lab File ID: H6J18095	Matrix: WATER
Ext Btch ID: IMJ022W	% Moisture: NA
Calib. Ref.: H6J18085	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.96J	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	79000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.1J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	34000	500	100	250
Manganese	200	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : JChun	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 11:40
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	BGMW11102023	Date Analyzed:	10/24/23 21:33
Lab Samp ID:	J039-06T	Dilution Factor:	50
Lab File ID:	H6J18114	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18107	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	78000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	35000	5000	1000	2500
Manganese	210	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	21J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW63102023
Lab Samp ID: J039-07G
Lab File ID: H6J18099
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18096

Date Collected: 10/04/23 13:30
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 20:50
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	9300	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1000	500	100	250
Manganese	24	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	800J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW63102023
Lab Samp ID: J039-07T
Lab File ID: H6J19020
Ext Btch ID: IMJ022W
Calib. Ref.: H6J19017

Date Analyzed: 10/25/23 15:27
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	650000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW63102023	Date Analyzed:	10/24/23 20:50
Lab Samp ID:	J039-07G	Dilution Factor:	5
Lab File ID:	H6J18099	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	9300	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1000	500	100	250
Manganese	24	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	800J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	680000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 13:30
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW63102023	Date Analyzed:	10/25/23 15:27
Lab Samp ID:	J039-07T	Dilution Factor:	50
Lab File ID:	H6J19020	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J19017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	9000J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1200J	5000	1000	2500
Manganese	17J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	650000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:00
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	QC04102023EB	Date Analyzed:	10/24/23 21:01
Lab Samp ID:	J039-08	Dilution Factor:	1
Lab File ID:	H6J18103	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	0.16J	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	0.20J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	1.6J	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	110J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.53J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: TMW04102023
Lab Samp ID: J039-09G
Lab File ID: H6J18104
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18096

Date Collected: 10/04/23 14:10
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 21:04
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	5.0	0.62	1.2
Barium	7.8	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	3.0J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5800	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	76	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	19	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW04102023
Lab Samp ID: J039-09T
Lab File ID: H6J18122
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18115

Date Analyzed: 10/24/23 21:57
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	900000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW04102023	Date Analyzed:	10/24/23 21:04
Lab Samp ID:	J039-09G	Dilution Factor:	5
Lab File ID:	H6J18104	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	5.0	0.62	1.2
Barium	7.8	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	3.0J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5800	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	76	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	860000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	19	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 14:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW04102023	Date Analyzed:	10/24/23 21:57
Lab Samp ID:	J039-09T	Dilution Factor:	50
Lab File ID:	H6J18122	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	29000	10000	2500	5000
Chromium	5.5J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5900	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	78	50	7.5	15
Silver	ND	50	5.0	10
Sodium	900000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	36J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.		Date Collected:	10/04/23 12:10
Project : USACE WINGATE		Date Received:	10/05/23
SDG NO. : 23J039		Date Extracted:	10/20/23 09:42
Sample ID: TMW27102023		Date Analyzed:	10/24/23 21:07
Lab Samp ID: J039-10G		Dilution Factor:	5
Lab File ID: H6J18105		Matrix:	WATER
Ext Btch ID: IMJ022W		% Moisture:	NA
Calib. Ref.: H6J18096		Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	23	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	25000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	560J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6600	500	100	250
Manganese	580	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW27102023		Date Analyzed:	10/24/23 22:00
Lab Samp ID: J039-10T		Dilution Factor:	50
Lab File ID: H6J18123		Matrix:	WATER
Ext Btch ID: IMJ022W		% Moisture:	NA
Calib. Ref.: H6J18115		Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	360000	10000	2500	5000

Sample Amount : 50ml		Final Volume:	50ml
Prepared by : JChun		Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW27102023	Date Analyzed:	10/24/23 21:07
Lab Samp ID:	J039-10G	Dilution Factor:	5
Lab File ID:	H6J18105	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	23	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	25000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	560J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6600	500	100	250
Manganese	580	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	350000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:10
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	TMW27102023	Date Analyzed:	10/24/23 22:00
Lab Samp ID:	J039-10T	Dilution Factor:	50
Lab File ID:	H6J18123	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	29J	50	6.2	12
Barium	130	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	24000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6800	5000	1000	2500
Manganese	590	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	360000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	19J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J039
Sample ID: FDUP03-102023
Lab Samp ID: J039-11G
Lab File ID: H6J18106
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18096

Date Collected: 10/04/23 12:15
Date Received: 10/05/23
Date Extracted: 10/20/23 09:42
Date Analyzed: 10/24/23 21:10
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	22	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	560J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6500	500	100	250
Manganese	550	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP03-102023
Lab Samp ID: J039-11T
Lab File ID: H6J18124
Ext Btch ID: IMJ022W
Calib. Ref.: H6J18115

Date Analyzed: 10/24/23 22:03
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	340000	10000	2500	5000

Sample Amount : 50ml
Prepared by : JChun

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	FDUP03-102023	Date Analyzed:	10/24/23 21:10
Lab Samp ID:	J039-11G	Dilution Factor:	5
Lab File ID:	H6J18106	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	22	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	560J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6500	500	100	250
Manganese	550	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	340000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/04/23 12:15
Project	: USACE WINGATE	Date Received:	10/05/23
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	FDUP03-102023	Date Analyzed:	10/24/23 22:03
Lab Samp ID:	J039-11T	Dilution Factor:	50
Lab File ID:	H6J18124	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	26J	50	6.2	12
Barium	120	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	23000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6600	5000	1000	2500
Manganese	580	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	340000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	21J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J039	Date Extracted:	10/20/23 09:42
Sample ID:	MBLK1W	Date Analyzed:	10/24/23 20:15
Lab Samp ID:	IMJ022WB	Dilution Factor:	1
Lab File ID:	H6J18087	Matrix:	WATER
Ext Btch ID:	IMJ022W	% Moisture:	NA
Calib. Ref.:	H6J18085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.38J	1.0	0.25	0.50
Zinc	5.6J	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: JChun	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 10/05/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ023WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ023WL/HGJ023WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J039-07M/J039-07S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ023WB	1	NA	10/26/2314:28	10/26/2310:31	M47J012012	M47J012	23HGJ023W	Method Blank
LCS1W	HGJ023WL	1	NA	10/26/2314:30	10/26/2310:31	M47J012013	M47J012	23HGJ023W	Lab Control Sample (LCS)
LCD1W	HGJ023WC	1	NA	10/26/2314:32	10/26/2310:31	M47J012014	M47J012	23HGJ023W	LCS Duplicate
TMW30102023	J039-01	1	NA	10/26/2314:36	10/26/2310:31	M47J012016	M47J012	23HGJ023W	Field Sample
TMW58102023	J039-02	1	NA	10/26/2314:37	10/26/2310:31	M47J012017	M47J012	23HGJ023W	Field Sample
TMW26102023	J039-03	1	NA	10/26/2314:39	10/26/2310:31	M47J012018	M47J012	23HGJ023W	Field Sample
TMW50102023	J039-04	1	NA	10/26/2314:41	10/26/2310:31	M47J012019	M47J012	23HGJ023W	Field Sample
SMW01102023	J039-05	1	NA	10/26/2314:43	10/26/2310:31	M47J012020	M47J012	23HGJ023W	Field Sample
BGMW11102023	J039-06	1	NA	10/26/2314:45	10/26/2310:31	M47J012021	M47J012	23HGJ023W	Field Sample
TMW63102023MS	J039-07M	1	NA	10/26/2314:50	10/26/2310:31	M47J012024	M47J012	23HGJ023W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/26/2314:52	10/26/2310:31	M47J012025	M47J012	23HGJ023W	MS Duplicate (MSD)
TMW63102023	J039-07	1	NA	10/26/2314:56	10/26/2310:31	M47J012027	M47J012	23HGJ023W	Field Sample
QC04102023EB	J039-08	1	NA	10/26/2315:00	10/26/2310:31	M47J012029	M47J012	23HGJ023W	Field Sample
TMW04102023	J039-09	1	NA	10/26/2315:01	10/26/2310:31	M47J012030	M47J012	23HGJ023W	Field Sample
TMW27102023	J039-10	1	NA	10/26/2315:03	10/26/2310:31	M47J012031	M47J012	23HGJ023W	Field Sample
FDUP03-102023	J039-11	1	NA	10/26/2315:05	10/26/2310:31	M47J012032	M47J012	23HGJ023W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ023WB	ND	1	NA	0.50	0.10	0.20	10/26/2314:28	10/26/2310:31	M47J012012	M47J012	23HGJ023W	NA	NA
LCS1W	HGJ023WL	2.5	1	NA	0.50	0.10	0.20	10/26/2314:30	10/26/2310:31	M47J012013	M47J012	23HGJ023W	NA	NA
LCD1W	HGJ023WC	2.3	1	NA	0.50	0.10	0.20	10/26/2314:32	10/26/2310:31	M47J012014	M47J012	23HGJ023W	NA	NA
TMW30102023	J039-01	ND	1	NA	0.50	0.10	0.20	10/26/2314:36	10/26/2310:31	M47J012016	M47J012	23HGJ023W	10/04/2308:10	10/05/23
TMW58102023	J039-02	ND	1	NA	0.50	0.10	0.20	10/26/2314:37	10/26/2310:31	M47J012017	M47J012	23HGJ023W	10/04/2308:30	10/05/23
TMW26102023	J039-03	ND	1	NA	0.50	0.10	0.20	10/26/2314:39	10/26/2310:31	M47J012018	M47J012	23HGJ023W	10/04/2309:00	10/05/23
TMW50102023	J039-04	ND	1	NA	0.50	0.10	0.20	10/26/2314:41	10/26/2310:31	M47J012019	M47J012	23HGJ023W	10/04/2309:15	10/05/23
SMW01102023	J039-05	ND	1	NA	0.50	0.10	0.20	10/26/2314:43	10/26/2310:31	M47J012020	M47J012	23HGJ023W	10/04/2310:40	10/05/23
BGMW11102023	J039-06	ND	1	NA	0.50	0.10	0.20	10/26/2314:45	10/26/2310:31	M47J012021	M47J012	23HGJ023W	10/04/2311:40	10/05/23
TMW63102023MS	J039-07M	2.7	1	NA	0.50	0.10	0.20	10/26/2314:50	10/26/2310:31	M47J012024	M47J012	23HGJ023W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07S	2.6	1	NA	0.50	0.10	0.20	10/26/2314:52	10/26/2310:31	M47J012025	M47J012	23HGJ023W	10/04/2313:30	10/05/23
TMW63102023	J039-07	ND	1	NA	0.50	0.10	0.20	10/26/2314:56	10/26/2310:31	M47J012027	M47J012	23HGJ023W	10/04/2313:30	10/05/23
QC04102023EB	J039-08	ND	1	NA	0.50	0.10	0.20	10/26/2315:00	10/26/2310:31	M47J012029	M47J012	23HGJ023W	10/04/2314:00	10/05/23
TMW04102023	J039-09	ND	1	NA	0.50	0.10	0.20	10/26/2315:01	10/26/2310:31	M47J012030	M47J012	23HGJ023W	10/04/2314:10	10/05/23
TMW27102023	J039-10	ND	1	NA	0.50	0.10	0.20	10/26/2315:03	10/26/2310:31	M47J012031	M47J012	23HGJ023W	10/04/2312:10	10/05/23
FDUP03-102023	J039-11	ND	1	NA	0.50	0.10	0.20	10/26/2315:05	10/26/2310:31	M47J012032	M47J012	23HGJ023W	10/04/2312:15	10/05/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 10/05/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ024WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ024WL/HGJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J039-07M/J039-07S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J039
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ024WB	1	NA	10/26/2315:28	10/26/2311:25	M47J012044	M47J012	23HGJ024W	Method Blank
LCS1W	HGJ024WL	1	NA	10/26/2315:29	10/26/2311:25	M47J012045	M47J012	23HGJ024W	Lab Control Sample (LCS)
LCD1W	HGJ024WC	1	NA	10/26/2315:35	10/26/2311:25	M47J012048	M47J012	23HGJ024W	LCS Duplicate
TMW30102023	J039-01	1	NA	10/26/2315:36	10/26/2311:25	M47J012049	M47J012	23HGJ024W	Field Sample
TMW58102023	J039-02	1	NA	10/26/2315:39	10/26/2311:25	M47J012050	M47J012	23HGJ024W	Field Sample
TMW26102023	J039-03	1	NA	10/26/2315:40	10/26/2311:25	M47J012051	M47J012	23HGJ024W	Field Sample
TMW50102023	J039-04	1	NA	10/26/2315:42	10/26/2311:25	M47J012052	M47J012	23HGJ024W	Field Sample
SMW01102023	J039-05	1	NA	10/26/2315:44	10/26/2311:25	M47J012053	M47J012	23HGJ024W	Field Sample
BGMW11102023	J039-06	1	NA	10/26/2315:45	10/26/2311:25	M47J012054	M47J012	23HGJ024W	Field Sample
TMW63102023MS	J039-07M	1	NA	10/26/2315:47	10/26/2311:25	M47J012055	M47J012	23HGJ024W	Matrix Spike Sample (MS)
TMW63102023MSD	J039-07S	1	NA	10/26/2315:49	10/26/2311:25	M47J012056	M47J012	23HGJ024W	MS Duplicate (MSD)
TMW63102023	J039-07	1	NA	10/26/2315:56	10/26/2311:25	M47J012060	M47J012	23HGJ024W	Field Sample
QC04102023EB	J039-08	1	NA	10/26/2316:00	10/26/2311:25	M47J012062	M47J012	23HGJ024W	Field Sample
TMW04102023	J039-09	1	NA	10/26/2316:02	10/26/2311:25	M47J012063	M47J012	23HGJ024W	Field Sample
TMW27102023	J039-10	1	NA	10/26/2316:04	10/26/2311:25	M47J012064	M47J012	23HGJ024W	Field Sample
FDUP03-102023	J039-11	1	NA	10/26/2316:06	10/26/2311:25	M47J012065	M47J012	23HGJ024W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ024WB	ND	1	NA	0.50	0.10	0.20	10/26/2315:28	10/26/2311:25	M47J012044	M47J012	23HGJ024W	NA	NA
LCS1W	HGJ024WL	2.6	1	NA	0.50	0.10	0.20	10/26/2315:29	10/26/2311:25	M47J012045	M47J012	23HGJ024W	NA	NA
LCD1W	HGJ024WC	2.6	1	NA	0.50	0.10	0.20	10/26/2315:35	10/26/2311:25	M47J012048	M47J012	23HGJ024W	NA	NA
TMW30102023	J039-01	ND	1	NA	0.50	0.10	0.20	10/26/2315:36	10/26/2311:25	M47J012049	M47J012	23HGJ024W	10/04/2308:10	10/05/23
TMW58102023	J039-02	ND	1	NA	0.50	0.10	0.20	10/26/2315:39	10/26/2311:25	M47J012050	M47J012	23HGJ024W	10/04/2308:30	10/05/23
TMW26102023	J039-03	ND	1	NA	0.50	0.10	0.20	10/26/2315:40	10/26/2311:25	M47J012051	M47J012	23HGJ024W	10/04/2309:00	10/05/23
TMW50102023	J039-04	ND	1	NA	0.50	0.10	0.20	10/26/2315:42	10/26/2311:25	M47J012052	M47J012	23HGJ024W	10/04/2309:15	10/05/23
SMW01102023	J039-05	ND	1	NA	0.50	0.10	0.20	10/26/2315:44	10/26/2311:25	M47J012053	M47J012	23HGJ024W	10/04/2310:40	10/05/23
BGMW11102023	J039-06	ND	1	NA	0.50	0.10	0.20	10/26/2315:45	10/26/2311:25	M47J012054	M47J012	23HGJ024W	10/04/2311:40	10/05/23
TMW63102023MS	J039-07M	2.6	1	NA	0.50	0.10	0.20	10/26/2315:47	10/26/2311:25	M47J012055	M47J012	23HGJ024W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07S	2.7	1	NA	0.50	0.10	0.20	10/26/2315:49	10/26/2311:25	M47J012056	M47J012	23HGJ024W	10/04/2313:30	10/05/23
TMW63102023	J039-07	ND	1	NA	0.50	0.10	0.20	10/26/2315:56	10/26/2311:25	M47J012060	M47J012	23HGJ024W	10/04/2313:30	10/05/23
QC04102023EB	J039-08	ND	1	NA	0.50	0.10	0.20	10/26/2316:00	10/26/2311:25	M47J012062	M47J012	23HGJ024W	10/04/2314:00	10/05/23
TMW04102023	J039-09	ND	1	NA	0.50	0.10	0.20	10/26/2316:02	10/26/2311:25	M47J012063	M47J012	23HGJ024W	10/04/2314:10	10/05/23
TMW27102023	J039-10	ND	1	NA	0.50	0.10	0.20	10/26/2316:04	10/26/2311:25	M47J012064	M47J012	23HGJ024W	10/04/2312:10	10/05/23
FDUP03-102023	J039-11	ND	1	NA	0.50	0.10	0.20	10/26/2316:06	10/26/2311:25	M47J012065	M47J012	23HGJ024W	10/04/2312:15	10/05/23

Note: Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23J039

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of eleven(11) water samples were received on 10/05/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. PLJ008WB and PLJ009WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- PLJ008WL/PLJ008WC were within LCS limits.
- PLJ009WL/PLJ009WC were within LCS limits.
Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Perchlorate was within MS QC limits in J039-07M/J039-07S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J039-03I, -05I, -06I, -10I, and -11I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039
Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ008WB	ND	1	NA	0.20	0.050	0.10	10/12/2310:49	NA	23MJ12007	MJ12004	PLJ008W	NA	NA
LCS1W	PLJ008WL	0.22	1	NA	0.20	0.050	0.10	10/12/2311:04	NA	23MJ12008	MJ12004	PLJ008W	NA	NA
LCD1W	PLJ008WC	0.22	1	NA	0.20	0.050	0.10	10/12/2311:38	NA	23MJ12009	MJ12004	PLJ008W	NA	NA
TMW58102023	J039-02	0.081J	1	NA	0.20	0.050	0.10	10/12/2315:39	NA	23MJ12021	MJ12017	PLJ008W	10/04/2308:30	10/05/23
TMW50102023	J039-04	1.4	1	NA	0.20	0.050	0.10	10/12/2316:08	NA	23MJ12023	MJ12017	PLJ008W	10/04/2309:15	10/05/23
TMW63102023	J039-07	ND	1	NA	0.20	0.050	0.10	10/12/2316:52	NA	23MJ12026	MJ12017	PLJ008W	10/04/2313:30	10/05/23
TMW63102023MS	J039-07M	0.23	1	NA	0.20	0.050	0.10	10/12/2317:07	NA	23MJ12027	MJ12017	PLJ008W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07S	0.23	1	NA	0.20	0.050	0.10	10/12/2317:36	NA	23MJ12029	MJ12028	PLJ008W	10/04/2313:30	10/05/23
QC04102023EB	J039-08	ND	1	NA	0.20	0.050	0.10	10/12/2317:51	NA	23MJ12030	MJ12028	PLJ008W	10/04/2314:00	10/05/23
MBLK2W	PLJ009WB	ND	1	NA	0.20	0.050	0.10	10/13/2310:48	NA	23MJ13007	MJ13004	PLJ009W	NA	NA
LCS2W	PLJ009WL	0.22	1	NA	0.20	0.050	0.10	10/13/2311:03	NA	23MJ13008	MJ13004	PLJ009W	NA	NA
LCD2W	PLJ009WC	0.22	1	NA	0.20	0.050	0.10	10/13/2311:18	NA	23MJ13009	MJ13004	PLJ009W	NA	NA
TMW30102023	J039-01I	490	100	NA	20	5.0	10	10/13/2313:40	NA	23MJ13018	MJ13017	PLJ009W	10/04/2308:10	10/05/23
TMW26102023	J039-03I	ND	5	NA	1.0	0.25	0.50	10/13/2313:54	NA	23MJ13019	MJ13017	PLJ009W	10/04/2309:00	10/05/23
SMW01102023	J039-05I	ND	5	NA	1.0	0.25	0.50	10/13/2314:09	NA	23MJ13020	MJ13017	PLJ009W	10/04/2310:40	10/05/23
BGMW11102023	J039-06I	ND	5	NA	1.0	0.25	0.50	10/13/2315:01	NA	23MJ13021	MJ13017	PLJ009W	10/04/2311:40	10/05/23
TMW04102023	J039-09I	0.46	2	NA	0.40	0.10	0.20	10/13/2315:17	NA	23MJ13022	MJ13017	PLJ009W	10/04/2314:10	10/05/23
TMW27102023	J039-10I	ND	5	NA	1.0	0.25	0.50	10/13/2315:32	NA	23MJ13023	MJ13017	PLJ009W	10/04/2312:10	10/05/23
FDUP03-102023	J039-11I	ND	5	NA	1.0	0.25	0.50	10/13/2315:47	NA	23MJ13024	MJ13017	PLJ009W	10/04/2312:15	10/05/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD 9056A
BROMIDE

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ008WL/ICJ008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J039-07M/J039-07S - Percent recovery for Bromide was not within MS/MSD QC limits. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples J039-03I and -09I were reported at 5X dilution factor due to yellow color. Sample J039-05I was reported at a 10X dilution factor due to brown color. Sample J039-06I was reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD 9056A
CHLORIDE-CL

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Chloride-Cl in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ008WB and ICJ020WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ008WL/ICJ008WC and ICJ020WL/ICJ020WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Chloride-Cl was within MS QC limits in J039-07TM/J039-07TS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD 9056A
FLUORIDE

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Fluoride-F was not detected in ICJ008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ008WL/ICJ008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Fluoride-F was within MS QC limits in J039-07M/J039-07S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J039-03I and -09I were reported at 5X dilution factor due to yellow color. Sample J039-05I was reported at a 10X dilution factor due to brown color. Sample J039-06I was reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW9056A
NITRATE-N

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrate was not detected in ICJ008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ008WL/ICJ008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Nitrate was within MS QC limits in J039-07M/J039-07S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J039-03I was reported at 5X dilution factor due to yellow color. Sample J039-05I was reported at a 10X dilution factor due to brown color. Sample J039-06I was reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD SW9056A
NITRITE-N

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrite was not detected in ICJ008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ008WL/ICJ008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Nitrite was within MS QC limits in J039-07M/J039-07S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J039-03I and -09I were reported at 5X dilution factor due to yellow color. Sample J039-05I was reported at a 10X dilution factor due to brown color. Sample J039-06I was reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD 9056A
ORTHOPHOSPHATE-P

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ008WL/ICJ008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Orthophosphate-P was within MS QC limits in J039-07M/J039-07S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J039-03I and -09I were reported at 5X dilution factor due to yellow color. Sample J039-05I was reported at a 10X dilution factor due to brown color. Sample J039-06I was reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J039

METHOD 9056A
SULFATE

A total of nine(9) water samples were received on 10/05/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Sulfate was not detected in ICJ008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ008WL/ICJ008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Sulfate was within MS QC limits in J039-07JM/J039-07JS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039
Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ008WB	ND	1	NA	0.5	0.13	0.25	10/05/2313:27	NA	AJ06-03	AJ06-01	ICJ008W	NA	NA
LCS1W	ICJ008WL	0.99	1	NA	0.5	0.13	0.25	10/05/2313:47	NA	AJ06-04	AJ06-01	ICJ008W	NA	NA
LCD1W	ICJ008WC	0.99	1	NA	0.5	0.13	0.25	10/05/2314:27	NA	AJ06-05	AJ06-01	ICJ008W	NA	NA
TMW63102023	J039-07	0.43J	1	NA	0.5	0.13	0.25	10/05/2314:47	NA	AJ06-06	AJ06-01	ICJ008W	10/04/2313:30	10/05/23
TMW30102023	J039-01	0.85	1	NA	0.5	0.13	0.25	10/05/2315:08	NA	AJ06-07	AJ06-01	ICJ008W	10/04/2308:10	10/05/23
TMW58102023	J039-02	0.43J	1	NA	0.5	0.13	0.25	10/05/2315:28	NA	AJ06-08	AJ06-01	ICJ008W	10/04/2308:30	10/05/23
TMW26102023	J039-03I	2.0J	5	NA	2.5	0.65	1.2	10/05/2315:48	NA	AJ06-09	AJ06-01	ICJ008W	10/04/2309:00	10/05/23
TMW50102023	J039-04	1.1	1	NA	0.5	0.13	0.25	10/05/2316:09	NA	AJ06-10	AJ06-01	ICJ008W	10/04/2309:15	10/05/23
SMW01102023	J039-05I	ND	10	NA	5	1.3	2.5	10/05/2316:29	NA	AJ06-11	AJ06-01	ICJ008W	10/04/2310:40	10/05/23
BGMW11102023	J039-06I	1.9	2	NA	1	0.26	0.5	10/05/2316:49	NA	AJ06-12	AJ06-01	ICJ008W	10/04/2311:40	10/05/23
QC04102023EB	J039-08	ND	1	NA	0.5	0.13	0.25	10/05/2317:50	NA	AJ06-15	AJ06-13	ICJ008W	10/04/2314:00	10/05/23
TMW04102023	J039-09I	1.9J	5	NA	2.5	0.65	1.2	10/05/2318:10	NA	AJ06-16	AJ06-13	ICJ008W	10/04/2314:10	10/05/23
TMW63102023DUP	J039-07D	0.43J	1	NA	0.5	0.13	0.25	10/05/2320:12	NA	AJ06-22	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MS	J039-07M	1.2	1	NA	0.5	0.13	0.25	10/05/2320:33	NA	AJ06-23	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07S	1.2	1	NA	0.5	0.13	0.25	10/05/2320:53	NA	AJ06-24	AJ06-13	ICJ008W	10/04/2313:30	10/05/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ008WB	ND	1	NA	0.1	0.025	0.05	10/05/2313:27	NA	AJ06-03	AJ06-01	ICJ008W	NA	NA
LCS1W	ICJ008WL	0.93	1	NA	0.1	0.025	0.05	10/05/2313:47	NA	AJ06-04	AJ06-01	ICJ008W	NA	NA
LCD1W	ICJ008WC	0.93	1	NA	0.1	0.025	0.05	10/05/2314:27	NA	AJ06-05	AJ06-01	ICJ008W	NA	NA
TMW63102023	J039-07	0.57	1	NA	0.1	0.025	0.05	10/05/2314:47	NA	AJ06-06	AJ06-01	ICJ008W	10/04/2313:30	10/05/23
TMW30102023	J039-01	0.42	1	NA	0.1	0.025	0.05	10/05/2315:08	NA	AJ06-07	AJ06-01	ICJ008W	10/04/2308:10	10/05/23
TMW58102023	J039-02	1.3	1	NA	0.1	0.025	0.05	10/05/2315:28	NA	AJ06-08	AJ06-01	ICJ008W	10/04/2308:30	10/05/23
TMW26102023	J039-03I	1.9	5	NA	0.5	0.12	0.25	10/05/2315:48	NA	AJ06-09	AJ06-01	ICJ008W	10/04/2309:00	10/05/23
TMW50102023	J039-04	0.43	1	NA	0.1	0.025	0.05	10/05/2316:09	NA	AJ06-10	AJ06-01	ICJ008W	10/04/2309:15	10/05/23
SMW01102023	J039-05I	1.7	10	NA	1	0.25	0.5	10/05/2316:29	NA	AJ06-11	AJ06-01	ICJ008W	10/04/2310:40	10/05/23
BGMW11102023	J039-06I	1.6	2	NA	0.2	0.05	0.1	10/05/2316:49	NA	AJ06-12	AJ06-01	ICJ008W	10/04/2311:40	10/05/23
QC04102023EB	J039-08	0.047J	1	NA	0.1	0.025	0.05	10/05/2317:50	NA	AJ06-15	AJ06-13	ICJ008W	10/04/2314:00	10/05/23
TMW04102023	J039-09I	1.3	5	NA	0.5	0.12	0.25	10/05/2318:10	NA	AJ06-16	AJ06-13	ICJ008W	10/04/2314:10	10/05/23
TMW63102023DUP	J039-07D	0.58	1	NA	0.1	0.025	0.05	10/05/2320:12	NA	AJ06-22	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MS	J039-07M	1.6	1	NA	0.1	0.025	0.05	10/05/2320:33	NA	AJ06-23	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07S	1.6	1	NA	0.1	0.025	0.05	10/05/2320:53	NA	AJ06-24	AJ06-13	ICJ008W	10/04/2313:30	10/05/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ008WB	ND	1	NA	0.2	0.05	0.1	10/05/2313:27	NA	AJ06-03	AJ06-01	ICJ008W	NA	NA
LCS1W	ICJ008WL	1.9	1	NA	0.2	0.05	0.1	10/05/2313:47	NA	AJ06-04	AJ06-01	ICJ008W	NA	NA
LCD1W	ICJ008WC	1.9	1	NA	0.2	0.05	0.1	10/05/2314:27	NA	AJ06-05	AJ06-01	ICJ008W	NA	NA
QC04102023EB	J039-08	0.14J	1	NA	0.2	0.05	0.1	10/05/2317:50	NA	AJ06-15	AJ06-13	ICJ008W	10/04/2314:00	10/05/23
TMW30102023	J039-01K	74	40	NA	8	2	4	10/05/2322:55	NA	AJ06-30	AJ06-25	ICJ008W	10/04/2308:10	10/05/23
TMW58102023	J039-02I	110	40	NA	8	2	4	10/05/2323:35	NA	AJ06-32	AJ06-25	ICJ008W	10/04/2308:30	10/05/23
TMW26102023	J039-03J	250	100	NA	20	5	10	10/06/2300:16	NA	AJ06-34	AJ06-25	ICJ008W	10/04/2309:00	10/05/23
TMW50102023	J039-04I	180	50	NA	10	2.5	5	10/06/2300:36	NA	AJ06-35	AJ06-25	ICJ008W	10/04/2309:15	10/05/23
SMW01102023	J039-05K	650	200	NA	40	10	20	10/06/2301:57	NA	AJ06-39	AJ06-37	ICJ008W	10/04/2310:40	10/05/23
BGMW11102023	J039-06J	420	100	NA	20	5	10	10/06/2302:18	NA	AJ06-40	AJ06-37	ICJ008W	10/04/2311:40	10/05/23
TMW04102023	J039-09K	160	100	NA	20	5	10	10/06/2306:01	NA	AJ06-51	AJ06-49	ICJ008W	10/04/2314:10	10/05/23
MBLK2W	ICJ020WB	ND	1	NA	0.2	0.05	0.1	10/10/2313:39	NA	AJ12-03	AJ12-01	ICJ020W	NA	NA
LCS2W	ICJ020WL	2.0	1	NA	0.2	0.05	0.1	10/10/2313:59	NA	AJ12-04	AJ12-01	ICJ020W	NA	NA
LCD2W	ICJ020WC	2.0	1	NA	0.2	0.05	0.1	10/10/2314:19	NA	AJ12-05	AJ12-01	ICJ020W	NA	NA
TMW63102023	J039-07T	120	100	NA	20	5	10	10/11/2301:56	NA	AJ12-39	AJ12-37	ICJ020W	10/04/2313:30	10/05/23
TMW63102023DUP	J039-07TD	130	100	NA	20	5	10	10/11/2302:17	NA	AJ12-40	AJ12-37	ICJ020W	10/04/2313:30	10/05/23
TMW63102023MS	J039-07TM	330	100	NA	20	5	10	10/11/2302:37	NA	AJ12-41	AJ12-37	ICJ020W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07TS	330	100	NA	20	5	10	10/11/2302:57	NA	AJ12-42	AJ12-37	ICJ020W	10/04/2313:30	10/05/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ008WB	ND	1	NA	0.1	0.03	0.06	10/05/2313:27	NA	AJ06-03	AJ06-01	ICJ008W	NA	NA
LCS1W	ICJ008WL	0.98	1	NA	0.1	0.03	0.06	10/05/2313:47	NA	AJ06-04	AJ06-01	ICJ008W	NA	NA
LCD1W	ICJ008WC	0.98	1	NA	0.1	0.03	0.06	10/05/2314:27	NA	AJ06-05	AJ06-01	ICJ008W	NA	NA
TMW63102023	J039-07	ND	1	NA	0.1	0.03	0.06	10/05/2314:47	NA	AJ06-06	AJ06-01	ICJ008W	10/04/2313:30	10/05/23
TMW58102023	J039-02	0.11	1	NA	0.1	0.03	0.06	10/05/2315:28	NA	AJ06-08	AJ06-01	ICJ008W	10/04/2308:30	10/05/23
TMW26102023	J039-03I	ND	5	NA	0.5	0.15	0.3	10/05/2315:48	NA	AJ06-09	AJ06-01	ICJ008W	10/04/2309:00	10/05/23
TMW50102023	J039-04	0.077J	1	NA	0.1	0.03	0.06	10/05/2316:09	NA	AJ06-10	AJ06-01	ICJ008W	10/04/2309:15	10/05/23
SMW01102023	J039-05I	ND	10	NA	1	0.3	0.6	10/05/2316:29	NA	AJ06-11	AJ06-01	ICJ008W	10/04/2310:40	10/05/23
BGMW11102023	J039-06I	ND	2	NA	0.2	0.06	0.12	10/05/2316:49	NA	AJ06-12	AJ06-01	ICJ008W	10/04/2311:40	10/05/23
QC04102023EB	J039-08	0.069J	1	NA	0.1	0.03	0.06	10/05/2317:50	NA	AJ06-15	AJ06-13	ICJ008W	10/04/2314:00	10/05/23
TMW63102023DUP	J039-07D	0.065J	1	NA	0.1	0.03	0.06	10/05/2320:12	NA	AJ06-22	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MS	J039-07M	1.0	1	NA	0.1	0.03	0.06	10/05/2320:33	NA	AJ06-23	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07S	1.0	1	NA	0.1	0.03	0.06	10/05/2320:53	NA	AJ06-24	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW30102023	J039-01J	14	10	NA	1	0.3	0.6	10/05/2322:14	NA	AJ06-28	AJ06-25	ICJ008W	10/04/2308:10	10/05/23
TMW04102023	J039-09J	40	50	NA	5	1.5	3	10/05/2322:34	NA	AJ06-29	AJ06-25	ICJ008W	10/04/2314:10	10/05/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ008WB	ND	1	NA	0.1	0.03	0.06	10/05/2313:27	NA	AJ06-03	AJ06-01	ICJ008W	NA	NA
LCS1W	ICJ008WL	2.0	1	NA	0.1	0.03	0.06	10/05/2313:47	NA	AJ06-04	AJ06-01	ICJ008W	NA	NA
LCD1W	ICJ008WC	2.0	1	NA	0.1	0.03	0.06	10/05/2314:27	NA	AJ06-05	AJ06-01	ICJ008W	NA	NA
TMW63102023	J039-07	ND	1	NA	0.1	0.03	0.06	10/05/2314:47	NA	AJ06-06	AJ06-01	ICJ008W	10/04/2313:30	10/05/23
TMW30102023	J039-01	ND	1	NA	0.1	0.03	0.06	10/05/2315:08	NA	AJ06-07	AJ06-01	ICJ008W	10/04/2308:10	10/05/23
TMW58102023	J039-02	ND	1	NA	0.1	0.03	0.06	10/05/2315:28	NA	AJ06-08	AJ06-01	ICJ008W	10/04/2308:30	10/05/23
TMW26102023	J039-03I	ND	5	NA	0.5	0.15	0.3	10/05/2315:48	NA	AJ06-09	AJ06-01	ICJ008W	10/04/2309:00	10/05/23
TMW50102023	J039-04	ND	1	NA	0.1	0.03	0.06	10/05/2316:09	NA	AJ06-10	AJ06-01	ICJ008W	10/04/2309:15	10/05/23
SMW01102023	J039-05I	ND	10	NA	1	0.3	0.6	10/05/2316:29	NA	AJ06-11	AJ06-01	ICJ008W	10/04/2310:40	10/05/23
BGMW11102023	J039-06I	ND	2	NA	0.2	0.06	0.12	10/05/2316:49	NA	AJ06-12	AJ06-01	ICJ008W	10/04/2311:40	10/05/23
QC04102023EB	J039-08	ND	1	NA	0.1	0.03	0.06	10/05/2317:50	NA	AJ06-15	AJ06-13	ICJ008W	10/04/2314:00	10/05/23
TMW04102023	J039-09I	ND	5	NA	0.5	0.15	0.3	10/05/2318:10	NA	AJ06-16	AJ06-13	ICJ008W	10/04/2314:10	10/05/23
TMW63102023DUP	J039-07D	ND	1	NA	0.1	0.03	0.06	10/05/2320:12	NA	AJ06-22	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MS	J039-07M	2.2	1	NA	0.1	0.03	0.06	10/05/2320:33	NA	AJ06-23	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07S	2.2	1	NA	0.1	0.03	0.06	10/05/2320:53	NA	AJ06-24	AJ06-13	ICJ008W	10/04/2313:30	10/05/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ008WB	ND	1	NA	0.5	0.12	0.25	10/05/2313:27	NA	AJ06-03	AJ06-01	ICJ008W	NA	NA
LCS1W	ICJ008WL	1.9	1	NA	0.5	0.12	0.25	10/05/2313:47	NA	AJ06-04	AJ06-01	ICJ008W	NA	NA
LCD1W	ICJ008WC	1.9	1	NA	0.5	0.12	0.25	10/05/2314:27	NA	AJ06-05	AJ06-01	ICJ008W	NA	NA
TMW63102023	J039-07	ND	1	NA	0.5	0.12	0.25	10/05/2314:47	NA	AJ06-06	AJ06-01	ICJ008W	10/04/2313:30	10/05/23
TMW30102023	J039-01	ND	1	NA	0.5	0.12	0.25	10/05/2315:08	NA	AJ06-07	AJ06-01	ICJ008W	10/04/2308:10	10/05/23
TMW58102023	J039-02	ND	1	NA	0.5	0.12	0.25	10/05/2315:28	NA	AJ06-08	AJ06-01	ICJ008W	10/04/2308:30	10/05/23
TMW26102023	J039-03I	ND	5	NA	2.5	0.62	1.2	10/05/2315:48	NA	AJ06-09	AJ06-01	ICJ008W	10/04/2309:00	10/05/23
TMW50102023	J039-04	ND	1	NA	0.5	0.12	0.25	10/05/2316:09	NA	AJ06-10	AJ06-01	ICJ008W	10/04/2309:15	10/05/23
SMW01102023	J039-05I	ND	10	NA	5	1.2	2.5	10/05/2316:29	NA	AJ06-11	AJ06-01	ICJ008W	10/04/2310:40	10/05/23
BGMW11102023	J039-06I	ND	2	NA	1	0.25	0.5	10/05/2316:49	NA	AJ06-12	AJ06-01	ICJ008W	10/04/2311:40	10/05/23
QC04102023EB	J039-08	ND	1	NA	0.5	0.12	0.25	10/05/2317:50	NA	AJ06-15	AJ06-13	ICJ008W	10/04/2314:00	10/05/23
TMW04102023	J039-09I	ND	5	NA	2.5	0.62	1.2	10/05/2318:10	NA	AJ06-16	AJ06-13	ICJ008W	10/04/2314:10	10/05/23
TMW63102023DUP	J039-07D	ND	1	NA	0.5	0.12	0.25	10/05/2320:12	NA	AJ06-22	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MS	J039-07M	1.6	1	NA	0.5	0.12	0.25	10/05/2320:33	NA	AJ06-23	AJ06-13	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07S	1.6	1	NA	0.5	0.12	0.25	10/05/2320:53	NA	AJ06-24	AJ06-13	ICJ008W	10/04/2313:30	10/05/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J039

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ008WB	ND	1	NA	0.5	0.13	0.25	10/05/2313:27	NA	AJ06-03	AJ06-01	ICJ008W	NA	NA
LCS1W	ICJ008WL	4.6	1	NA	0.5	0.13	0.25	10/05/2313:47	NA	AJ06-04	AJ06-01	ICJ008W	NA	NA
LCD1W	ICJ008WC	4.6	1	NA	0.5	0.13	0.25	10/05/2314:27	NA	AJ06-05	AJ06-01	ICJ008W	NA	NA
QC04102023EB	J039-08	0.89	1	NA	0.5	0.13	0.25	10/05/2317:50	NA	AJ06-15	AJ06-13	ICJ008W	10/04/2314:00	10/05/23
TMW30102023	J039-01K	590	40	NA	20	5.2	10	10/05/2322:55	NA	AJ06-30	AJ06-25	ICJ008W	10/04/2308:10	10/05/23
TMW58102023	J039-02J	810	100	NA	50	13	25	10/05/2323:56	NA	AJ06-33	AJ06-25	ICJ008W	10/04/2308:30	10/05/23
TMW26102023	J039-03J	660	100	NA	50	13	25	10/06/2300:16	NA	AJ06-34	AJ06-25	ICJ008W	10/04/2309:00	10/05/23
TMW50102023	J039-04I	550	50	NA	25	6.5	12	10/06/2300:36	NA	AJ06-35	AJ06-25	ICJ008W	10/04/2309:15	10/05/23
SMW01102023	J039-05J	710	100	NA	50	13	25	10/06/2300:56	NA	AJ06-36	AJ06-25	ICJ008W	10/04/2310:40	10/05/23
BGMW11102023	J039-06J	1400	100	NA	50	13	25	10/06/2302:18	NA	AJ06-40	AJ06-37	ICJ008W	10/04/2311:40	10/05/23
TMW63102023	J039-07J	960	200	NA	100	26	50	10/06/2303:59	NA	AJ06-45	AJ06-37	ICJ008W	10/04/2313:30	10/05/23
TMW63102023DUP	J039-07JD	950	200	NA	100	26	50	10/06/2304:19	NA	AJ06-46	AJ06-37	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MS	J039-07JM	2000	200	NA	100	26	50	10/06/2304:40	NA	AJ06-47	AJ06-37	ICJ008W	10/04/2313:30	10/05/23
TMW63102023MSD	J039-07JS	2000	200	NA	100	26	50	10/06/2305:00	NA	AJ06-48	AJ06-37	ICJ008W	10/04/2313:30	10/05/23
TMW04102023	J039-09K	1000	100	NA	50	13	25	10/06/2306:01	NA	AJ06-51	AJ06-49	ICJ008W	10/04/2314:10	10/05/23

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-02-2023
EMAX Batch No.: 23J063

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/06/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW36S102023	J063-01	10/05/23	WATER	ANIONS BY IC
MW36D102023	J063-02	10/05/23	WATER	ANIONS BY IC
TMW08102023	J063-03	10/05/23	WATER	ANIONS BY IC
TMW31S102023	J063-04	10/05/23	WATER	ANIONS BY IC
TMW10102023	J063-05	10/05/23	WATER	ANIONS BY IC
FDUP04-102023	J063-06	10/05/23	WATER	ANIONS BY IC
QC05102023EB	J063-07	10/05/23	WATER	ANIONS BY IC
MW03102023	J063-08	10/05/23	WATER	ANIONS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 9056A
ANIONS

SDG#: 23J063

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J063

METHOD 9056A
BROMIDE

A total of eight(8) water samples were received on 10/06/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ010WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ010WL/ICJ010WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J063-01I, -05I, -06I, and -08I were reported at a 2X dilution factor due to high conductivity. Sample J063-02I was reported at a 2X dilution factor due to yellow color. Sample J063-03I was reported at a 5X dilution factor due high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J063

METHOD 9056A
CHLORIDE-CL

A total of eight(8) water samples were received on 10/06/23 to be analyzed for Chloride-Cl in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ010WB and ICJ052WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ010WL/ICJ010WC and ICJ052WL/ICJ052WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J063

METHOD 9056A
FLUORIDE

A total of eight(8) water samples were received on 10/06/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Fluoride-F was not detected in ICJ010WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ010WL/ICJ010WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J063-01I, -05I, -06I, and -08I were reported at a 2X dilution factor due to high conductivity. Sample J063-02I was reported at a 2X dilution factor due to yellow color. Sample J063-03I was reported at a 5X dilution factor due high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J063

METHOD SW9056A
NITRATE-N

A total of eight(8) water samples were received on 10/06/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrate was not detected in ICJ010WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ010WL/ICJ010WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J063-01I, -05I, and -06I were reported at a 2X dilution factor due to high conductivity. Sample J063-02I was reported at a 2X dilution factor due to yellow color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J063

METHOD SW9056A
NITRITE-N

A total of eight(8) water samples were received on 10/06/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrite was not detected in ICJ010WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ010WL/ICJ010WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J063-01I, -05I, -06I, and -08I were reported at a 2X dilution factor due to high conductivity. Sample J063-02I was reported at a 2X dilution factor due to yellow color. Sample J063-03J was reported at a 10X dilution factor due to chloride interference. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J063

METHOD 9056A
ORTHOPHOSPHATE-P

A total of eight(8) water samples were received on 10/06/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ010WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ010WL/ICJ010WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J063-01I, -05I, -06I, and -08I were reported at a 2X dilution factor due to high conductivity. Sample J063-02I was reported at a 2X dilution factor due to yellow color. Sample J063-03I was reported at a 5X dilution factor due high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J063

METHOD 9056A
SULFATE

A total of eight(8) water samples were received on 10/06/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Sulfate was not detected in ICJ010WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ010WL/ICJ010WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J063

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ010WB	ND	1	NA	0.5	0.13	0.25	10/06/2311:46	NA	AJ06-68	AJ06-66	ICJ010W	NA	NA
LCS1W	ICJ010WL	1.0	1	NA	0.5	0.13	0.25	10/06/2312:28	NA	AJ06-69	AJ06-66	ICJ010W	NA	NA
LCD1W	ICJ010WC	1.0	1	NA	0.5	0.13	0.25	10/06/2312:48	NA	AJ06-70	AJ06-66	ICJ010W	NA	NA
MW36S102023	J063-01I	2.1	2	NA	1	0.26	0.5	10/06/2313:08	NA	AJ06-71	AJ06-66	ICJ010W	10/05/2308:10	10/06/23
MW36D102023	J063-02I	1.2	2	NA	1	0.26	0.5	10/06/2313:28	NA	AJ06-72	AJ06-66	ICJ010W	10/05/2308:35	10/06/23
TMW08102023	J063-03I	3.6	5	NA	2.5	0.65	1.2	10/06/2313:49	NA	AJ06-73	AJ06-66	ICJ010W	10/05/2308:45	10/06/23
TMW31S102023	J063-04	1.6	1	NA	0.5	0.13	0.25	10/06/2314:09	NA	AJ06-74	AJ06-66	ICJ010W	10/05/2309:30	10/06/23
TMW10102023	J063-05I	1.5	2	NA	1	0.26	0.5	10/06/2314:29	NA	AJ06-75	AJ06-66	ICJ010W	10/05/2311:05	10/06/23
FDUP04-102023	J063-06I	1.5	2	NA	1	0.26	0.5	10/06/2314:50	NA	AJ06-76	AJ06-66	ICJ010W	10/05/2311:10	10/06/23
MW03102023	J063-08I	0.92J	2	NA	1	0.26	0.5	10/06/2315:10	NA	AJ06-77	AJ06-66	ICJ010W	10/05/2314:10	10/06/23
QC05102023EB	J063-07	ND	1	NA	0.5	0.13	0.25	10/06/2316:11	NA	AJ06-80	AJ06-78	ICJ010W	10/05/2314:00	10/06/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J063

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ010WB	ND	1	NA	0.2	0.05	0.1	10/06/2311:46	NA	AJ06-68	AJ06-66	ICJ010W	NA	NA
LCS1W	ICJ010WL	1.9	1	NA	0.2	0.05	0.1	10/06/2312:28	NA	AJ06-69	AJ06-66	ICJ010W	NA	NA
LCD1W	ICJ010WC	1.9	1	NA	0.2	0.05	0.1	10/06/2312:48	NA	AJ06-70	AJ06-66	ICJ010W	NA	NA
QC05102023EB	J063-07	0.15J	1	NA	0.2	0.05	0.1	10/06/2316:11	NA	AJ06-80	AJ06-78	ICJ010W	10/05/2314:00	10/06/23
MW36D102023	J063-02J	96	40	NA	8	2	4	10/07/2304:22	NA	AJ06-116	AJ06-114	ICJ010W	10/05/2308:35	10/06/23
TMW08102023	J063-03K	1500	400	NA	80	20	40	10/07/2304:42	NA	AJ06-117	AJ06-114	ICJ010W	10/05/2308:45	10/06/23
TMW31S102023	J063-04K	180	50	NA	10	2.5	5	10/07/2305:22	NA	AJ06-119	AJ06-114	ICJ010W	10/05/2309:30	10/06/23
TMW10102023	J063-05T	590	200	NA	40	10	20	10/07/2306:23	NA	AJ06-122	AJ06-114	ICJ010W	10/05/2311:05	10/06/23
FDUP04-102023	J063-06G	600	200	NA	40	10	20	10/07/2307:04	NA	AJ06-124	AJ06-114	ICJ010W	10/05/2311:10	10/06/23
MW03102023	J063-08K	350	100	NA	20	5	10	10/07/2307:24	NA	AJ06-125	AJ06-114	ICJ010W	10/05/2314:10	10/06/23
MBLK2W	ICJ052WB	ND	1	NA	0.2	0.05	0.1	10/24/2314:25	NA	AJ28-03	AJ28-01	ICJ052W	NA	NA
LCS2W	ICJ052WL	1.9	1	NA	0.2	0.05	0.1	10/24/2314:45	NA	AJ28-04	AJ28-01	ICJ052W	NA	NA
LCD2W	ICJ052WC	1.9	1	NA	0.2	0.05	0.1	10/24/2315:06	NA	AJ28-05	AJ28-01	ICJ052W	NA	NA
MW36S102023	J063-01G	490	200	NA	40	10	20	10/24/2316:47	NA	AJ28-10	AJ28-01	ICJ052W	10/05/2308:10	10/06/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J063

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ010WB	ND	1	NA	0.1	0.025	0.05	10/06/2311:46	NA	AJ06-68	AJ06-66	ICJ010W	NA	NA
LCS1W	ICJ010WL	0.95	1	NA	0.1	0.025	0.05	10/06/2312:28	NA	AJ06-69	AJ06-66	ICJ010W	NA	NA
LCD1W	ICJ010WC	0.95	1	NA	0.1	0.025	0.05	10/06/2312:48	NA	AJ06-70	AJ06-66	ICJ010W	NA	NA
MW36S102023	J063-01I	0.41	2	NA	0.2	0.05	0.1	10/06/2313:08	NA	AJ06-71	AJ06-66	ICJ010W	10/05/2308:10	10/06/23
MW36D102023	J063-02I	0.84	2	NA	0.2	0.05	0.1	10/06/2313:28	NA	AJ06-72	AJ06-66	ICJ010W	10/05/2308:35	10/06/23
TMW08102023	J063-03I	0.88	5	NA	0.5	0.12	0.25	10/06/2313:49	NA	AJ06-73	AJ06-66	ICJ010W	10/05/2308:45	10/06/23
TMW31S102023	J063-04	0.38	1	NA	0.1	0.025	0.05	10/06/2314:09	NA	AJ06-74	AJ06-66	ICJ010W	10/05/2309:30	10/06/23
TMW10102023	J063-05I	0.87	2	NA	0.2	0.05	0.1	10/06/2314:29	NA	AJ06-75	AJ06-66	ICJ010W	10/05/2311:05	10/06/23
FDUP04-102023	J063-06I	0.88	2	NA	0.2	0.05	0.1	10/06/2314:50	NA	AJ06-76	AJ06-66	ICJ010W	10/05/2311:10	10/06/23
MW03102023	J063-08I	0.47	2	NA	0.2	0.05	0.1	10/06/2315:10	NA	AJ06-77	AJ06-66	ICJ010W	10/05/2314:10	10/06/23
QC05102023EB	J063-07	0.047J	1	NA	0.1	0.025	0.05	10/06/2316:11	NA	AJ06-80	AJ06-78	ICJ010W	10/05/2314:00	10/06/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J063

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ010WB	ND	1	NA	0.1	0.03	0.06	10/06/2311:46	NA	AJ06-68	AJ06-66	ICJ010W	NA	NA
LCS1W	ICJ010WL	1.0	1	NA	0.1	0.03	0.06	10/06/2312:28	NA	AJ06-69	AJ06-66	ICJ010W	NA	NA
LCD1W	ICJ010WC	1.0	1	NA	0.1	0.03	0.06	10/06/2312:48	NA	AJ06-70	AJ06-66	ICJ010W	NA	NA
MW36S102023	J063-01I	0.37	2	NA	0.2	0.06	0.12	10/06/2313:08	NA	AJ06-71	AJ06-66	ICJ010W	10/05/2308:10	10/06/23
MW36D102023	J063-02I	ND	2	NA	0.2	0.06	0.12	10/06/2313:28	NA	AJ06-72	AJ06-66	ICJ010W	10/05/2308:35	10/06/23
TMW08102023	J063-03I	6.1	5	NA	0.5	0.15	0.3	10/06/2313:49	NA	AJ06-73	AJ06-66	ICJ010W	10/05/2308:45	10/06/23
TMW10102023	J063-05I	ND	2	NA	0.2	0.06	0.12	10/06/2314:29	NA	AJ06-75	AJ06-66	ICJ010W	10/05/2311:05	10/06/23
FDUP04-102023	J063-06I	ND	2	NA	0.2	0.06	0.12	10/06/2314:50	NA	AJ06-76	AJ06-66	ICJ010W	10/05/2311:10	10/06/23
QC05102023EB	J063-07	ND	1	NA	0.1	0.03	0.06	10/06/2316:11	NA	AJ06-80	AJ06-78	ICJ010W	10/05/2314:00	10/06/23
TMW31S102023	J063-04J	7.4	5	NA	0.5	0.15	0.3	10/06/2318:33	NA	AJ06-87	AJ06-78	ICJ010W	10/05/2309:30	10/06/23
MW03102023	J063-08K	13	100	NA	10	3	6	10/07/2307:24	NA	AJ06-125	AJ06-114	ICJ010W	10/05/2314:10	10/06/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J063
Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ010WB	ND	1	NA	0.1	0.03	0.06	10/06/2311:46	NA	AJ06-68	AJ06-66	ICJ010W	NA	NA
LCS1W	ICJ010WL	2.1	1	NA	0.1	0.03	0.06	10/06/2312:28	NA	AJ06-69	AJ06-66	ICJ010W	NA	NA
LCD1W	ICJ010WC	2.0	1	NA	0.1	0.03	0.06	10/06/2312:48	NA	AJ06-70	AJ06-66	ICJ010W	NA	NA
MW36S102023	J063-01I	ND	2	NA	0.2	0.06	0.12	10/06/2313:08	NA	AJ06-71	AJ06-66	ICJ010W	10/05/2308:10	10/06/23
MW36D102023	J063-02I	ND	2	NA	0.2	0.06	0.12	10/06/2313:28	NA	AJ06-72	AJ06-66	ICJ010W	10/05/2308:35	10/06/23
TMW08102023	J063-03I	ND	5	NA	0.5	0.15	0.3	10/06/2313:49	NA	AJ06-73	AJ06-66	ICJ010W	10/05/2308:45	10/06/23
TMW31S102023	J063-04	ND	1	NA	0.1	0.03	0.06	10/06/2314:09	NA	AJ06-74	AJ06-66	ICJ010W	10/05/2309:30	10/06/23
TMW10102023	J063-05I	ND	2	NA	0.2	0.06	0.12	10/06/2314:29	NA	AJ06-75	AJ06-66	ICJ010W	10/05/2311:05	10/06/23
FDUP04-102023	J063-06I	ND	2	NA	0.2	0.06	0.12	10/06/2314:50	NA	AJ06-76	AJ06-66	ICJ010W	10/05/2311:10	10/06/23
MW03102023	J063-08I	ND	2	NA	0.2	0.06	0.12	10/06/2315:10	NA	AJ06-77	AJ06-66	ICJ010W	10/05/2314:10	10/06/23
QC05102023EB	J063-07	ND	1	NA	0.1	0.03	0.06	10/06/2316:11	NA	AJ06-80	AJ06-78	ICJ010W	10/05/2314:00	10/06/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J063
Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ010WB	ND	1	NA	0.5	0.12	0.25	10/06/2311:46	NA	AJ06-68	AJ06-66	ICJ010W	NA	NA
LCS1W	ICJ010WL	1.9	1	NA	0.5	0.12	0.25	10/06/2312:28	NA	AJ06-69	AJ06-66	ICJ010W	NA	NA
LCD1W	ICJ010WC	1.9	1	NA	0.5	0.12	0.25	10/06/2312:48	NA	AJ06-70	AJ06-66	ICJ010W	NA	NA
MW36S102023	J063-01I	0.40J	2	NA	1	0.25	0.5	10/06/2313:08	NA	AJ06-71	AJ06-66	ICJ010W	10/05/2308:10	10/06/23
MW36D102023	J063-02I	0.79J	2	NA	1	0.25	0.5	10/06/2313:28	NA	AJ06-72	AJ06-66	ICJ010W	10/05/2308:35	10/06/23
TMW08102023	J063-03I	ND	5	NA	2.5	0.62	1.2	10/06/2313:49	NA	AJ06-73	AJ06-66	ICJ010W	10/05/2308:45	10/06/23
TMW31S102023	J063-04	ND	1	NA	0.5	0.12	0.25	10/06/2314:09	NA	AJ06-74	AJ06-66	ICJ010W	10/05/2309:30	10/06/23
TMW10102023	J063-05I	ND	2	NA	1	0.25	0.5	10/06/2314:29	NA	AJ06-75	AJ06-66	ICJ010W	10/05/2311:05	10/06/23
FDUP04-102023	J063-06I	ND	2	NA	1	0.25	0.5	10/06/2314:50	NA	AJ06-76	AJ06-66	ICJ010W	10/05/2311:10	10/06/23
MW03102023	J063-08I	ND	2	NA	1	0.25	0.5	10/06/2315:10	NA	AJ06-77	AJ06-66	ICJ010W	10/05/2314:10	10/06/23
QC05102023EB	J063-07	ND	1	NA	0.5	0.12	0.25	10/06/2316:11	NA	AJ06-80	AJ06-78	ICJ010W	10/05/2314:00	10/06/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J063

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ010WB	ND	1	NA	0.5	0.13	0.25	10/06/2311:46	NA	AJ06-68	AJ06-66	ICJ010W	NA	NA
LCS1W	ICJ010WL	4.6	1	NA	0.5	0.13	0.25	10/06/2312:28	NA	AJ06-69	AJ06-66	ICJ010W	NA	NA
LCD1W	ICJ010WC	4.6	1	NA	0.5	0.13	0.25	10/06/2312:48	NA	AJ06-70	AJ06-66	ICJ010W	NA	NA
MW36D102023	J063-02I	35	2	NA	1	0.26	0.5	10/06/2313:28	NA	AJ06-72	AJ06-66	ICJ010W	10/05/2308:35	10/06/23
QC05102023EB	J063-07	0.91	1	NA	0.5	0.13	0.25	10/06/2316:11	NA	AJ06-80	AJ06-78	ICJ010W	10/05/2314:00	10/06/23
MW36S102023	J063-01T	4000	1000	NA	500	130	250	10/07/2303:21	NA	AJ06-113	AJ06-102	ICJ010W	10/05/2308:10	10/06/23
TMW08102023	J063-03T	7100	1000	NA	500	130	250	10/07/2305:02	NA	AJ06-118	AJ06-114	ICJ010W	10/05/2308:45	10/06/23
TMW31S102023	J063-04T	810	200	NA	100	26	50	10/07/2305:43	NA	AJ06-120	AJ06-114	ICJ010W	10/05/2309:30	10/06/23
TMW10102023	J063-05T	1400	200	NA	100	26	50	10/07/2306:23	NA	AJ06-122	AJ06-114	ICJ010W	10/05/2311:05	10/06/23
FDUP04-102023	J063-06G	1500	200	NA	100	26	50	10/07/2307:04	NA	AJ06-124	AJ06-114	ICJ010W	10/05/2311:10	10/06/23
MW03102023	J063-08K	1400	100	NA	50	13	25	10/07/2307:24	NA	AJ06-125	AJ06-114	ICJ010W	10/05/2314:10	10/06/23

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-27-2023
EMAX Batch No.: 23J087

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/07/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW33102023	J087-01	10/06/23	WATER	VOCS BY 8260C TPH GASOLINE DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 TPH-DRO ANIONS BY IC
TMW29102023	J087-02	10/06/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS ANIONS BY IC
TMW07102023	J087-03	10/06/23	WATER	VOCS BY 8260C TPH GASOLINE NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 TPH-DRO ANIONS BY IC
TMW23102023	J087-04	10/06/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW01102023	J087-05	10/06/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				ANIONS BY IC
MW29102023	J087-06	10/06/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
TMW41102023	J087-07	10/06/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				ANIONS BY IC
MW28102023	J087-08	10/06/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
TMW55102023	J087-09	10/06/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW22102023	J087-10	10/06/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				SEMIVOLATILES + APP 9
				ANIONS BY IC
TMW02102023	J087-11	10/06/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				SEMIVOLATILES + APP 9
				ANIONS BY IC
FDUP05-102023	J087-12	10/06/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				SEMIVOLATILES + APP 9
				ANIONS BY IC
TMW62102023	J087-13	10/06/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
TMW39S102023	J087-14	10/06/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				ANIONS BY IC

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW51102023	J087-15	10/06/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
TMW40D102023	J087-16	10/06/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				ANIONS BY IC
TMW48102023	J087-17	10/06/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				ANIONS BY IC
MW25102023	J087-18	10/06/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
TMW25102023	J087-19	10/06/23	WATER	VOCS BY 8260C
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				ANIONS BY IC

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW01102023MS	J087-05M	10/06/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS ANIONS BY IC
TMW01102023MSD	J087-05S	10/06/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS ANIONS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied except for Naphthalene was detected biased high(%D=24.4) in CCV(data file ID RJG227). However, note that the analytes in question were not detected in any of the associated field samples. Note that" Minimum Response Factor" for all analytes were within method recommended response factors with the exception of 2-Butanone. However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VOE2J11B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. All analytes were within LCS limits in VOE2J11L/VOE2J11C,except for percent recovery for Naphthalene in LCD. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 23J087-05M/23J087-05S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : E2

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOE2J11L	1	NA	10/18/2316:04	10/18/2316:04	RJG228	RJG046	VOE2J11	Lab Control Sample (LCS)
LCD1W	VOE2J11C	1	NA	10/18/2316:29	10/18/2316:29	RJG229	RJG046	VOE2J11	LCS Duplicate
MBLK1W	VOE2J11B	1	NA	10/18/2317:24	10/18/2317:24	RJG231	RJG046	VOE2J11	Method Blank
TMW01102023	23J087-05	1	NA	10/18/2317:49	10/18/2317:49	RJG232	RJG046	VOE2J11	Field Sample
TMW01102023MS	23J087-05M	1	NA	10/18/2318:13	10/18/2318:13	RJG233	RJG046	VOE2J11	Matrix Spike Sample (MS)
TMW01102023MSD	23J087-05S	1	NA	10/18/2318:37	10/18/2318:37	RJG234	RJG046	VOE2J11	MS Duplicate (MSD)
TMW33102023	23J087-01	1	NA	10/18/2319:26	10/18/2319:26	RJG236	RJG046	VOE2J11	Field Sample
TMW29102023	23J087-02	1	NA	10/18/2319:51	10/18/2319:51	RJG237	RJG046	VOE2J11	Field Sample
TMW07102023	23J087-03	1	NA	10/18/2320:15	10/18/2320:15	RJG238	RJG046	VOE2J11	Field Sample
TMW23102023	23J087-04	1	NA	10/18/2320:39	10/18/2320:39	RJG239	RJG046	VOE2J11	Field Sample
MW29102023	23J087-06	1	NA	10/18/2321:03	10/18/2321:03	RJG240	RJG046	VOE2J11	Field Sample
TMW41102023	23J087-07	1	NA	10/18/2321:27	10/18/2321:27	RJG241	RJG046	VOE2J11	Field Sample
MW28102023	23J087-08	1	NA	10/18/2321:52	10/18/2321:52	RJG242	RJG046	VOE2J11	Field Sample
TMW55102023	23J087-09	1	NA	10/18/2322:16	10/18/2322:16	RJG243	RJG046	VOE2J11	Field Sample
TMW22102023	23J087-10	1	NA	10/18/2322:40	10/18/2322:40	RJG244	RJG046	VOE2J11	Field Sample
TMW02102023	23J087-11	1	NA	10/18/2323:04	10/18/2323:04	RJG245	RJG046	VOE2J11	Field Sample
FDUP05-102023	23J087-12	1	NA	10/18/2323:29	10/18/2323:29	RJG246	RJG046	VOE2J11	Field Sample
TMW62102023	23J087-13	1	NA	10/18/2323:53	10/18/2323:53	RJG247	RJG046	VOE2J11	Field Sample
TMW39S102023	23J087-14	1	NA	10/19/2300:17	10/19/2300:17	RJG248	RJG046	VOE2J11	Field Sample
TMW51102023	23J087-15	1	NA	10/19/2300:41	10/19/2300:41	RJG249	RJG046	VOE2J11	Field Sample
TMW40D102023	23J087-16	1	NA	10/19/2301:05	10/19/2301:05	RJG250	RJG046	VOE2J11	Field Sample
TMW48102023	23J087-17	1	NA	10/19/2301:29	10/19/2301:29	RJG251	RJG046	VOE2J11	Field Sample
MW25102023	23J087-18	1	NA	10/19/2301:54	10/19/2301:54	RJG252	RJG046	VOE2J11	Field Sample
TMW25102023	23J087-19	1	NA	10/19/2302:18	10/19/2302:18	RJG253	RJG046	VOE2J11	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 19:26
Sample ID	: TMW33102023	Date Analyzed:	10/18/23 19:26
Lab Samp ID:	23J087-01	Dilution Factor:	1
Lab File ID:	RJG236	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	31	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.1	10.0	101	81-118
4-Bromofluorobenzene	9.90	10.0	99	85-114
Toluene-d8	9.63	10.0	96	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:25
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 19:51
Sample ID	: TMW29102023	Date Analyzed:	10/18/23 19:51
Lab Samp ID:	23J087-02	Dilution Factor:	1
Lab File ID:	RJG237	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.5	10.0	105	81-118
4-Bromofluorobenzene	9.80	10.0	98	85-114
Toluene-d8	9.39	10.0	94	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE_WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 20:15
Sample ID	: TMW07102023	Date Analyzed:	10/18/23 20:15
Lab Samp ID:	23J087-03	Dilution Factor:	1
Lab File ID:	RJG238	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.7	10.0	107	81-118
4-Bromofluorobenzene	9.90	10.0	99	85-114
Toluene-d8	9.46	10.0	95	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE_WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 20:39
Sample ID	: TMW23102023	Date Analyzed:	10/18/23 20:39
Lab Samp ID:	23J087-04	Dilution Factor:	1
Lab File ID:	RJG239	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.6	10.0	106	81-118
4-Bromofluorobenzene	9.97	10.0	100	85-114
Toluene-d8	9.53	10.0	95	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:05
Project	: USACE_WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 17:49
Sample ID	: TMW01102023	Date Analyzed:	10/18/23 17:49
Lab Samp ID:	23J087-05	Dilution Factor:	1
Lab File ID:	RJG232	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.4	10.0	104	81-118
4-Bromofluorobenzene	9.90	10.0	99	85-114
Toluene-d8	9.59	10.0	96	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 21:03
Sample ID	: MW29102023	Date Analyzed:	10/18/23 21:03
Lab Samp ID:	23J087-06	Dilution Factor:	1
Lab File ID:	RJG240	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.6	10.0	106	81-118
4-Bromofluorobenzene	9.89	10.0	99	85-114
Toluene-d8	9.50	10.0	95	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 21:27
Sample ID	: TMW41102023	Date Analyzed:	10/18/23 21:27
Lab Samp ID:	23J087-07	Dilution Factor:	1
Lab File ID:	RJG241	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.8	10.0	108	81-118
4-Bromofluorobenzene	9.61	10.0	96	85-114
Toluene-d8	9.54	10.0	95	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 21:52
Sample ID	: MW28102023	Date Analyzed:	10/18/23 21:52
Lab Samp ID:	23J087-08	Dilution Factor:	1
Lab File ID:	RJG242	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	9.97	10.0	100	85-114
Toluene-d8	9.32	10.0	93	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 22:16
Sample ID	: TMW55102023	Date Analyzed:	10/18/23 22:16
Lab Samp ID:	23J087-09	Dilution Factor:	1
Lab File ID:	RJG243	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.41	10.0	94	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 22:40
Sample ID	: TMW22102023	Date Analyzed:	10/18/23 22:40
Lab Samp ID:	23J087-10	Dilution Factor:	1
Lab File ID:	RJG244	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	9.73	10.0	97	85-114
Toluene-d8	9.36	10.0	94	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 23:04
Sample ID	: TMW02102023	Date Analyzed:	10/18/23 23:04
Lab Samp ID:	23J087-11	Dilution Factor:	1
Lab File ID:	RJG245	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.0	10.0	110	81-118
4-Bromofluorobenzene	9.72	10.0	97	85-114
Toluene-d8	9.41	10.0	94	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 23:29
Sample ID	: FDUP05-102023	Date Analyzed:	10/18/23 23:29
Lab Samp ID:	23J087-12	Dilution Factor:	1
Lab File ID:	RJG246	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.2	10.0	112	81-118
4-Bromofluorobenzene	9.68	10.0	97	85-114
Toluene-d8	9.41	10.0	94	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/18/23 23:53
Sample ID	: TMW62102023	Date Analyzed:	10/18/23 23:53
Lab Samp ID:	23J087-13	Dilution Factor:	1
Lab File ID:	RJG247	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.2	10.0	112	81-118
4-Bromofluorobenzene	9.88	10.0	99	85-114
Toluene-d8	9.42	10.0	94	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/19/23 00:17
Sample ID	: TMW39S102023	Date Analyzed:	10/19/23 00:17
Lab Samp ID:	23J087-14	Dilution Factor:	1
Lab File ID:	RJG248	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.3	10.0	113	81-118
4-Bromofluorobenzene	9.66	10.0	97	85-114
Toluene-d8	9.53	10.0	95	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/19/23 00:41
Sample ID	: TMW51102023	Date Analyzed:	10/19/23 00:41
Lab Samp ID:	23J087-15	Dilution Factor:	1
Lab File ID:	RJG249	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.8	10.0	108	81-118
4-Bromofluorobenzene	9.55	10.0	96	85-114
Toluene-d8	9.42	10.0	94	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/19/23 01:05
Sample ID	: TMW40D102023	Date Analyzed:	10/19/23 01:05
Lab Samp ID:	23J087-16	Dilution Factor:	1
Lab File ID:	RJG250	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.1	10.0	111	81-118
4-Bromofluorobenzene	9.55	10.0	95	85-114
Toluene-d8	9.50	10.0	95	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/19/23 01:29
Sample ID	: TMW48102023	Date Analyzed:	10/19/23 01:29
Lab Samp ID:	23J087-17	Dilution Factor:	1
Lab File ID:	RJG251	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.3	10.0	113	81-118
4-Bromofluorobenzene	9.87	10.0	99	85-114
Toluene-d8	9.42	10.0	94	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/19/23 01:54
Sample ID	: MW25102023	Date Analyzed:	10/19/23 01:54
Lab Samp ID:	23J087-18	Dilution Factor:	1
Lab File ID:	RJG252	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	1.8	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.4	10.0	114	81-118
4-Bromofluorobenzene	9.90	10.0	99	85-114
Toluene-d8	9.45	10.0	95	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/19/23 02:18
Sample ID	: TMW25102023	Date Analyzed:	10/19/23 02:18
Lab Samp ID:	23J087-19	Dilution Factor:	1
Lab File ID:	RJG253	Matrix:	WATER
Ext Btch ID:	VOE2J11	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	7.3J	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.3	10.0	113	81-118
4-Bromofluorobenzene	9.68	10.0	97	85-114
Toluene-d8	9.41	10.0	94	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS + APPENDIX 9

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of sixteen(16) water samples were received on 10/07/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were four(4)CCVs (Data file IDs: RJJ335, RJJ336, RJJ370 and RJJ371) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ026WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: SVJ026WL/SVJ026WC - Percent recoveries for bis(2-Ethylhexyl) Phthalate, and Butylbenzylphthalate in LCS/LCD, percent recoveries for 2,4,5-Trichlorophenol, 2,4-Dinitrotoluene, 2-Chloronaphthalene, bis(2-Chloroethoxy)methane, Chrysene, Dibenzofuran and Di-N-Butyl Phthalate in LCS were biased high. However, all analytes were not detected in the associated samples. RPDs for several analytes were greater than RPD QC limit. The rest of the analytes were in control. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality

control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of sixteen(16) water samples were received on 10/07/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ338 and RJJ369) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ026WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ026WL/CLJ026WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of sixteen(16) water samples were received on 10/07/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method 3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ336 and RJJ371) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ026WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ026WL/CLJ026WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ026WB	1	NA	10/16/2314:28	10/12/2313:15	RJJ347	RGJ087	23SVJ026W	Method Blank
LCS1W	SVJ026WL	1	NA	10/16/2314:47	10/12/2313:15	RJJ348	RGJ087	23SVJ026W	Lab Control Sample (LCS)
LCD1W	SVJ026WC	1	NA	10/16/2315:06	10/12/2313:15	RJJ349	RGJ087	23SVJ026W	LCS Duplicate
TMW33102023	23J087-01	1	NA	10/16/2316:02	10/12/2313:15	RJJ352	RGJ087	23SVJ026W	Field Sample
TMW07102023	23J087-03	1	NA	10/16/2316:21	10/12/2313:15	RJJ353	RGJ087	23SVJ026W	Field Sample
TMW23102023	23J087-04	1	NA	10/16/2316:39	10/12/2313:15	RJJ354	RGJ087	23SVJ026W	Field Sample
MW29102023	23J087-06	1	NA	10/16/2316:58	10/12/2313:15	RJJ355	RGJ087	23SVJ026W	Field Sample
TMW41102023	23J087-07	1	NA	10/16/2317:17	10/12/2313:15	RJJ356	RGJ087	23SVJ026W	Field Sample
MW28102023	23J087-08	1	NA	10/16/2317:36	10/12/2313:15	RJJ357	RGJ087	23SVJ026W	Field Sample
TMW55102023	23J087-09	1	NA	10/16/2317:55	10/12/2313:15	RJJ358	RGJ087	23SVJ026W	Field Sample
TMW22102023	23J087-10	1	NA	10/16/2318:13	10/12/2313:15	RJJ359	RGJ087	23SVJ026W	Field Sample
TMW02102023	23J087-11	1	NA	10/16/2318:32	10/12/2313:15	RJJ360	RGJ087	23SVJ026W	Field Sample
FDUP05-102023	23J087-12	1	NA	10/16/2318:51	10/12/2313:15	RJJ361	RGJ087	23SVJ026W	Field Sample
TMW62102023	23J087-13	1	NA	10/16/2319:09	10/12/2313:15	RJJ362	RGJ087	23SVJ026W	Field Sample
TMW39S102023	23J087-14	1	NA	10/16/2319:28	10/12/2313:15	RJJ363	RGJ087	23SVJ026W	Field Sample
TMW51102023	23J087-15	1	NA	10/16/2319:47	10/12/2313:15	RJJ364	RGJ087	23SVJ026W	Field Sample
TMW40D102023	23J087-16	1	NA	10/16/2320:05	10/12/2313:15	RJJ365	RGJ087	23SVJ026W	Field Sample
TMW48102023	23J087-17	1	NA	10/16/2320:24	10/12/2313:15	RJJ366	RGJ087	23SVJ026W	Field Sample
MW25102023	23J087-18	1	NA	10/16/2320:43	10/12/2313:15	RJJ367	RGJ087	23SVJ026W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ026WB	1	NA	10/16/2314:28	10/12/2313:15	RJJ347	RGJ100	23SVJ026W	Method Blank
LCS1W	CLJ026WL	1	NA	10/16/2315:25	10/12/2313:15	RJJ350	RGJ100	23SVJ026W	Lab Control Sample (LCS)
LCD1W	CLJ026WC	1	NA	10/16/2315:43	10/12/2313:15	RJJ351	RGJ100	23SVJ026W	LCS Duplicate
TMW33102023	23J087-01	1	NA	10/16/2316:02	10/12/2313:15	RJJ352	RGJ100	23SVJ026W	Field Sample
TMW07102023	23J087-03	1	NA	10/16/2316:21	10/12/2313:15	RJJ353	RGJ100	23SVJ026W	Field Sample
TMW23102023	23J087-04	1	NA	10/16/2316:39	10/12/2313:15	RJJ354	RGJ100	23SVJ026W	Field Sample
MW29102023	23J087-06	1	NA	10/16/2316:58	10/12/2313:15	RJJ355	RGJ100	23SVJ026W	Field Sample
TMW41102023	23J087-07	1	NA	10/16/2317:17	10/12/2313:15	RJJ356	RGJ100	23SVJ026W	Field Sample
MW28102023	23J087-08	1	NA	10/16/2317:36	10/12/2313:15	RJJ357	RGJ100	23SVJ026W	Field Sample
TMW55102023	23J087-09	1	NA	10/16/2317:55	10/12/2313:15	RJJ358	RGJ100	23SVJ026W	Field Sample
TMW22102023	23J087-10	1	NA	10/16/2318:13	10/12/2313:15	RJJ359	RGJ100	23SVJ026W	Field Sample
TMW02102023	23J087-11	1	NA	10/16/2318:32	10/12/2313:15	RJJ360	RGJ100	23SVJ026W	Field Sample
FDUP05-102023	23J087-12	1	NA	10/16/2318:51	10/12/2313:15	RJJ361	RGJ100	23SVJ026W	Field Sample
TMW62102023	23J087-13	1	NA	10/16/2319:09	10/12/2313:15	RJJ362	RGJ100	23SVJ026W	Field Sample
TMW39S102023	23J087-14	1	NA	10/16/2319:28	10/12/2313:15	RJJ363	RGJ100	23SVJ026W	Field Sample
TMW51102023	23J087-15	1	NA	10/16/2319:47	10/12/2313:15	RJJ364	RGJ100	23SVJ026W	Field Sample
TMW40D102023	23J087-16	1	NA	10/16/2320:05	10/12/2313:15	RJJ365	RGJ100	23SVJ026W	Field Sample
TMW48102023	23J087-17	1	NA	10/16/2320:24	10/12/2313:15	RJJ366	RGJ100	23SVJ026W	Field Sample
MW25102023	23J087-18	1	NA	10/16/2320:43	10/12/2313:15	RJJ367	RGJ100	23SVJ026W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ026WB	1	NA	10/16/2314:28	10/12/2313:15	RJJ347	RGJ079	23SVJ026W	Method Blank
LCS1W	CLJ026WL	1	NA	10/16/2315:25	10/12/2313:15	RJJ350	RGJ079	23SVJ026W	Lab Control Sample (LCS)
LCD1W	CLJ026WC	1	NA	10/16/2315:43	10/12/2313:15	RJJ351	RGJ079	23SVJ026W	LCS Duplicate
TMW33102023	23J087-01	1	NA	10/16/2316:02	10/12/2313:15	RJJ352	RGJ079	23SVJ026W	Field Sample
TMW07102023	23J087-03	1	NA	10/16/2316:21	10/12/2313:15	RJJ353	RGJ079	23SVJ026W	Field Sample
TMW23102023	23J087-04	1	NA	10/16/2316:39	10/12/2313:15	RJJ354	RGJ079	23SVJ026W	Field Sample
MW29102023	23J087-06	1	NA	10/16/2316:58	10/12/2313:15	RJJ355	RGJ079	23SVJ026W	Field Sample
TMW41102023	23J087-07	1	NA	10/16/2317:17	10/12/2313:15	RJJ356	RGJ079	23SVJ026W	Field Sample
MW28102023	23J087-08	1	NA	10/16/2317:36	10/12/2313:15	RJJ357	RGJ079	23SVJ026W	Field Sample
TMW55102023	23J087-09	1	NA	10/16/2317:55	10/12/2313:15	RJJ358	RGJ079	23SVJ026W	Field Sample
TMW22102023	23J087-10	1	NA	10/16/2318:13	10/12/2313:15	RJJ359	RGJ079	23SVJ026W	Field Sample
TMW02102023	23J087-11	1	NA	10/16/2318:32	10/12/2313:15	RJJ360	RGJ079	23SVJ026W	Field Sample
FDUP05-102023	23J087-12	1	NA	10/16/2318:51	10/12/2313:15	RJJ361	RGJ079	23SVJ026W	Field Sample
TMW62102023	23J087-13	1	NA	10/16/2319:09	10/12/2313:15	RJJ362	RGJ079	23SVJ026W	Field Sample
TMW39S102023	23J087-14	1	NA	10/16/2319:28	10/12/2313:15	RJJ363	RGJ079	23SVJ026W	Field Sample
TMW51102023	23J087-15	1	NA	10/16/2319:47	10/12/2313:15	RJJ364	RGJ079	23SVJ026W	Field Sample
TMW40D102023	23J087-16	1	NA	10/16/2320:05	10/12/2313:15	RJJ365	RGJ079	23SVJ026W	Field Sample
TMW48102023	23J087-17	1	NA	10/16/2320:24	10/12/2313:15	RJJ366	RGJ079	23SVJ026W	Field Sample
MW25102023	23J087-18	1	NA	10/16/2320:43	10/12/2313:15	RJJ367	RGJ079	23SVJ026W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW33102023	Date Analyzed:	10/16/23 16:02
Lab Samp ID:	23J087-01	Dilution Factor:	1
Lab File ID:	RJJ352	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.5	11
1,2-Dichlorobenzene	ND	11	2.8	5.5
1,2-Diphenylhydrazine	ND	11	2.8	5.5
1,3-Dichlorobenzene	ND	11	2.8	5.5
1,4-Dichlorobenzene	ND	11	2.8	5.5
2,4,5-Trichlorophenol	ND	11	2.8	5.5
2,4,6-Trichlorophenol	ND	11	2.8	5.5
2,4-Dichlorophenol	ND	11	2.8	5.5
2,4-Dimethylphenol	ND	11	2.8	5.5
2,4-Dinitrophenol	ND	22	2.8	5.5
2,4-Dinitrotoluene	ND	11	2.8	5.5
2,6-Dinitrotoluene	ND	11	2.8	5.5
2-Chloronaphthalene	ND	11	2.8	5.5
2-Chlorophenol	ND	11	2.8	5.5
2-Methylnaphthalene	ND	11	2.8	5.5
2-Methylphenol	ND	11	2.8	5.5
2-Nitroaniline	ND	11	2.8	5.5
2-Nitrophenol	ND	11	2.8	5.5
3,3'-Dichlorobenzidine	ND	11	2.8	5.5
3/4-Methylphenol	ND	11	2.8	5.5
3-Nitroaniline	ND	11	2.8	5.5
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.5
4-Bromophenyl phenyl ether	ND	11	2.8	5.5
4-Chloro-3-methylphenol	ND	11	2.8	5.5
4-Chloroaniline	ND	22	5.5	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.5
4-Nitroaniline	ND	11	2.8	5.5
4-Nitrophenol	ND	22	2.8	5.5
Acenaphthene	ND	11	2.8	5.5
Acenaphthylene	ND	11	2.8	5.5
Anthracene	ND	11	2.8	5.5
Benzo(a)anthracene	ND	11	2.8	5.5
Benzo(a)pyrene	ND	11	2.8	5.5
Benzo(b)fluoranthene	ND	11	2.8	5.5
Benzo(g,h,i)perylene	ND	11	2.8	5.5
Benzo(k)fluoranthene	ND	11	2.8	5.5
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.5
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.5
bis(2-Chloroethoxy)methane	ND	11	2.8	5.5
bis(2-Chloroethyl) ether	ND	11	2.8	5.5
bis(2-Ethylhexyl) phthalate	ND	22	5.5	11
Butylbenzylphthalate	ND	11	2.8	5.5
Carbazole	ND	11	2.8	5.5
Chrysene	ND	11	2.8	5.5
Dibenzo(a,h)anthracene	ND	11	2.8	5.5
Dibenzofuran	ND	11	2.8	5.5
Diethylphthalate	ND	11	2.8	5.5
Dimethylphthalate	ND	11	2.8	5.5
Di-n-butyl phthalate	ND	11	2.8	5.5
Di-n-octyl phthalate	ND	11	2.8	5.5
Fluoranthene	ND	11	2.8	5.5
Fluorene	ND	11	2.8	5.5
Hexachlorobenzene	ND	11	2.8	5.5
Hexachlorobutadiene	ND	11	2.8	5.5
Hexachloroethane	ND	11	2.8	5.5
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.5
Isophorone	ND	11	2.8	5.5
Naphthalene	ND	11	2.8	5.5
Nitrobenzene	ND	11	2.8	5.5
N-Nitrosodimethylamine	ND	11	2.8	5.5
n-Nitroso-di-n-propylamine	ND	11	2.8	5.5
n-Nitrosodiphenylamine	ND	11	2.8	5.5
Pentachlorophenol	ND	22	2.8	5.5
Phenanthrene	ND	11	2.8	5.5
Phenol	ND	11	2.8	5.5
Pyrene	ND	11	2.8	5.5
Hexachlorocyclopentadiene	ND	11	2.8	5.5
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.5
2,6-Dichlorophenol	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	44.5	66.0	67	43-140
2-Fluorobiphenyl	23.4	22.0	106	44-119
2-Fluorophenol	19.1	66.0	29	19-119
Nitrobenzene-d5	21.2	22.0	96	44-120
Phenol-d5	31.9	66.0	48	40-130
Terphenyl-d14	28.7	22.0	130	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW33102023	Date Analyzed:	10/16/23 16:02
Lab Samp ID:	23J087-01	Dilution Factor:	1
Lab File ID:	RJJ352	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.5

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 2ml
Prepared by	: RGalan/POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW33102023	Date Analyzed:	10/16/23 16:02
Lab Samp ID:	23J087-01	Dilution Factor:	1
Lab File ID:	RJJ352	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.5	11
Benzaldehyde	ND	22	5.5	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW07102023	Date Analyzed:	10/16/23 16:21
Lab Samp ID:	23J087-03	Dilution Factor:	1
Lab File ID:	RJJ353	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	48.9	72.0	68	43-140
2-Fluorobiphenyl	18.0	24.0	75	44-119
2-Fluorophenol	30.3	72.0	42	19-119
Nitrobenzene-d5	17.9	24.0	75	44-120
Phenol-d5	37.1	72.0	52	40-130
Terphenyl-d14	25.2	24.0	105	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW07102023	Date Analyzed:	10/16/23 16:21
Lab Samp ID:	23J087-03	Dilution Factor:	1
Lab File ID:	RJJ353	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume :	2ml
Prepared by	: RGalan/POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW07102023	Date Analyzed:	10/16/23 16:21
Lab Samp ID:	23J087-03	Dilution Factor:	1
Lab File ID:	RJJ353	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW23102023	Date Analyzed:	10/16/23 16:39
Lab Samp ID:	23J087-04	Dilution Factor:	1
Lab File ID:	RJJ354	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.9	5.7
1,2-Diphenylhydrazine	ND	11	2.9	5.7
1,3-Dichlorobenzene	ND	11	2.9	5.7
1,4-Dichlorobenzene	ND	11	2.9	5.7
2,4,5-Trichlorophenol	ND	11	2.9	5.7
2,4,6-Trichlorophenol	ND	11	2.9	5.7
2,4-Dichlorophenol	ND	11	2.9	5.7
2,4-Dimethylphenol	ND	11	2.9	5.7
2,4-Dinitrophenol	ND	23	2.9	5.7
2,4-Dinitrotoluene	ND	11	2.9	5.7
2,6-Dinitrotoluene	ND	11	2.9	5.7
2-Chloronaphthalene	ND	11	2.9	5.7
2-Chlorophenol	ND	11	2.9	5.7
2-Methylnaphthalene	ND	11	2.9	5.7
2-Methylphenol	ND	11	2.9	5.7
2-Nitroaniline	ND	11	2.9	5.7
2-Nitrophenol	ND	11	2.9	5.7
3,3'-Dichlorobenzidine	ND	11	2.9	5.7
3/4-Methylphenol	ND	11	2.9	5.7
3-Nitroaniline	ND	11	2.9	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.7
4-Bromophenyl phenyl ether	ND	11	2.9	5.7
4-Chloro-3-methylphenol	ND	11	2.9	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.9	5.7
4-Nitroaniline	ND	11	2.9	5.7
4-Nitrophenol	ND	23	2.9	5.7
Acenaphthene	ND	11	2.9	5.7
Acenaphthylene	ND	11	2.9	5.7
Anthracene	ND	11	2.9	5.7
Benzo(a)anthracene	ND	11	2.9	5.7
Benzo(a)pyrene	ND	11	2.9	5.7
Benzo(b)fluoranthene	ND	11	2.9	5.7
Benzo(g,h,i)perylene	ND	11	2.9	5.7
Benzo(k)fluoranthene	ND	11	2.9	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.9	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.9	5.7
bis(2-Chloroethoxy)methane	ND	11	2.9	5.7
bis(2-Chloroethyl) ether	ND	11	2.9	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.9	5.7
Carbazole	ND	11	2.9	5.7
Chrysene	ND	11	2.9	5.7
Dibenzo(a,h)anthracene	ND	11	2.9	5.7
Dibenzofuran	ND	11	2.9	5.7
Diethylphthalate	ND	11	2.9	5.7
Dimethylphthalate	ND	11	2.9	5.7
Di-n-butyl phthalate	ND	11	2.9	5.7
Di-n-octyl phthalate	ND	11	2.9	5.7
Fluoranthene	ND	11	2.9	5.7
Fluorene	ND	11	2.9	5.7
Hexachlorobenzene	ND	11	2.9	5.7
Hexachlorobutadiene	ND	11	2.9	5.7
Hexachloroethane	ND	11	2.9	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.9	5.7
Isophorone	ND	11	2.9	5.7
Naphthalene	ND	11	2.9	5.7
Nitrobenzene	ND	11	2.9	5.7
N-Nitrosodimethylamine	ND	11	2.9	5.7
n-Nitroso-di-n-propylamine	ND	11	2.9	5.7
n-Nitrosodiphenylamine	ND	11	2.9	5.7
Pentachlorophenol	ND	23	2.9	5.7
Phenanthrene	ND	11	2.9	5.7
Phenol	ND	11	2.9	5.7
Pyrene	ND	11	2.9	5.7
Hexachlorocyclopentadiene	ND	11	2.9	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.9	5.7
2,6-Dichlorophenol	ND	11	2.9	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	63.0	69.0	91	43-140
2-Fluorobiphenyl	25.9	23.0	113	44-119
2-Fluorophenol	48.6	69.0	70	19-119
Nitrobenzene-d5	26.3	23.0	114	44-120
Phenol-d5	54.3	69.0	79	40-130
Terphenyl-d14	24.5	23.0	106	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW23102023	Date Analyzed:	10/16/23 16:39
Lab Samp ID:	23J087-04	Dilution Factor:	1
Lab File ID:	RJJ354	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.9	5.7

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	Final Volume :	2ml
Prepared by	: RGalan/POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW23102023	Date Analyzed:	10/16/23 16:39
Lab Samp ID:	23J087-04	Dilution Factor:	1
Lab File ID:	RJJ354	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW29102023	Date Analyzed:	10/16/23 16:58
Lab Samp ID:	23J087-06	Dilution Factor:	1
Lab File ID:	RJJ355	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.3	11
1,2-Dichlorobenzene	ND	11	2.6	5.3
1,2-Diphenylhydrazine	ND	11	2.6	5.3
1,3-Dichlorobenzene	ND	11	2.6	5.3
1,4-Dichlorobenzene	ND	11	2.6	5.3
2,4,5-Trichlorophenol	ND	11	2.6	5.3
2,4,6-Trichlorophenol	ND	11	2.6	5.3
2,4-Dichlorophenol	ND	11	2.6	5.3
2,4-Dimethylphenol	ND	11	2.6	5.3
2,4-Dinitrophenol	ND	21	2.6	5.3
2,4-Dinitrotoluene	ND	11	2.6	5.3
2,6-Dinitrotoluene	ND	11	2.6	5.3
2-Chloronaphthalene	ND	11	2.6	5.3
2-Chlorophenol	ND	11	2.6	5.3
2-Methylnaphthalene	ND	11	2.6	5.3
2-Methylphenol	ND	11	2.6	5.3
2-Nitroaniline	ND	11	2.6	5.3
2-Nitrophenol	ND	11	2.6	5.3
3,3'-Dichlorobenzidine	ND	11	2.6	5.3
3/4-Methylphenol	ND	11	2.6	5.3
3-Nitroaniline	ND	11	2.6	5.3
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.3
4-Bromophenyl phenyl ether	ND	11	2.6	5.3
4-Chloro-3-methylphenol	ND	11	2.6	5.3
4-Chloroaniline	ND	21	5.3	11
4-Chlorophenyl-phenyl ether	ND	11	2.6	5.3
4-Nitroaniline	ND	11	2.6	5.3
4-Nitrophenol	ND	21	2.6	5.3
Acenaphthene	ND	11	2.6	5.3
Acenaphthylene	ND	11	2.6	5.3
Anthracene	ND	11	2.6	5.3
Benzo(a)anthracene	ND	11	2.6	5.3
Benzo(a)pyrene	ND	11	2.6	5.3
Benzo(b)fluoranthene	ND	11	2.6	5.3
Benzo(g,h,i)perylene	ND	11	2.6	5.3
Benzo(k)fluoranthene	ND	11	2.6	5.3
Benzoic Acid	ND	110	21	42
Benzyl Alcohol	ND	11	2.6	5.3
bis(2-Chloroisopropyl) ether	ND	11	2.6	5.3
bis(2-Chloroethoxy)methane	ND	11	2.6	5.3
bis(2-Chloroethyl) ether	ND	11	2.6	5.3
bis(2-Ethylhexyl) phthalate	ND	21	5.3	11
Butylbenzylphthalate	ND	11	2.6	5.3
Carbazole	ND	11	2.6	5.3
Chrysene	ND	11	2.6	5.3
Dibenzo(a,h)anthracene	ND	11	2.6	5.3
Dibenzofuran	ND	11	2.6	5.3
Diethylphthalate	ND	11	2.6	5.3
Dimethylphthalate	ND	11	2.6	5.3
Di-n-butyl phthalate	ND	11	2.6	5.3
Di-n-octyl phthalate	ND	11	2.6	5.3
Fluoranthene	ND	11	2.6	5.3
Fluorene	ND	11	2.6	5.3
Hexachlorobenzene	ND	11	2.6	5.3
Hexachlorobutadiene	ND	11	2.6	5.3
Hexachloroethane	ND	11	2.6	5.3
Indeno(1,2,3-cd)pyrene	ND	11	2.6	5.3
Isophorone	ND	11	2.6	5.3
Naphthalene	ND	11	2.6	5.3
Nitrobenzene	ND	11	2.6	5.3
N-Nitrosodimethylamine	ND	11	2.6	5.3
n-Nitroso-di-n-propylamine	ND	11	2.6	5.3
n-Nitrosodiphenylamine	ND	11	2.6	5.3
Pentachlorophenol	ND	21	2.6	5.3
Phenanthrene	ND	11	2.6	5.3
Phenol	ND	11	2.6	5.3
Pyrene	ND	11	2.6	5.3
Hexachlorocyclopentadiene	ND	11	2.6	5.3
Benzidine	ND	42	11	21
2,3,4,6-Tetrachlorophenol	ND	11	2.6	5.3
2,6-Dichlorophenol	ND	11	2.6	5.3

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	53.3	63.6	84	43-140
2-Fluorobiphenyl	25.1	21.2	118	44-119
2-Fluorophenol	48.8	63.6	77	19-119
Nitrobenzene-d5	23.7	21.2	112	44-120
Phenol-d5	51.3	63.6	81	40-130
Terphenyl-d14	18.3	21.2	86	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW29102023	Date Analyzed:	10/16/23 16:58
Lab Samp ID:	23J087-06	Dilution Factor:	1
Lab File ID:	RJJ355	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.6	5.3

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 940ml	Final Volume	: 2ml
Prepared by	: RGalan/POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW29102023	Date Analyzed:	10/16/23 16:58
Lab Samp ID:	23J087-06	Dilution Factor:	1
Lab File ID:	RJJ355	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.3	11
Benzaldehyde	ND	21	5.3	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW41102023	Date Analyzed:	10/16/23 17:17
Lab Samp ID:	23J087-07	Dilution Factor:	1
Lab File ID:	RJJ356	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	45
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	45	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	55.5	67.2	83	43-140
2-Fluorobiphenyl	20.5	22.4	91	44-119
2-Fluorophenol	35.5	67.2	53	19-119
Nitrobenzene-d5	19.7	22.4	88	44-120
Phenol-d5	42.0	67.2	62	40-130
Terphenyl-d14	26.1	22.4	117	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW41102023	Date Analyzed:	10/16/23 17:17
Lab Samp ID:	23J087-07	Dilution Factor:	1
Lab File ID:	RJJ356	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW41102023	Date Analyzed:	10/16/23 17:17
Lab Samp ID:	23J087-07	Dilution Factor:	1
Lab File ID:	RJJ356	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW28102023	Date Analyzed:	10/16/23 17:36
Lab Samp ID:	23J087-08	Dilution Factor:	1
Lab File ID:	RJJ357	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.5	11
1,2-Dichlorobenzene	ND	11	2.8	5.5
1,2-Diphenylhydrazine	ND	11	2.8	5.5
1,3-Dichlorobenzene	ND	11	2.8	5.5
1,4-Dichlorobenzene	ND	11	2.8	5.5
2,4,5-Trichlorophenol	ND	11	2.8	5.5
2,4,6-Trichlorophenol	ND	11	2.8	5.5
2,4-Dichlorophenol	ND	11	2.8	5.5
2,4-Dimethylphenol	ND	11	2.8	5.5
2,4-Dinitrophenol	ND	22	2.8	5.5
2,4-Dinitrotoluene	ND	11	2.8	5.5
2,6-Dinitrotoluene	ND	11	2.8	5.5
2-Chloronaphthalene	ND	11	2.8	5.5
2-Chlorophenol	ND	11	2.8	5.5
2-Methylnaphthalene	ND	11	2.8	5.5
2-Methylphenol	ND	11	2.8	5.5
2-Nitroaniline	ND	11	2.8	5.5
2-Nitrophenol	ND	11	2.8	5.5
3,3'-Dichlorobenzidine	ND	11	2.8	5.5
3/4-Methylphenol	ND	11	2.8	5.5
3-Nitroaniline	ND	11	2.8	5.5
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.5
4-Bromophenyl phenyl ether	ND	11	2.8	5.5
4-Chloro-3-methylphenol	ND	11	2.8	5.5
4-Chloroaniline	ND	22	5.5	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.5
4-Nitroaniline	ND	11	2.8	5.5
4-Nitrophenol	ND	22	2.8	5.5
Acenaphthene	ND	11	2.8	5.5
Acenaphthylene	ND	11	2.8	5.5
Anthracene	ND	11	2.8	5.5
Benzo(a)anthracene	ND	11	2.8	5.5
Benzo(a)pyrene	ND	11	2.8	5.5
Benzo(b)fluoranthene	ND	11	2.8	5.5
Benzo(g,h,i)perylene	ND	11	2.8	5.5
Benzo(k)fluoranthene	ND	11	2.8	5.5
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.5
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.5
bis(2-Chloroethoxy)methane	ND	11	2.8	5.5
bis(2-Chloroethyl) ether	ND	11	2.8	5.5
bis(2-Ethylhexyl) phthalate	ND	22	5.5	11
Butylbenzylphthalate	ND	11	2.8	5.5
Carbazole	ND	11	2.8	5.5
Chrysene	ND	11	2.8	5.5
Dibenzo(a,h)anthracene	ND	11	2.8	5.5
Dibenzofuran	ND	11	2.8	5.5
Diethylphthalate	ND	11	2.8	5.5
Dimethylphthalate	ND	11	2.8	5.5
Di-n-butyl phthalate	ND	11	2.8	5.5
Di-n-octyl phthalate	ND	11	2.8	5.5
Fluoranthene	ND	11	2.8	5.5
Fluorene	ND	11	2.8	5.5
Hexachlorobenzene	ND	11	2.8	5.5
Hexachlorobutadiene	ND	11	2.8	5.5
Hexachloroethane	ND	11	2.8	5.5
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.5
Isophorone	ND	11	2.8	5.5
Naphthalene	ND	11	2.8	5.5
Nitrobenzene	ND	11	2.8	5.5
N-Nitrosodimethylamine	ND	11	2.8	5.5
n-Nitroso-di-n-propylamine	ND	11	2.8	5.5
n-Nitrosodiphenylamine	ND	11	2.8	5.5
Pentachlorophenol	ND	22	2.8	5.5
Phenanthrene	ND	11	2.8	5.5
Phenol	ND	11	2.8	5.5
Pyrene	ND	11	2.8	5.5
Hexachlorocyclopentadiene	ND	11	2.8	5.5
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.5
2,6-Dichlorophenol	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	51.3	66.0	78	43-140
2-Fluorobiphenyl	22.9	22.0	104	44-119
2-Fluorophenol	30.1	66.0	46	19-119
Nitrobenzene-d5	22.4	22.0	102	44-120
Phenol-d5	39.8	66.0	60	40-130
Terphenyl-d14	23.9	22.0	109	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW28102023	Date Analyzed:	10/16/23 17:36
Lab Samp ID:	23J087-08	Dilution Factor:	1
Lab File ID:	RJJ357	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.5

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW28102023	Date Analyzed:	10/16/23 17:36
Lab Samp ID:	23J087-08	Dilution Factor:	1
Lab File ID:	RJJ357	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.5	11
Benzaldehyde	ND	22	5.5	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 2ml
Prepared by	: RGalan/POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW55102023	Date Analyzed:	10/16/23 17:55
Lab Samp ID:	23J087-09	Dilution Factor:	1
Lab File ID:	RJJ358	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	43
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	43	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	58.0	64.8	89	43-140
2-Fluorobiphenyl	23.7	21.6	110	44-119
2-Fluorophenol	46.1	64.8	71	19-119
Nitrobenzene-d5	24.5	21.6	113	44-120
Phenol-d5	51.2	64.8	79	40-130
Terphenyl-d14	23.8	21.6	110	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW55102023	Date Analyzed:	10/16/23 17:55
Lab Samp ID:	23J087-09	Dilution Factor:	1
Lab File ID:	RJJ358	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 2ml
Prepared by	: RGalan/POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW55102023	Date Analyzed:	10/16/23 17:55
Lab Samp ID:	23J087-09	Dilution Factor:	1
Lab File ID:	RJJ358	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW22102023	Date Analyzed:	10/16/23 18:13
Lab Samp ID:	23J087-10	Dilution Factor:	1
Lab File ID:	RJJ359	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	5.9	12
1,2-Dichlorobenzene	ND	12	2.9	5.9
1,2-Diphenylhydrazine	ND	12	2.9	5.9
1,3-Dichlorobenzene	ND	12	2.9	5.9
1,4-Dichlorobenzene	ND	12	2.9	5.9
2,4,5-Trichlorophenol	ND	12	2.9	5.9
2,4,6-Trichlorophenol	ND	12	2.9	5.9
2,4-Dichlorophenol	ND	12	2.9	5.9
2,4-Dimethylphenol	ND	12	2.9	5.9
2,4-Dinitrophenol	ND	24	2.9	5.9
2,4-Dinitrotoluene	ND	12	2.9	5.9
2,6-Dinitrotoluene	ND	12	2.9	5.9
2-Chloronaphthalene	ND	12	2.9	5.9
2-Chlorophenol	ND	12	2.9	5.9
2-Methylnaphthalene	ND	12	2.9	5.9
2-Methylphenol	ND	12	2.9	5.9
2-Nitroaniline	ND	12	2.9	5.9
2-Nitrophenol	ND	12	2.9	5.9
3,3'-Dichlorobenzidine	ND	12	2.9	5.9
3/4-Methylphenol	ND	12	2.9	5.9
3-Nitroaniline	ND	12	2.9	5.9
4,6-Dinitro-2-methylphenol	ND	24	2.9	5.9
4-Bromophenyl phenyl ether	ND	12	2.9	5.9
4-Chloro-3-methylphenol	ND	12	2.9	5.9
4-Chloroaniline	ND	24	5.9	12
4-Chlorophenyl-phenyl ether	ND	12	2.9	5.9
4-Nitroaniline	ND	12	2.9	5.9
4-Nitrophenol	ND	24	2.9	5.9
Acenaphthene	ND	12	2.9	5.9
Acenaphthylene	ND	12	2.9	5.9
Anthracene	ND	12	2.9	5.9
Benzo(a)anthracene	ND	12	2.9	5.9
Benzo(a)pyrene	ND	12	2.9	5.9
Benzo(b)fluoranthene	ND	12	2.9	5.9
Benzo(g,h,i)perylene	ND	12	2.9	5.9
Benzo(k)fluoranthene	ND	12	2.9	5.9
Benzoic Acid	ND	120	24	47
Benzyl Alcohol	ND	12	2.9	5.9
bis(2-Chloroisopropyl) ether	ND	12	2.9	5.9
bis(2-Chloroethoxy)methane	ND	12	2.9	5.9
bis(2-Chloroethyl) ether	ND	12	2.9	5.9
bis(2-Ethylhexyl) phthalate	ND	24	5.9	12
Butylbenzylphthalate	ND	12	2.9	5.9
Carbazole	ND	12	2.9	5.9
Chrysene	ND	12	2.9	5.9
Dibenzo(a,h)anthracene	ND	12	2.9	5.9
Dibenzofuran	ND	12	2.9	5.9
Diethylphthalate	ND	12	2.9	5.9
Dimethylphthalate	ND	12	2.9	5.9
Di-n-butyl phthalate	ND	12	2.9	5.9
Di-n-octyl phthalate	ND	12	2.9	5.9
Fluoranthene	ND	12	2.9	5.9
Fluorene	ND	12	2.9	5.9
Hexachlorobenzene	ND	12	2.9	5.9
Hexachlorobutadiene	ND	12	2.9	5.9
Hexachloroethane	ND	12	2.9	5.9
Indeno(1,2,3-cd)pyrene	ND	12	2.9	5.9
Isophorone	ND	12	2.9	5.9
Naphthalene	ND	12	2.9	5.9
Nitrobenzene	ND	12	2.9	5.9
N-Nitrosodimethylamine	ND	12	2.9	5.9
n-Nitroso-di-n-propylamine	ND	12	2.9	5.9
n-Nitrosodiphenylamine	ND	12	2.9	5.9
Pentachlorophenol	ND	24	2.9	5.9
Phenanthrene	ND	12	2.9	5.9
Phenol	ND	12	2.9	5.9
Pyrene	ND	12	2.9	5.9
Hexachlorocyclopentadiene	ND	12	2.9	5.9
Benzidine	ND	47	12	24
2,3,4,6-Tetrachlorophenol	ND	12	2.9	5.9
2,6-Dichlorophenol	ND	12	2.9	5.9

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	60.0	70.8	85	43-140
2-Fluorobiphenyl	24.3	23.6	103	44-119
2-Fluorophenol	40.6	70.8	57	19-119
Nitrobenzene-d5	23.8	23.6	101	44-120
Phenol-d5	49.0	70.8	69	40-130
Terphenyl-d14	26.6	23.6	113	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 850ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW22102023	Date Analyzed:	10/16/23 18:13
Lab Samp ID:	23J087-10	Dilution Factor:	1
Lab File ID:	RJJ359	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	2.9	5.9

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 850ml	Final Volume :	2ml
Prepared by	: RGalan/POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW22102023	Date Analyzed:	10/16/23 18:13
Lab Samp ID:	23J087-10	Dilution Factor:	1
Lab File ID:	RJJ359	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	5.9	12
Benzaldehyde	ND	24	5.9	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 850ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW02102023	Date Analyzed:	10/16/23 18:32
Lab Samp ID:	23J087-11	Dilution Factor:	1
Lab File ID:	RJJ360	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	60.5	71.4	85	43-140
2-Fluorobiphenyl	22.0	23.8	93	44-119
2-Fluorophenol	38.1	71.4	53	19-119
Nitrobenzene-d5	21.5	23.8	90	44-120
Phenol-d5	46.0	71.4	64	40-130
Terphenyl-d14	27.4	23.8	115	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW02102023	Date Analyzed:	10/16/23 18:32
Lab Samp ID:	23J087-11	Dilution Factor:	1
Lab File ID:	RJJ360	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW02102023	Date Analyzed:	10/16/23 18:32
Lab Samp ID:	23J087-11	Dilution Factor:	1
Lab File ID:	RJJ360	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: FDUP05-102023	Date Analyzed:	10/16/23 18:51
Lab Samp ID:	23J087-12	Dilution Factor:	1
Lab File ID:	RJJ361	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.9	5.7
1,2-Diphenylhydrazine	ND	11	2.9	5.7
1,3-Dichlorobenzene	ND	11	2.9	5.7
1,4-Dichlorobenzene	ND	11	2.9	5.7
2,4,5-Trichlorophenol	ND	11	2.9	5.7
2,4,6-Trichlorophenol	ND	11	2.9	5.7
2,4-Dichlorophenol	ND	11	2.9	5.7
2,4-Dimethylphenol	ND	11	2.9	5.7
2,4-Dinitrophenol	ND	23	2.9	5.7
2,4-Dinitrotoluene	ND	11	2.9	5.7
2,6-Dinitrotoluene	ND	11	2.9	5.7
2-Chloronaphthalene	ND	11	2.9	5.7
2-Chlorophenol	ND	11	2.9	5.7
2-Methylnaphthalene	ND	11	2.9	5.7
2-Methylphenol	ND	11	2.9	5.7
2-Nitroaniline	ND	11	2.9	5.7
2-Nitrophenol	ND	11	2.9	5.7
3,3'-Dichlorobenzidine	ND	11	2.9	5.7
3/4-Methylphenol	ND	11	2.9	5.7
3-Nitroaniline	ND	11	2.9	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.7
4-Bromophenyl phenyl ether	ND	11	2.9	5.7
4-Chloro-3-methylphenol	ND	11	2.9	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.9	5.7
4-Nitroaniline	ND	11	2.9	5.7
4-Nitrophenol	ND	23	2.9	5.7
Acenaphthene	ND	11	2.9	5.7
Acenaphthylene	ND	11	2.9	5.7
Anthracene	ND	11	2.9	5.7
Benzo(a)anthracene	ND	11	2.9	5.7
Benzo(a)pyrene	ND	11	2.9	5.7
Benzo(b)fluoranthene	ND	11	2.9	5.7
Benzo(g,h,i)perylene	ND	11	2.9	5.7
Benzo(k)fluoranthene	ND	11	2.9	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.9	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.9	5.7
bis(2-Chloroethoxy)methane	ND	11	2.9	5.7
bis(2-Chloroethyl) ether	ND	11	2.9	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.9	5.7
Carbazole	ND	11	2.9	5.7
Chrysene	ND	11	2.9	5.7
Dibenzo(a,h)anthracene	ND	11	2.9	5.7
Dibenzofuran	ND	11	2.9	5.7
Diethylphthalate	ND	11	2.9	5.7
Dimethylphthalate	ND	11	2.9	5.7
Di-n-butyl phthalate	ND	11	2.9	5.7
Di-n-octyl phthalate	ND	11	2.9	5.7
Fluoranthene	ND	11	2.9	5.7
Fluorene	ND	11	2.9	5.7
Hexachlorobenzene	ND	11	2.9	5.7
Hexachlorobutadiene	ND	11	2.9	5.7
Hexachloroethane	ND	11	2.9	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.9	5.7
Isophorone	ND	11	2.9	5.7
Naphthalene	ND	11	2.9	5.7
Nitrobenzene	ND	11	2.9	5.7
N-Nitrosodimethylamine	ND	11	2.9	5.7
n-Nitroso-di-n-propylamine	ND	11	2.9	5.7
n-Nitrosodiphenylamine	ND	11	2.9	5.7
Pentachlorophenol	ND	23	2.9	5.7
Phenanthrene	ND	11	2.9	5.7
Phenol	ND	11	2.9	5.7
Pyrene	ND	11	2.9	5.7
Hexachlorocyclopentadiene	ND	11	2.9	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.9	5.7
2,6-Dichlorophenol	ND	11	2.9	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	54.2	69.0	79	43-140
2-Fluorobiphenyl	22.0	23.0	96	44-119
2-Fluorophenol	40.8	69.0	59	19-119
Nitrobenzene-d5	21.5	23.0	93	44-120
Phenol-d5	45.5	69.0	66	40-130
Terphenyl-d14	24.9	23.0	108	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: FDUP05-102023	Date Analyzed:	10/16/23 18:51
Lab Samp ID:	23J087-12	Dilution Factor:	1
Lab File ID:	RJJ361	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.9	5.7

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	Final Volume :	2ml
Prepared by	: RGalan/POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: FDUP05-102023	Date Analyzed:	10/16/23 18:51
Lab Samp ID:	23J087-12	Dilution Factor:	1
Lab File ID:	RJJ361	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : B70ml
Prepared by : RGalan/POreto
Final Volume : 2ml
Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW62102023	Date Analyzed:	10/16/23 19:09
Lab Samp ID:	23J087-13	Dilution Factor:	1
Lab File ID:	RJJ362	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.5	11
1,2-Dichlorobenzene	ND	11	2.8	5.5
1,2-Diphenylhydrazine	ND	11	2.8	5.5
1,3-Dichlorobenzene	ND	11	2.8	5.5
1,4-Dichlorobenzene	ND	11	2.8	5.5
2,4,5-Trichlorophenol	ND	11	2.8	5.5
2,4,6-Trichlorophenol	ND	11	2.8	5.5
2,4-Dichlorophenol	ND	11	2.8	5.5
2,4-Dimethylphenol	ND	11	2.8	5.5
2,4-Dinitrophenol	ND	22	2.8	5.5
2,4-Dinitrotoluene	ND	11	2.8	5.5
2,6-Dinitrotoluene	ND	11	2.8	5.5
2-Chloronaphthalene	ND	11	2.8	5.5
2-Chlorophenol	ND	11	2.8	5.5
2-Methylnaphthalene	ND	11	2.8	5.5
2-Methylphenol	ND	11	2.8	5.5
2-Nitroaniline	ND	11	2.8	5.5
2-Nitrophenol	ND	11	2.8	5.5
3,3'-Dichlorobenzidine	ND	11	2.8	5.5
3/4-Methylphenol	ND	11	2.8	5.5
3-Nitroaniline	ND	11	2.8	5.5
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.5
4-Bromophenyl phenyl ether	ND	11	2.8	5.5
4-Chloro-3-methylphenol	ND	11	2.8	5.5
4-Chloroaniline	ND	22	5.5	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.5
4-Nitroaniline	ND	11	2.8	5.5
4-Nitrophenol	ND	22	2.8	5.5
Acenaphthene	ND	11	2.8	5.5
Acenaphthylene	ND	11	2.8	5.5
Anthracene	ND	11	2.8	5.5
Benzo(a)anthracene	ND	11	2.8	5.5
Benzo(a)pyrene	ND	11	2.8	5.5
Benzo(b)fluoranthene	ND	11	2.8	5.5
Benzo(g,h,i)perylene	ND	11	2.8	5.5
Benzo(k)fluoranthene	ND	11	2.8	5.5
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.5
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.5
bis(2-Chloroethoxy)methane	ND	11	2.8	5.5
bis(2-Chloroethyl) ether	ND	11	2.8	5.5
bis(2-Ethylhexyl) phthalate	ND	22	5.5	11
Butylbenzylphthalate	ND	11	2.8	5.5
Carbazole	ND	11	2.8	5.5
Chrysene	ND	11	2.8	5.5
Dibenzo(a,h)anthracene	ND	11	2.8	5.5
Dibenzofuran	ND	11	2.8	5.5
Diethylphthalate	ND	11	2.8	5.5
Dimethylphthalate	ND	11	2.8	5.5
Di-n-butyl phthalate	ND	11	2.8	5.5
Di-n-octyl phthalate	ND	11	2.8	5.5
Fluoranthene	ND	11	2.8	5.5
Fluorene	ND	11	2.8	5.5
Hexachlorobenzene	ND	11	2.8	5.5
Hexachlorobutadiene	ND	11	2.8	5.5
Hexachloroethane	ND	11	2.8	5.5
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.5
Isophorone	ND	11	2.8	5.5
Naphthalene	ND	11	2.8	5.5
Nitrobenzene	ND	11	2.8	5.5
N-Nitrosodimethylamine	ND	11	2.8	5.5
n-Nitroso-di-n-propylamine	ND	11	2.8	5.5
n-Nitrosodiphenylamine	ND	11	2.8	5.5
Pentachlorophenol	ND	22	2.8	5.5
Phenanthrene	ND	11	2.8	5.5
Phenol	ND	11	2.8	5.5
Pyrene	ND	11	2.8	5.5
Hexachlorocyclopentadiene	ND	11	2.8	5.5
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.5
2,6-Dichlorophenol	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	52.5	66.0	79	43-140
2-Fluorobiphenyl	18.7	22.0	85	44-119
2-Fluorophenol	36.6	66.0	55	19-119
Nitrobenzene-d5	18.4	22.0	84	44-120
Phenol-d5	41.1	66.0	62	40-130
Terphenyl-d14	25.2	22.0	114	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW62102023	Date Analyzed:	10/16/23 19:09
Lab Samp ID:	23J087-13	Dilution Factor:	1
Lab File ID:	RJJ362	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.5

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW62102023	Date Analyzed:	10/16/23 19:09
Lab Samp ID:	23J087-13	Dilution Factor:	1
Lab File ID:	RJJ362	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.5	11
Benzaldehyde	ND	22	5.5	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW39S102023	Date Analyzed:	10/16/23 19:28
Lab Samp ID:	23J087-14	Dilution Factor:	1
Lab File ID:	RJJ363	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.3	11
1,2-Dichlorobenzene	ND	11	2.6	5.3
1,2-Diphenylhydrazine	ND	11	2.6	5.3
1,3-Dichlorobenzene	ND	11	2.6	5.3
1,4-Dichlorobenzene	ND	11	2.6	5.3
2,4,5-Trichlorophenol	ND	11	2.6	5.3
2,4,6-Trichlorophenol	ND	11	2.6	5.3
2,4-Dichlorophenol	ND	11	2.6	5.3
2,4-Dimethylphenol	ND	11	2.6	5.3
2,4-Dinitrophenol	ND	21	2.6	5.3
2,4-Dinitrotoluene	ND	11	2.6	5.3
2,6-Dinitrotoluene	ND	11	2.6	5.3
2-Chloronaphthalene	ND	11	2.6	5.3
2-Chlorophenol	ND	11	2.6	5.3
2-Methylnaphthalene	ND	11	2.6	5.3
2-Methylphenol	ND	11	2.6	5.3
2-Nitroaniline	ND	11	2.6	5.3
2-Nitrophenol	ND	11	2.6	5.3
3,3'-Dichlorobenzidine	ND	11	2.6	5.3
3/4-Methylphenol	ND	11	2.6	5.3
3-Nitroaniline	ND	11	2.6	5.3
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.3
4-Bromophenyl phenyl ether	ND	11	2.6	5.3
4-Chloro-3-methylphenol	ND	11	2.6	5.3
4-Chloroaniline	ND	21	5.3	11
4-Chlorophenyl-phenyl ether	ND	11	2.6	5.3
4-Nitroaniline	ND	11	2.6	5.3
4-Nitrophenol	ND	21	2.6	5.3
Acenaphthene	ND	11	2.6	5.3
Acenaphthylene	ND	11	2.6	5.3
Anthracene	ND	11	2.6	5.3
Benzo(a)anthracene	ND	11	2.6	5.3
Benzo(a)pyrene	ND	11	2.6	5.3
Benzo(b)fluoranthene	ND	11	2.6	5.3
Benzo(g,h,i)perylene	ND	11	2.6	5.3
Benzo(k)fluoranthene	ND	11	2.6	5.3
Benzoic Acid	ND	110	21	42
Benzyl Alcohol	ND	11	2.6	5.3
bis(2-Chloroisopropyl) ether	ND	11	2.6	5.3
bis(2-Chloroethoxy)methane	ND	11	2.6	5.3
bis(2-Chloroethyl) ether	ND	11	2.6	5.3
bis(2-Ethylhexyl) phthalate	ND	21	5.3	11
Butylbenzylphthalate	ND	11	2.6	5.3
Carbazole	ND	11	2.6	5.3
Chrysene	ND	11	2.6	5.3
Dibenzo(a,h)anthracene	ND	11	2.6	5.3
Dibenzofuran	ND	11	2.6	5.3
Diethylphthalate	ND	11	2.6	5.3
Dimethylphthalate	ND	11	2.6	5.3
Di-n-butyl phthalate	ND	11	2.6	5.3
Di-n-octyl phthalate	ND	11	2.6	5.3
Fluoranthene	ND	11	2.6	5.3
Fluorene	ND	11	2.6	5.3
Hexachlorobenzene	ND	11	2.6	5.3
Hexachlorobutadiene	ND	11	2.6	5.3
Hexachloroethane	ND	11	2.6	5.3
Indeno(1,2,3-cd)pyrene	ND	11	2.6	5.3
Isophorone	ND	11	2.6	5.3
Naphthalene	ND	11	2.6	5.3
Nitrobenzene	ND	11	2.6	5.3
N-Nitrosodimethylamine	ND	11	2.6	5.3
n-Nitroso-di-n-propylamine	ND	11	2.6	5.3
n-Nitrosodiphenylamine	ND	11	2.6	5.3
Pentachlorophenol	ND	21	2.6	5.3
Phenanthrene	ND	11	2.6	5.3
Phenol	ND	11	2.6	5.3
Pyrene	ND	11	2.6	5.3
Hexachlorocyclopentadiene	ND	11	2.6	5.3
Benzidine	ND	42	11	21
2,3,4,6-Tetrachlorophenol	ND	11	2.6	5.3
2,6-Dichlorophenol	ND	11	2.6	5.3

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	52.4	63.6	82	43-140
2-Fluorobiphenyl	20.2	21.2	95	44-119
2-Fluorophenol	29.7	63.6	47	19-119
Nitrobenzene-d5	19.5	21.2	92	44-120
Phenol-d5	37.5	63.6	59	40-130
Terphenyl-d14	25.2	21.2	119	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW39S102023	Date Analyzed:	10/16/23 19:28
Lab Samp ID:	23J087-14	Dilution Factor:	1
Lab File ID:	RJJ363	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.6	5.3

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW39S102023	Date Analyzed:	10/16/23 19:28
Lab Samp ID:	23J087-14	Dilution Factor:	1
Lab File ID:	RJJ363	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.3	11
Benzaldehyde	ND	21	5.3	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW51102023	Date Analyzed:	10/16/23 19:47
Lab Samp ID:	23J087-15	Dilution Factor:	1
Lab File ID:	RJJ364	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.1	10
1,2-Dichlorobenzene	ND	10	2.6	5.1
1,2-Diphenylhydrazine	ND	10	2.6	5.1
1,3-Dichlorobenzene	ND	10	2.6	5.1
1,4-Dichlorobenzene	ND	10	2.6	5.1
2,4,5-Trichlorophenol	ND	10	2.6	5.1
2,4,6-Trichlorophenol	ND	10	2.6	5.1
2,4-Dichlorophenol	ND	10	2.6	5.1
2,4-Dimethylphenol	ND	10	2.6	5.1
2,4-Dinitrophenol	ND	21	2.6	5.1
2,4-Dinitrotoluene	ND	10	2.6	5.1
2,6-Dinitrotoluene	ND	10	2.6	5.1
2-Chloronaphthalene	ND	10	2.6	5.1
2-Chlorophenol	ND	10	2.6	5.1
2-Methylnaphthalene	ND	10	2.6	5.1
2-Methylphenol	ND	10	2.6	5.1
2-Nitroaniline	ND	10	2.6	5.1
2-Nitrophenol	ND	10	2.6	5.1
3,3'-Dichlorobenzidine	ND	10	2.6	5.1
3/4-Methylphenol	ND	10	2.6	5.1
3-Nitroaniline	ND	10	2.6	5.1
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.1
4-Bromophenyl phenyl ether	ND	10	2.6	5.1
4-Chloro-3-methylphenol	ND	10	2.6	5.1
4-Chloroaniline	ND	21	5.1	10
4-Chlorophenyl-phenyl ether	ND	10	2.6	5.1
4-Nitroaniline	ND	10	2.6	5.1
4-Nitrophenol	ND	21	2.6	5.1
Acenaphthene	ND	10	2.6	5.1
Acenaphthylene	ND	10	2.6	5.1
Anthracene	ND	10	2.6	5.1
Benzo(a)anthracene	ND	10	2.6	5.1
Benzo(a)pyrene	ND	10	2.6	5.1
Benzo(b)fluoranthene	ND	10	2.6	5.1
Benzo(g,h,i)perylene	ND	10	2.6	5.1
Benzo(k)fluoranthene	ND	10	2.6	5.1
Benzoic Acid	ND	100	21	41
Benzyl Alcohol	ND	10	2.6	5.1
bis(2-Chloroisopropyl) ether	ND	10	2.6	5.1
bis(2-Chloroethoxy)methane	ND	10	2.6	5.1
bis(2-Chloroethyl) ether	ND	10	2.6	5.1
bis(2-Ethylhexyl) phthalate	ND	21	5.1	10
Butylbenzylphthalate	ND	10	2.6	5.1
Carbazole	ND	10	2.6	5.1
Chrysene	ND	10	2.6	5.1
Dibenzo(a,h)anthracene	ND	10	2.6	5.1
Dibenzofuran	ND	10	2.6	5.1
Diethylphthalate	ND	10	2.6	5.1
Dimethylphthalate	ND	10	2.6	5.1
Di-n-butyl phthalate	ND	10	2.6	5.1
Di-n-octyl phthalate	ND	10	2.6	5.1
Fluoranthene	ND	10	2.6	5.1
Fluorene	ND	10	2.6	5.1
Hexachlorobenzene	ND	10	2.6	5.1
Hexachlorobutadiene	ND	10	2.6	5.1
Hexachloroethane	ND	10	2.6	5.1
Indeno(1,2,3-cd)pyrene	ND	10	2.6	5.1
Isophorone	ND	10	2.6	5.1
Naphthalene	ND	10	2.6	5.1
Nitrobenzene	ND	10	2.6	5.1
N-Nitrosodimethylamine	ND	10	2.6	5.1
n-Nitroso-di-n-propylamine	ND	10	2.6	5.1
n-Nitrosodiphenylamine	ND	10	2.6	5.1
Pentachlorophenol	ND	21	2.6	5.1
Phenanthrene	ND	10	2.6	5.1
Phenol	ND	10	2.6	5.1
Pyrene	ND	10	2.6	5.1
Hexachlorocyclopentadiene	ND	10	2.6	5.1
Benzidine	ND	41	10	21
2,3,4,6-Tetrachlorophenol	ND	10	2.6	5.1
2,6-Dichlorophenol	ND	10	2.6	5.1

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	52.4	61.8	85	43-140
2-Fluorobiphenyl	21.2	20.6	103	44-119
2-Fluorophenol	43.3	61.8	70	19-119
Nitrobenzene-d5	23.3	20.6	113	44-120
Phenol-d5	46.0	61.8	74	40-130
Terphenyl-d14	23.9	20.6	116	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW51102023	Date Analyzed:	10/16/23 19:47
Lab Samp ID:	23J087-15	Dilution Factor:	1
Lab File ID:	RJJ364	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	10	2.6	5.1

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW51102023	Date Analyzed:	10/16/23 19:47
Lab Samp ID:	23J087-15	Dilution Factor:	1
Lab File ID:	RJJ364	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.1	10
Benzaldehyde	ND	21	5.1	10

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 970ml	Final Volume :	2ml
Prepared by	: RGalan/POreto	Analyzed by :	KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW40D102023	Date Analyzed:	10/16/23 20:05
Lab Samp ID:	23J087-16	Dilution Factor:	1
Lab File ID:	RJJ365	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	5.9	12
1,2-Dichlorobenzene	ND	12	2.9	5.9
1,2-Diphenylhydrazine	ND	12	2.9	5.9
1,3-Dichlorobenzene	ND	12	2.9	5.9
1,4-Dichlorobenzene	ND	12	2.9	5.9
2,4,5-Trichlorophenol	ND	12	2.9	5.9
2,4,6-Trichlorophenol	ND	12	2.9	5.9
2,4-Dichlorophenol	ND	12	2.9	5.9
2,4-Dimethylphenol	ND	12	2.9	5.9
2,4-Dinitrophenol	ND	24	2.9	5.9
2,4-Dinitrotoluene	ND	12	2.9	5.9
2,6-Dinitrotoluene	ND	12	2.9	5.9
2-Chloronaphthalene	ND	12	2.9	5.9
2-Chlorophenol	ND	12	2.9	5.9
2-Methylnaphthalene	ND	12	2.9	5.9
2-Methylphenol	ND	12	2.9	5.9
2-Nitroaniline	ND	12	2.9	5.9
2-Nitrophenol	ND	12	2.9	5.9
3,3'-Dichlorobenzidine	ND	12	2.9	5.9
3/4-Methylphenol	ND	12	2.9	5.9
3-Nitroaniline	ND	12	2.9	5.9
4,6-Dinitro-2-methylphenol	ND	24	2.9	5.9
4-Bromophenyl phenyl ether	ND	12	2.9	5.9
4-Chloro-3-methylphenol	ND	12	2.9	5.9
4-Chloroaniline	ND	24	5.9	12
4-Chlorophenyl-phenyl ether	ND	12	2.9	5.9
4-Nitroaniline	ND	12	2.9	5.9
4-Nitrophenol	ND	24	2.9	5.9
Acenaphthene	ND	12	2.9	5.9
Acenaphthylene	ND	12	2.9	5.9
Anthracene	ND	12	2.9	5.9
Benzo(a)anthracene	ND	12	2.9	5.9
Benzo(a)pyrene	ND	12	2.9	5.9
Benzo(b)fluoranthene	ND	12	2.9	5.9
Benzo(g,h,i)perylene	ND	12	2.9	5.9
Benzo(k)fluoranthene	ND	12	2.9	5.9
Benzoic Acid	ND	120	24	47
Benzyl Alcohol	ND	12	2.9	5.9
bis(2-Chloroisopropyl) ether	ND	12	2.9	5.9
bis(2-Chloroethoxy)methane	ND	12	2.9	5.9
bis(2-Chloroethyl) ether	ND	12	2.9	5.9
bis(2-Ethylhexyl) phthalate	ND	24	5.9	12
Butylbenzylphthalate	ND	12	2.9	5.9
Carbazole	ND	12	2.9	5.9
Chrysene	ND	12	2.9	5.9
Dibenzo(a,h)anthracene	ND	12	2.9	5.9
Dibenzofuran	ND	12	2.9	5.9
Diethylphthalate	ND	12	2.9	5.9
Dimethylphthalate	ND	12	2.9	5.9
Di-n-butyl phthalate	ND	12	2.9	5.9
Di-n-octyl phthalate	ND	12	2.9	5.9
Fluoranthene	ND	12	2.9	5.9
Fluorene	ND	12	2.9	5.9
Hexachlorobenzene	ND	12	2.9	5.9
Hexachlorobutadiene	ND	12	2.9	5.9
Hexachloroethane	ND	12	2.9	5.9
Indeno(1,2,3-cd)pyrene	ND	12	2.9	5.9
Isophorone	ND	12	2.9	5.9
Naphthalene	ND	12	2.9	5.9
Nitrobenzene	ND	12	2.9	5.9
N-Nitrosodimethylamine	ND	12	2.9	5.9
n-Nitroso-di-n-propylamine	ND	12	2.9	5.9
n-Nitrosodiphenylamine	ND	12	2.9	5.9
Pentachlorophenol	ND	24	2.9	5.9
Phenanthrene	ND	12	2.9	5.9
Phenol	ND	12	2.9	5.9
Pyrene	ND	12	2.9	5.9
Hexachlorocyclopentadiene	ND	12	2.9	5.9
Benzidine	ND	47	12	24
2,3,4,6-Tetrachlorophenol	ND	12	2.9	5.9
2,6-Dichlorophenol	ND	12	2.9	5.9

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	61.1	70.8	86	43-140
2-Fluorobiphenyl	24.8	23.6	105	44-119
2-Fluorophenol	48.0	70.8	68	19-119
Nitrobenzene-d5	24.8	23.6	105	44-120
Phenol-d5	52.7	70.8	74	40-130
Terphenyl-d14	27.9	23.6	118	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 850ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW40D102023	Date Analyzed:	10/16/23 20:05
Lab Samp ID:	23J087-16	Dilution Factor:	1
Lab File ID:	RJJ365	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	2.9	5.9

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 850ml	Final Volume	: 2ml
Prepared by	: RGalan/POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW40D102023	Date Analyzed:	10/16/23 20:05
Lab Samp ID:	23J087-16	Dilution Factor:	1
Lab File ID:	RJJ365	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	5.9	12
Benzaldehyde	ND	24	5.9	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 850ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW48102023	Date Analyzed:	10/16/23 20:24
Lab Samp ID:	23J087-17	Dilution Factor:	1
Lab File ID:	RJJ366	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	49.4	65.4	76	43-140
2-Fluorobiphenyl	19.3	21.8	88	44-119
2-Fluorophenol	22.7	65.4	35	19-119
Nitrobenzene-d5	16.7	21.8	77	44-120
Phenol-d5	32.8	65.4	50	40-130
Terphenyl-d14	24.6	21.8	113	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW48102023	Date Analyzed:	10/16/23 20:24
Lab Samp ID:	23J087-17	Dilution Factor:	1
Lab File ID:	RJJ366	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: TMW48102023	Date Analyzed:	10/16/23 20:24
Lab Samp ID:	23J087-17	Dilution Factor:	1
Lab File ID:	RJJ366	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW25102023	Date Analyzed:	10/16/23 20:43
Lab Samp ID:	23J087-18	Dilution Factor:	1
Lab File ID:	RJJ367	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	56.7	65.4	87	43-140
2-Fluorobiphenyl	24.6	21.8	113	44-119
2-Fluorophenol	40.5	65.4	62	19-119
Nitrobenzene-d5	23.2	21.8	107	44-120
Phenol-d5	48.5	65.4	74	40-130
Terphenyl-d14	23.1	21.8	106	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ336

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW25102023	Date Analyzed:	10/16/23 20:43
Lab Samp ID:	23J087-18	Dilution Factor:	1
Lab File ID:	RJJ367	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 13:15
Sample ID	: MW25102023	Date Analyzed:	10/16/23 20:43
Lab Samp ID:	23J087-18	Dilution Factor:	1
Lab File ID:	RJJ367	Matrix:	WATER
Ext Btch ID:	23SVJ026W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : RGalan/POreto Analyzed by : KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of eight(8) water samples were received on 10/07/23 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7J01B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VGH7J01L/VGH7J01C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7J01B	1	NA	10/10/2314:05	10/10/2314:05	AJ10005A	AJ10004A	23VGH7J01	Method Blank
LCS1W	VGH7J01L	1	NA	10/10/2316:07	10/10/2316:07	AJ10008A	AJ10004A	23VGH7J01	Lab Control Sample (LCS)
LCD1W	VGH7J01C	1	NA	10/10/2316:47	10/10/2316:47	AJ10009A	AJ10004A	23VGH7J01	LCS Duplicate
TMW33102023	J087-01	1	NA	10/10/2322:11	10/10/2322:11	AJ10017A	AJ10014A	23VGH7J01	Field Sample
TMW07102023	J087-03	1	NA	10/10/2322:52	10/10/2322:52	AJ10018A	AJ10014A	23VGH7J01	Field Sample
MW29102023	J087-06	1	NA	10/10/2323:32	10/10/2323:32	AJ10019A	AJ10014A	23VGH7J01	Field Sample
MW28102023	J087-08	1	NA	10/11/2300:12	10/11/2300:12	AJ10020A	AJ10014A	23VGH7J01	Field Sample
TMW55102023	J087-09	1	NA	10/11/2300:53	10/11/2300:53	AJ10021A	AJ10014A	23VGH7J01	Field Sample
TMW62102023	J087-13	1	NA	10/11/2301:33	10/11/2301:33	AJ10022A	AJ10014A	23VGH7J01	Field Sample
TMW51102023	J087-15	1	NA	10/11/2302:14	10/11/2302:14	AJ10023A	AJ10014A	23VGH7J01	Field Sample
MW25102023	J087-18	1	NA	10/11/2302:54	10/11/2302:54	AJ10024A	AJ10014A	23VGH7J01	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/10/23 22:11
Sample ID	: TMW33102023	Date Analyzed:	10/10/23 22:11
Lab Samp ID:	J087-01	Dilution Factor:	1
Lab File ID:	AJ10017A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10014A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	16J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	39.8	40.0	99	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/10/23 22:52
Sample ID	: TMW07102023	Date Analyzed:	10/10/23 22:52
Lab Samp ID:	J087-03	Dilution Factor:	1
Lab File ID:	AJ10018A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10014A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	24J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	38.1	40.0	95	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/10/23 23:32
Sample ID	: MW29102023	Date Analyzed:	10/10/23 23:32
Lab Samp ID:	J087-06	Dilution Factor:	1
Lab File ID:	AJ10019A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10014A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	13J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	35.7	40.0	89	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 00:12
Sample ID	: MW28102023	Date Analyzed:	10/11/23 00:12
Lab Samp ID:	J087-08	Dilution Factor:	1
Lab File ID:	AJ10020A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10014A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	15J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.1	40.0	90	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 00:53
Sample ID	: TMW55102023	Date Analyzed:	10/11/23 00:53
Lab Samp ID:	J087-09	Dilution Factor:	1
Lab File ID:	AJ10021A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10014A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	13J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.8	40.0	95	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 01:33
Sample ID	: TMW62102023	Date Analyzed:	10/11/23 01:33
Lab Samp ID:	J087-13	Dilution Factor:	1
Lab File ID:	AJ10022A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10014A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	21J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	39.0	40.0	97	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 02:14
Sample ID	: TMW51102023	Date Analyzed:	10/11/23 02:14
Lab Samp ID:	J087-15	Dilution Factor:	1
Lab File ID:	AJ10023A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10014A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	13J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	35.8	40.0	90	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 02:54
Sample ID	: MW25102023	Date Analyzed:	10/11/23 02:54
Lab Samp ID:	J087-18	Dilution Factor:	1
Lab File ID:	AJ10024A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10014A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.6	40.0	91	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of eight(8) water samples were received on 10/07/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ011WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSJ011WL/DSJ011WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ011WB	1	NA	10/12/2317:34	10/11/2312:45	LJ12012A	LJ12003A	23DSJ011W	Method Blank
LCS1W	DSJ011WL	1	NA	10/12/2317:53	10/11/2312:45	LJ12013A	LJ12003A	23DSJ011W	Lab Control Sample (LCS)
LCD1W	DSJ011WC	1	NA	10/12/2318:11	10/11/2312:45	LJ12014A	LJ12003A	23DSJ011W	LCS Duplicate
TMW33102023	J087-01	1	NA	10/12/2318:48	10/11/2312:45	LJ12016A	LJ12003A	23DSJ011W	Field Sample
TMW07102023	J087-03	1	NA	10/12/2319:07	10/11/2312:45	LJ12017A	LJ12003A	23DSJ011W	Field Sample
MW29102023	J087-06	1	NA	10/12/2320:03	10/11/2312:45	LJ12020A	LJ12018A	23DSJ011W	Field Sample
MW28102023	J087-08	1	NA	10/12/2320:22	10/11/2312:45	LJ12021A	LJ12018A	23DSJ011W	Field Sample
TMW55102023	J087-09	1	NA	10/12/2320:41	10/11/2312:45	LJ12022A	LJ12018A	23DSJ011W	Field Sample
TMW62102023	J087-13	1	NA	10/12/2320:59	10/11/2312:45	LJ12023A	LJ12018A	23DSJ011W	Field Sample
TMW51102023	J087-15	1	NA	10/12/2321:18	10/11/2312:45	LJ12024A	LJ12018A	23DSJ011W	Field Sample
MW25102023	J087-18	1	NA	10/12/2321:37	10/11/2312:45	LJ12025A	LJ12018A	23DSJ011W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:45
Sample ID	: TMW33102023	Date Analyzed:	10/12/23 18:48
Lab Samp ID:	23J087-01	Dilution Factor:	1
Lab File ID:	LJ12016A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.54	0.054	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.802	1.08	74	60-130
Hexacosane	0.277	0.270	103	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:45
Sample ID	: TMW07102023	Date Analyzed:	10/12/23 19:07
Lab Samp ID:	23J087-03	Dilution Factor:	1
Lab File ID:	LJ12017A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.57	0.057	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.819	1.14	72	60-130
Hexacosane	0.280	0.285	98	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:45
Sample ID	: MW29102023	Date Analyzed:	10/12/23 20:03
Lab Samp ID:	23J087-06	Dilution Factor:	1
Lab File ID:	LJ12020A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.16J	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.785	1.10	71	60-130
Hexacosane	0.246	0.275	89	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:45
Sample ID	: MW28102023	Date Analyzed:	10/12/23 20:22
Lab Samp ID:	23J087-08	Dilution Factor:	1
Lab File ID:	LJ12021A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.881	1.09	81	60-130
Hexacosane	0.292	0.273	107	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:45
Sample ID	: TMW55102023	Date Analyzed:	10/12/23 20:41
Lab Samp ID:	23J087-09	Dilution Factor:	1
Lab File ID:	LJ12022A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.56	0.056	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.853	1.11	77	60-130
Hexacosane	0.278	0.278	100	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:45
Sample ID	: TMW62102023	Date Analyzed:	10/12/23 20:59
Lab Samp ID:	23J087-13	Dilution Factor:	1
Lab File ID:	LJ12023A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.53	0.053	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.785	1.06	74	60-130
Hexacosane	0.247	0.265	93	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 940ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:45
Sample ID	: TMW51102023	Date Analyzed:	10/12/23 21:18
Lab Samp ID:	23J087-15	Dilution Factor:	1
Lab File ID:	LJ12024A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.835	1.10	76	60-130
Hexacosane	0.269	0.275	98	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:45
Sample ID	: MW25102023	Date Analyzed:	10/12/23 21:37
Lab Samp ID:	23J087-18	Dilution Factor:	1
Lab File ID:	LJ12025A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.792	1.10	72	60-130
Hexacosane	0.268	0.275	97	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW3520C/8081B
PESTICIDES

A total of eleven(11) water samples were received on 10/07/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ016WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ016WL/CPJ016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ016WB	1	NA	11/08/2317:17	10/12/2311:00	RK08005	RK08003	23CPJ016W	Method Blank
LCS1W	CPJ016WL	1	NA	11/08/2317:37	10/12/2311:00	RK08006	RK08003	23CPJ016W	Lab Control Sample (LCS)
LCD1W	CPJ016WC	1	NA	11/08/2317:58	10/12/2311:00	RK08007	RK08003	23CPJ016W	LCS Duplicate
TMW23102023	J087-04	1	NA	11/08/2318:59	10/12/2311:00	RK08010	RK08003	23CPJ016W	Field Sample
MW29102023	J087-06	1	NA	11/08/2319:19	10/12/2311:00	RK08011	RK08003	23CPJ016W	Field Sample
TMW41102023	J087-07	1	NA	11/08/2319:40	10/12/2311:00	RK08012	RK08003	23CPJ016W	Field Sample
MW28102023	J087-08	1	NA	11/08/2320:00	10/12/2311:00	RK08013	RK08003	23CPJ016W	Field Sample
TMW55102023	J087-09	1	NA	11/08/2320:21	10/12/2311:00	RK08014	RK08003	23CPJ016W	Field Sample
TMW62102023	J087-13	1	NA	11/08/2321:43	10/12/2311:00	RK08018	RK08016	23CPJ016W	Field Sample
TMW39S102023	J087-14	1	NA	11/08/2322:03	10/12/2311:00	RK08019	RK08016	23CPJ016W	Field Sample
TMW51102023	J087-15	1	NA	11/08/2322:24	10/12/2311:00	RK08020	RK08016	23CPJ016W	Field Sample
TMW40D102023	J087-16	1	NA	11/08/2322:44	10/12/2311:00	RK08021	RK08016	23CPJ016W	Field Sample
TMW48102023	J087-17	1	NA	11/08/2323:05	10/12/2311:00	RK08022	RK08016	23CPJ016W	Field Sample
MW25102023	J087-18	1	NA	11/08/2323:25	10/12/2311:00	RK08023	RK08016	23CPJ016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 11:00
Sample ID	: TMW23102023	Date Analyzed:	11/08/23 18:59
Lab Samp ID:	J087-04	Dilution Factor:	1
Lab File ID:	RK08010	Matrix:	WATER
Ext Btch ID:	23CPJ016W	% Moisture:	NA
Calib. Ref.:	RK08003	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND)|ND	0.10	0.020	0.041
gamma-BHC (Lindane)	(ND)|ND	0.10	0.020	0.041
beta-BHC	(ND)|ND	0.10	0.020	0.041
Heptachlor	(ND)|ND	0.10	0.020	0.041
delta-BHC	(ND)|ND	0.10	0.020	0.041
Aldrin	(ND)|ND	0.10	0.020	0.041
Heptachlor Epoxide	(ND)|ND	0.10	0.020	0.041
gamma-Chlordane	(ND)|ND	0.10	0.020	0.041
alpha-Chlordane	(ND)|ND	0.10	0.020	0.041
Endosulfan I	(ND)|ND	0.10	0.020	0.041
4,4'-DDE	(ND)|ND	0.10	0.020	0.041
Dieldrin	(ND)|ND	0.10	0.020	0.041
Endrin	(ND)|ND	0.10	0.020	0.041
4,4'-DDD	(ND)|ND	0.10	0.020	0.041
Endosulfan II	(ND)|ND	0.10	0.020	0.041
4,4'-DDT	(ND)|ND	0.10	0.020	0.041
Endrin Aldehyde	(ND)|ND	0.10	0.020	0.041
Endosulfan Sulfate	(ND)|ND	0.10	0.020	0.041
Methoxychlor	(ND)|ND	1.0	0.10	0.20
Toxaphene	(ND)|ND	2.0	0.25	0.51
Endrin Ketone	(ND)|ND	0.10	0.020	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.233|(0.267)	0.408	65	44-124
Decachlorobiphenyl	0.280|(0.283)	0.408	69	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 980ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK08004		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 08:20
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/12/23 11:00
Sample ID : MW29102023	Date Analyzed: 11/08/23 19:19
Lab Samp ID: J087-06	Dilution Factor: 1
Lab File ID: RK08011	Matrix: WATER
Ext Btch ID: 23CPJ016W	% Moisture: NA
Calib. Ref.: RK08003	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | ND	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.233 | (0.289)	0.400	72	44-124
Decachlorobiphenyl	0.271 | (0.280)	0.400	70	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK08004

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 11:00
Sample ID	: TMW41102023	Date Analyzed:	11/08/23 19:40
Lab Samp ID:	J087-07	Dilution Factor:	1
Lab File ID:	RK08012	Matrix:	WATER
Ext Btch ID:	23CPJ016W	% Moisture:	NA
Calib. Ref.:	RK08003	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.043
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.043
beta-BHC	(ND) | ND	0.11	0.022	0.043
Heptachlor	(ND) | ND	0.11	0.022	0.043
delta-BHC	(ND) | ND	0.11	0.022	0.043
Aldrin	(ND) | ND	0.11	0.022	0.043
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.043
gamma-Chlordane	(ND) | ND	0.11	0.022	0.043
alpha-Chlordane	(ND) | ND	0.11	0.022	0.043
Endosulfan I	(ND) | ND	0.11	0.022	0.043
4,4'-DDE	(ND) | ND	0.11	0.022	0.043
Dieldrin	(ND) | ND	0.11	0.022	0.043
Endrin	(ND) | ND	0.11	0.022	0.043
4,4'-DDD	(ND) | ND	0.11	0.022	0.043
Endosulfan II	(ND) | ND	0.11	0.022	0.043
4,4'-DDT	(ND) | ND	0.11	0.022	0.043
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.043
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.043
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.27	0.54
Endrin Ketone	(ND) | ND	0.11	0.022	0.043

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.196 | (0.254)	0.432	59	44-124
Decachlorobiphenyl	0.222 | (0.230)	0.432	53	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK08004

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 11:00
Sample ID	: MW28102023	Date Analyzed:	11/08/23 20:00
Lab Samp ID:	J087-08	Dilution Factor:	1
Lab File ID:	RK08013	Matrix:	WATER
Ext Btch ID:	23CPJ016W	% Moisture:	NA
Calib. Ref.:	RK08003	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.094	0.019	0.038
gamma-BHC (Lindane)	(ND) | ND	0.094	0.019	0.038
beta-BHC	(ND) | ND	0.094	0.019	0.038
Heptachlor	(ND) | ND	0.094	0.019	0.038
delta-BHC	(ND) | ND	0.094	0.019	0.038
Aldrin	(ND) | ND	0.094	0.019	0.038
Heptachlor Epoxide	(ND) | ND	0.094	0.019	0.038
gamma-Chlordane	(ND) | ND	0.094	0.019	0.038
alpha-Chlordane	(ND) | ND	0.094	0.019	0.038
Endosulfan I	(ND) | ND	0.094	0.019	0.038
4,4'-DDE	(ND) | ND	0.094	0.019	0.038
Dieldrin	(ND) | ND	0.094	0.019	0.038
Endrin	(ND) | ND	0.094	0.019	0.038
4,4'-DDD	(ND) | ND	0.094	0.019	0.038
Endosulfan II	(ND) | ND	0.094	0.019	0.038
4,4'-DDT	(ND) | ND	0.094	0.019	0.038
Endrin Aldehyde	(ND) | ND	0.094	0.019	0.038
Endosulfan Sulfate	(ND) | ND	0.094	0.019	0.038
Methoxychlor	(ND) | ND	0.94	0.094	0.19
Toxaphene	(ND) | ND	1.9	0.24	0.47
Endrin Ketone	(ND) | ND	0.094	0.019	0.038

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.214 | (0.261)	0.376	69	44-124
Decachlorobiphenyl	0.279 | (0.285)	0.376	76	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1060ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK08004		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087
Sample ID : TMW55102023
Lab Samp ID: J087-09
Lab File ID: RK08014
Ext Btch ID: 23CPJ016W
Calib. Ref.: RK08003

Date Collected: 10/06/23 09:15
Date Received: 10/07/23
Date Extracted: 10/12/23 11:00
Date Analyzed: 11/08/23 20:21
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | ND	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.198 | (0.235)	0.400	59	44-124
Decachlorobiphenyl	0.190 | (0.196)	0.400	49	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK08004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 10:10
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/12/23 11:00
Sample ID : TMW62102023	Date Analyzed: 11/08/23 21:43
Lab Samp ID: J087-13	Dilution Factor: 1
Lab File ID: RK08018	Matrix: WATER
Ext Btch ID: 23CPJ016W	% Moisture: NA
Calib. Ref.: RK08016	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.097	0.019	0.039
gamma-BHC (Lindane)	(ND) | ND	0.097	0.019	0.039
beta-BHC	(ND) | ND	0.097	0.019	0.039
Heptachlor	(ND) | ND	0.097	0.019	0.039
delta-BHC	(ND) | ND	0.097	0.019	0.039
Aldrin	(ND) | ND	0.097	0.019	0.039
Heptachlor Epoxide	(ND) | ND	0.097	0.019	0.039
gamma-Chlordane	(ND) | ND	0.097	0.019	0.039
alpha-Chlordane	(ND) | ND	0.097	0.019	0.039
Endosulfan I	(ND) | ND	0.097	0.019	0.039
4,4'-DDE	(ND) | ND	0.097	0.019	0.039
Dieldrin	(ND) | ND	0.097	0.019	0.039
Endrin	(ND) | ND	0.097	0.019	0.039
4,4'-DDD	(ND) | ND	0.097	0.019	0.039
Endosulfan II	(ND) | ND	0.097	0.019	0.039
4,4'-DDT	(ND) | ND	0.097	0.019	0.039
Endrin Aldehyde	(ND) | ND	0.097	0.019	0.039
Endosulfan Sulfate	(ND) | ND	0.097	0.019	0.039
Methoxychlor	(ND) | ND	0.97	0.097	0.19
Toxaphene	(ND) | ND	1.9	0.24	0.49
Endrin Ketone	(ND) | ND	0.097	0.019	0.039

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.229 | (0.264)	0.388	68	44-124
Decachlorobiphenyl	0.274 | (0.275)	0.388	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 1030ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RK08017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087
Sample ID : TMW39S102023
Lab Samp ID: J087-14
Lab File ID: RK08019
Ext Btch ID: 23CPJ016W
Calib. Ref.: RK08016

Date Collected: 10/06/23 11:00
Date Received: 10/07/23
Date Extracted: 10/12/23 11:00
Date Analyzed: 11/08/23 22:03
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.099	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.099	0.020	0.040
beta-BHC	(ND) | ND	0.099	0.020	0.040
Heptachlor	(ND) | ND	0.099	0.020	0.040
delta-BHC	(ND) | ND	0.099	0.020	0.040
Aldrin	(ND) | ND	0.099	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.099	0.020	0.040
gamma-Chlordane	(ND) | ND	0.099	0.020	0.040
alpha-Chlordane	(ND) | ND	0.099	0.020	0.040
Endosulfan I	(ND) | ND	0.099	0.020	0.040
4,4'-DDE	(ND) | ND	0.099	0.020	0.040
Dieldrin	(ND) | ND	0.099	0.020	0.040
Endrin	(ND) | ND	0.099	0.020	0.040
4,4'-DDD	(ND) | ND	0.099	0.020	0.040
Endosulfan II	(ND) | ND	0.099	0.020	0.040
4,4'-DDT	(ND) | ND	0.099	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.099	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.099	0.020	0.040
Methoxychlor	(ND) | ND	0.99	0.099	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.099	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.240 | (0.283)	0.396	72	44-124
Decachlorobiphenyl	0.280 | (0.280)	0.396	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 1010ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK08017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087
Sample ID : TMW51102023
Lab Samp ID: J087-15
Lab File ID: RK08020
Ext Btch ID: 23CPJ016W
Calib. Ref.: RK08016

Date Collected: 10/06/23 11:30
Date Received: 10/07/23
Date Extracted: 10/12/23 11:00
Date Analyzed: 11/08/23 22:24
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.234 | (0.278)	0.416	67	44-124
Decachlorobiphenyl	(0.301) | 0.301	0.416	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK08017

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 11:00
Sample ID	: TMW40D102023	Date Analyzed:	11/08/23 22:44
Lab Samp ID:	J087-16	Dilution Factor:	1
Lab File ID:	RK08021	Matrix:	WATER
Ext Btch ID:	23CPJ016W	% Moisture:	NA
Calib. Ref.:	RK08016	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.11	0.021	0.042
beta-BHC	(ND) | ND	0.11	0.021	0.042
Heptachlor	(ND) | ND	0.11	0.021	0.042
delta-BHC	(ND) | ND	0.11	0.021	0.042
Aldrin	(ND) | ND	0.11	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.11	0.021	0.042
gamma-Chlordane	(ND) | ND	0.11	0.021	0.042
alpha-Chlordane	(ND) | ND	0.11	0.021	0.042
Endosulfan I	(ND) | ND	0.11	0.021	0.042
4,4'-DDE	(ND) | ND	0.11	0.021	0.042
Dieldrin	(ND) | ND	0.11	0.021	0.042
Endrin	(ND) | ND	0.11	0.021	0.042
4,4'-DDD	(ND) | ND	0.11	0.021	0.042
Endosulfan II	(ND) | ND	0.11	0.021	0.042
4,4'-DDT	(ND) | ND	0.11	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.11	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.11	0.021	0.042
Methoxychlor	(ND) | ND	1.1	0.11	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.53
Endrin Ketone	(ND) | ND	0.11	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.267 | (0.318)	0.424	75	44-124
Decachlorobiphenyl	0.357 | (0.359)	0.424	85	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 940ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK08017		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 11:00
Sample ID	: TMW48102023	Date Analyzed:	11/08/23 23:05
Lab Samp ID:	J087-17	Dilution Factor:	1
Lab File ID:	RK08022	Matrix:	WATER
Ext Btch ID:	23CPJ016W	% Moisture:	NA
Calib. Ref.:	RK08016	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.214 | (0.220)	0.416	53	44-124
Decachlorobiphenyl	(0.280) | 0.276	0.416	67	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 960ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK08017		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/12/23 11:00
Sample ID	: MW25102023	Date Analyzed:	11/08/23 23:25
Lab Samp ID:	J087-18	Dilution Factor:	1
Lab File ID:	RK08023	Matrix:	WATER
Ext Btch ID:	23CPJ016W	% Moisture:	NA
Calib. Ref.:	RK08016	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.048
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.048
beta-BHC	(ND) | ND	0.12	0.024	0.048
Heptachlor	(ND) | ND	0.12	0.024	0.048
delta-BHC	(ND) | ND	0.12	0.024	0.048
Aldrin	(ND) | ND	0.12	0.024	0.048
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.048
gamma-Chlordane	(ND) | ND	0.12	0.024	0.048
alpha-Chlordane	(ND) | ND	0.12	0.024	0.048
Endosulfan I	(ND) | ND	0.12	0.024	0.048
4,4'-DDE	(ND) | ND	0.12	0.024	0.048
Dieldrin	(ND) | ND	0.12	0.024	0.048
Endrin	(ND) | ND	0.12	0.024	0.048
4,4'-DDD	(ND) | ND	0.12	0.024	0.048
Endosulfan II	(ND) | ND	0.12	0.024	0.048
4,4'-DDT	(ND) | ND	0.12	0.024	0.048
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.048
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.048
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.30	0.60
Endrin Ketone	(ND) | ND	0.12	0.024	0.048

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.233 | (0.278)	0.476	58	44-124
Decachlorobiphenyl	0.263 | (0.265)	0.476	56	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK08017		

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW3520C/8082A
PCBS

A total of six(6) water samples were received on 10/07/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ016WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 60J016WL/60J016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PCBs

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : 71

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ016WB	1	NA	10/13/2321:07	10/12/2311:00	KJ13034A	KJ13028A	CPJ016W	Method Blank
LCS1W	60J016WL	1	NA	10/13/2321:27	10/12/2311:00	KJ13035A	KJ13028A	CPJ016W	Lab Control Sample (LCS)
LCD1W	60J016WC	1	NA	10/13/2321:47	10/12/2311:00	KJ13036A	KJ13028A	CPJ016W	LCS Duplicate
MW29102023	J087-06	1	NA	10/13/2322:07	10/12/2311:00	KJ13037A	KJ13028A	CPJ016W	Field Sample
MW28102023	J087-08	0.94	NA	10/13/2322:27	10/12/2311:00	KJ13038A	KJ13028A	CPJ016W	Field Sample
TMW55102023	J087-09	1	NA	10/13/2322:47	10/12/2311:00	KJ13039A	KJ13028A	CPJ016W	Field Sample
TMW62102023	J087-13	0.97	NA	10/14/2300:07	10/12/2311:00	KJ13043A	KJ13041A	CPJ016W	Field Sample
TMW51102023	J087-15	1.04	NA	10/14/2300:27	10/12/2311:00	KJ13044A	KJ13041A	CPJ016W	Field Sample
MW25102023	J087-18	1.19	NA	10/14/2300:47	10/12/2311:00	KJ13045A	KJ13041A	CPJ016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/06/23
Project	: USACE WINGATE	Date Received	: 10/07/23
Batch No.	: 23J087	Date Extracted	: 10/12/23 11:00
Sample ID	: MW29102023	Date Analyzed	: 10/13/23 22:07
Lab Samp ID	: J087-06	Dilution Factor	: 1
Lab File ID	: KJ13037A	Matrix	: WATER
Ext Btch ID	: CPJ016W	% Moisture	: NA
Calib. Ref.	: KJ13028A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.50
PCB-1221	(ND)|ND	1.0	0.25	0.50
PCB-1232	(ND)|ND	1.0	0.25	0.50
PCB-1242	(ND)|ND	1.0	0.25	0.50
PCB-1248	(ND)|ND	1.0	0.25	0.50
PCB-1254	(ND)|ND	1.0	0.25	0.50
PCB-1260	(ND)|ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3790|(0.3854)	0.4000	94.8|(96.3)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/12/23 11:00
Sample ID: MW28102023	Date Analyzed: 10/13/23 22:27
Lab Samp ID: J087-08	Dilution Factor: 0.94
Lab File ID: KJ13038A	Matrix : WATER
Ext Btch ID: CPJ016W	% Moisture : NA
Calib. Ref.: KJ13028A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	0.94	0.24	0.47
PCB-1221	(ND)|ND	0.94	0.24	0.47
PCB-1232	(ND)|ND	0.94	0.24	0.47
PCB-1242	(ND)|ND	0.94	0.24	0.47
PCB-1248	(ND)|ND	0.94	0.24	0.47
PCB-1254	(ND)|ND	0.94	0.24	0.47
PCB-1260	(ND)|ND	0.94	0.24	0.47

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3552|(0.3594)	0.3760	94.5|(95.6)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/12/23 11:00
Sample ID: TMW55102023	Date Analyzed: 10/13/23 22:47
Lab Samp ID: J087-09	Dilution Factor: 1
Lab File ID: KJ13039A	Matrix : WATER
Ext Btch ID: CPJ016W	% Moisture : NA
Calib. Ref.: KJ13028A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.50
PCB-1221	(ND)|ND	1.0	0.25	0.50
PCB-1232	(ND)|ND	1.0	0.25	0.50
PCB-1242	(ND)|ND	1.0	0.25	0.50
PCB-1248	(ND)|ND	1.0	0.25	0.50
PCB-1254	(ND)|ND	1.0	0.25	0.50
PCB-1260	(ND)|ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3581|(0.3646)	0.4000	89.5|(91.2)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/06/23
Project	: USACE WINGATE	Date Received	: 10/07/23
Batch No.	: 23J087	Date Extracted	: 10/12/23 11:00
Sample ID	: TMW62102023	Date Analyzed	: 10/14/23 00:07
Lab Samp ID	: J087-13	Dilution Factor	: 0.97
Lab File ID	: KJ13043A	Matrix	: WATER
Ext Btch ID	: CPJ016W	% Moisture	: NA
Calib. Ref.	: KJ13041A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	0.97	0.24	0.49
PCB-1221	(ND)|ND	0.97	0.24	0.49
PCB-1232	(ND)|ND	0.97	0.24	0.49
PCB-1242	(ND)|ND	0.97	0.24	0.49
PCB-1248	(ND)|ND	0.97	0.24	0.49
PCB-1254	(ND)|ND	0.97	0.24	0.49
PCB-1260	(ND)|ND	0.97	0.24	0.49

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3630|(0.3680)	0.3880	93.6|(94.9)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/06/23
Project	: USACE WINGATE	Date Received	: 10/07/23
Batch No.	: 23J087	Date Extracted	: 10/12/23 11:00
Sample ID	: TMW51102023	Date Analyzed	: 10/14/23 00:27
Lab Samp ID	: J087-15	Dilution Factor	: 1.04
Lab File ID	: KJ13044A	Matrix	: WATER
Ext Btch ID	: CPJ016W	% Moisture	: NA
Calib. Ref.	: KJ13041A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3899|(0.3977)	0.4160	93.7|(95.6)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/06/23
Project	: USACE WINGATE	Date Received	: 10/07/23
Batch No.	: 23J087	Date Extracted	: 10/12/23 11:00
Sample ID	: MW25102023	Date Analyzed	: 10/14/23 00:47
Lab Samp ID	: J087-18	Dilution Factor	: 1.19
Lab File ID	: KJ13045A	Matrix	: WATER
Ext Btch ID	: CPJ016W	% Moisture	: NA
Calib. Ref.	: KJ13041A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.2	0.30	0.60
PCB-1221	(ND)|ND	1.2	0.30	0.60
PCB-1232	(ND)|ND	1.2	0.30	0.60
PCB-1242	(ND)|ND	1.2	0.30	0.60
PCB-1248	(ND)|ND	1.2	0.30	0.60
PCB-1254	(ND)|ND	1.2	0.30	0.60
PCB-1260	(ND)|ND	1.2	0.30	0.60

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.4383|(0.4473)	0.4760	92.1|(94.0)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD 8151A
HERBICIDES

A total of six(6) water samples were received on 10/07/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
Samples J087-06, J087-08, J087-13, and J087-18 were re-extracted 3 days out of holding time due to low surrogate recovery which was out of QC limits. All other samples were extracted and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. HEJ005WB and HEJ010WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. HEJ005WL/HEJ005WC and HEJ010WL/HEJ010WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : 16

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEJ005WB	1	NA	10/13/2320:46	10/10/2312:30	WJ13006A	WJ13002A	HEJ005W	Method Blank
LCS1W	HEJ005WL	1	NA	10/13/2321:15	10/10/2312:30	WJ13007A	WJ13002A	HEJ005W	Lab Control Sample (LCS)
LCD1W	HEJ005WC	1	NA	10/13/2321:44	10/10/2312:30	WJ13008A	WJ13002A	HEJ005W	LCS Duplicate
MBLK2W	HEJ010WB	1	NA	10/17/2321:39	10/16/2312:30	WJ17006A	WJ17002A	HEJ010W	Method Blank
LCS2W	HEJ010WL	1	NA	10/17/2322:08	10/16/2312:30	WJ17007A	WJ17002A	HEJ010W	Lab Control Sample (LCS)
LCD2W	HEJ010WC	1	NA	10/17/2322:36	10/16/2312:30	WJ17008A	WJ17002A	HEJ010W	LCS Duplicate
MW29102023	J087-06R	1	NA	10/18/2305:15	10/16/2312:30	WJ17022A	WJ17013A	HEJ010W	Field Sample
MW28102023	J087-08R	1	NA	10/18/2306:41	10/16/2312:30	WJ17025A	WJ17024A	HEJ010W	Field Sample
TMW55102023	J087-09	1	NA	10/14/2302:57	10/10/2312:30	WJ13019A	WJ13014A	HEJ005W	Field Sample
TMW62102023	J087-13R	1	NA	10/18/2307:09	10/16/2312:30	WJ17026A	WJ17024A	HEJ010W	Field Sample
TMW51102023	J087-15	1	NA	10/14/2303:54	10/10/2312:30	WJ13021A	WJ13014A	HEJ005W	Field Sample
MW25102023	J087-18R	1	NA	10/18/2307:38	10/16/2312:30	WJ17027A	WJ17024A	HEJ010W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/16/23 12:30
Sample ID: MW29102023	Date Analyzed: 10/18/23 05:15
Lab Samp ID: J087-06R	Dilution Factor: 1
Lab File ID: WJ17022A	Matrix : WATER
Ext Btch ID: HEJ010W	% Moisture : NA
Calib. Ref.: WJ17013A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.13J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	29J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.494 | (9.052)	10.00	84.9 | (90.5)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/16/23 12:30
Sample ID: MW28102023	Date Analyzed: 10/18/23 06:41
Lab Samp ID: J087-08R	Dilution Factor: 1
Lab File ID: WJ17025A	Matrix : WATER
Ext Btch ID: HEJ010W	% Moisture : NA
Calib. Ref.: WJ17024A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.15J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	42 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.223 | (8.517)	10.00	82.2 | (85.2)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:30
Sample ID: TMW55102023	Date Analyzed: 10/14/23 02:57
Lab Samp ID: J087-09	Dilution Factor: 1
Lab File ID: WJ13019A	Matrix : WATER
Ext Btch ID: HEJ005W	% Moisture : NA
Calib. Ref.: WJ13014A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	32J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.839 | (9.148)	10.00	88.4 | (91.5)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/16/23 12:30
Sample ID: TMW62102023	Date Analyzed: 10/18/23 07:09
Lab Samp ID: J087-13R	Dilution Factor: 1
Lab File ID: WJ17026A	Matrix : WATER
Ext Btch ID: HEJ010W	% Moisture : NA
Calib. Ref.: WJ17024A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	0.13J | (ND)	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	89 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.846 | (9.073)	10.00	78.5 | (90.7)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:30
Sample ID: TMW51102023	Date Analyzed: 10/14/23 03:54
Lab Samp ID: J087-15	Dilution Factor: 1
Lab File ID: WJ13021A	Matrix : WATER
Ext Btch ID: HEJ005W	% Moisture : NA
Calib. Ref.: WJ13014A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	28J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.294 | (8.042)	10.00	72.9 | (80.4)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/16/23 12:30
Sample ID: MW25102023	Date Analyzed: 10/18/23 07:38
Lab Samp ID: J087-18R	Dilution Factor: 1
Lab File ID: WJ17027A	Matrix : WATER
Ext Btch ID: HEJ010W	% Moisture : NA
Calib. Ref.: WJ17024A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	45 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.300 | (8.886)	10.00	83.0 | (88.9)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW8330B
EXPLOSIVES

A total of eighteen(18) water samples were received on 10/07/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- EXJ008WL/EXJ008WC were within LCS limits.
- EXJ010WL/EXJ010WC were within LCS limits.

Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J087-05M/J087-05S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW8330B
EXPLOSIVES

A total of eighteen(18) water samples were received on 10/07/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. EXJ008WB and EXJ010WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- 35J008WL/35J008WC were within LCS limits.
- 35J010WL/35J010WC were within LCS limits.

Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 3,5-Dinitroaniline was within MS QC limits in J087-05M/J087-05S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ008WB	1	NA	10/12/2310:01	10/10/2312:15	XJ10055A	XJ10053A	EXJ008W	Method Blank
LCS1W	EXJ008WL	1	NA	10/12/2310:49	10/10/2312:15	XJ10056A	XJ10053A	EXJ008W	Lab Control Sample (LCS)
LCD1W	EXJ008WC	1	NA	10/12/2311:46	10/10/2312:15	XJ10057A	XJ10053A	EXJ008W	LCS Duplicate
MBLK2W	EXJ010WB	1	NA	10/13/2305:14	10/11/2312:00	XJ10077A	XJ10075A	EXJ010W	Method Blank
LCS2W	EXJ010WL	1	NA	10/13/2306:02	10/11/2312:00	XJ10078A	XJ10075A	EXJ010W	Lab Control Sample (LCS)
LCD2W	EXJ010WC	1	NA	10/13/2306:58	10/11/2312:00	XJ10079A	XJ10075A	EXJ010W	LCS Duplicate
TMW29102023	J087-02	1	NA	10/13/2309:32	10/11/2312:00	XJ10082A	XJ10075A	EXJ010W	Field Sample
TMW07102023	J087-03	1	NA	10/13/2310:28	10/11/2312:00	XJ10083A	XJ10075A	EXJ010W	Field Sample
TMW23102023	J087-04	1	NA	10/13/2311:17	10/11/2312:00	XJ10084A	XJ10075A	EXJ010W	Field Sample
TMW23102023DL	J087-04I	5	NA	10/17/2306:11	10/11/2312:00	XJ16016A	XJ16014A	EXJ010W	Diluted Sample
TMW01102023	J087-05	1	NA	10/13/2312:13	10/11/2312:00	XJ10085A	XJ10075A	EXJ010W	Field Sample
MW29102023	J087-06	1	NA	10/13/2319:12	10/11/2312:00	XJ10093A	XJ10088A	EXJ010W	Field Sample
TMW41102023	J087-07	1	NA	10/13/2320:01	10/11/2312:00	XJ10094A	XJ10088A	EXJ010W	Field Sample
MW28102023	J087-08	1	NA	10/13/2320:57	10/11/2312:00	XJ10095A	XJ10088A	EXJ010W	Field Sample
TMW55102023	J087-09	1	NA	10/13/2321:46	10/11/2312:00	XJ10096A	XJ10088A	EXJ010W	Field Sample
TMW22102023	J087-10	1	NA	10/13/2322:42	10/11/2312:00	XJ10097A	XJ10088A	EXJ010W	Field Sample
TMW02102023	J087-11	1	NA	10/13/2323:31	10/11/2312:00	XJ10098A	XJ10088A	EXJ010W	Field Sample
FDUP05-102023	J087-12	1	NA	10/14/2300:27	10/11/2312:00	XJ10099A	XJ10088A	EXJ010W	Field Sample
TMW62102023	J087-13	1	NA	10/14/2304:46	10/11/2312:00	XJ10104A	XJ10102A	EXJ010W	Field Sample
TMW39S102023	J087-14	1	NA	10/14/2305:42	10/11/2312:00	XJ10105A	XJ10102A	EXJ010W	Field Sample
TMW51102023	J087-15	1	NA	10/12/2314:19	10/10/2312:15	XJ10060A	XJ10053A	EXJ008W	Field Sample
TMW40D102023	J087-16	1	NA	10/12/2315:15	10/10/2312:15	XJ10061A	XJ10053A	EXJ008W	Field Sample
TMW48102023	J087-17	1	NA	10/12/2316:04	10/10/2312:15	XJ10062A	XJ10053A	EXJ008W	Field Sample
MW25102023	J087-18	1	NA	10/12/2317:00	10/10/2312:15	XJ10063A	XJ10053A	EXJ008W	Field Sample
TMW25102023	J087-19	1	NA	10/12/2317:49	10/10/2312:15	XJ10064A	XJ10053A	EXJ008W	Field Sample
TMW01102023MS	J087-05M	1	NA	10/13/2313:01	10/11/2312:00	XJ10086A	XJ10075A	EXJ010W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	1	NA	10/13/2316:31	10/11/2312:00	XJ10090A	XJ10088A	EXJ010W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ008WB	1	NA	10/12/2310:01	10/10/2312:15	XJ10055A	XJ10054A	EXJ008W	Method Blank
LCS1W	35J008WL	1	NA	10/12/2312:34	10/10/2312:15	XJ10058A	XJ10054A	EXJ008W	Lab Control Sample (LCS)
LCD1W	35J008WC	1	NA	10/12/2313:31	10/10/2312:15	XJ10059A	XJ10054A	EXJ008W	LCS Duplicate
MBLK2W	EXJ010WB	1	NA	10/13/2305:14	10/11/2312:00	XJ10077A	XJ10076A	EXJ010W	Method Blank
LCS2W	35J010WL	1	NA	10/13/2307:47	10/11/2312:00	XJ10080A	XJ10076A	EXJ010W	Lab Control Sample (LCS)
LCD2W	35J010WC	1	NA	10/13/2308:43	10/11/2312:00	XJ10081A	XJ10076A	EXJ010W	LCS Duplicate
TMW29102023	J087-02	1	NA	10/13/2309:32	10/11/2312:00	XJ10082A	XJ10076A	EXJ010W	Field Sample
TMW07102023	J087-03	1	NA	10/13/2310:28	10/11/2312:00	XJ10083A	XJ10076A	EXJ010W	Field Sample
TMW23102023	J087-04	1	NA	10/13/2311:17	10/11/2312:00	XJ10084A	XJ10076A	EXJ010W	Field Sample
TMW01102023	J087-05	1	NA	10/13/2312:13	10/11/2312:00	XJ10085A	XJ10076A	EXJ010W	Field Sample
MW29102023	J087-06	1	NA	10/13/2319:12	10/11/2312:00	XJ10093A	XJ10089A	EXJ010W	Field Sample
TMW41102023	J087-07	1	NA	10/13/2320:01	10/11/2312:00	XJ10094A	XJ10089A	EXJ010W	Field Sample
MW28102023	J087-08	1	NA	10/13/2320:57	10/11/2312:00	XJ10095A	XJ10089A	EXJ010W	Field Sample
TMW55102023	J087-09	1	NA	10/13/2321:46	10/11/2312:00	XJ10096A	XJ10089A	EXJ010W	Field Sample
TMW22102023	J087-10	1	NA	10/13/2322:42	10/11/2312:00	XJ10097A	XJ10089A	EXJ010W	Field Sample
TMW02102023	J087-11	1	NA	10/13/2323:31	10/11/2312:00	XJ10098A	XJ10089A	EXJ010W	Field Sample
FDUP05-102023	J087-12	1	NA	10/14/2300:27	10/11/2312:00	XJ10099A	XJ10089A	EXJ010W	Field Sample
TMW62102023	J087-13	1	NA	10/14/2304:46	10/11/2312:00	XJ10104A	XJ10103A	EXJ010W	Field Sample
TMW39S102023	J087-14	1	NA	10/14/2305:42	10/11/2312:00	XJ10105A	XJ10103A	EXJ010W	Field Sample
TMW51102023	J087-15	1	NA	10/12/2314:19	10/10/2312:15	XJ10060A	XJ10054A	EXJ008W	Field Sample
TMW40D102023	J087-16	1	NA	10/12/2315:15	10/10/2312:15	XJ10061A	XJ10054A	EXJ008W	Field Sample
TMW48102023	J087-17	1	NA	10/12/2316:04	10/10/2312:15	XJ10062A	XJ10054A	EXJ008W	Field Sample
MW25102023	J087-18	1	NA	10/12/2317:00	10/10/2312:15	XJ10063A	XJ10054A	EXJ008W	Field Sample
TMW25102023	J087-19	1	NA	10/12/2317:49	10/10/2312:15	XJ10064A	XJ10054A	EXJ008W	Field Sample
TMW01102023MS	J087-05M	1	NA	10/13/2317:27	10/11/2312:00	XJ10091A	XJ10089A	EXJ010W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	1	NA	10/13/2318:16	10/11/2312:00	XJ10092A	XJ10089A	EXJ010W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW29102023	Date Analyzed: 10/13/23 09:32
Lab Samp ID: J087-02	Dilution Factor: 1
Lab File ID: XJ10082A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10075A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.59	4.000	89.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW29102023	Date Analyzed: 10/13/23 09:32
Lab Samp ID: J087-02	Dilution Factor: 1
Lab File ID: XJ10082A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10076A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.59	4.000	89.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW07102023	Date Analyzed: 10/13/23 10:28
Lab Samp ID: J087-03	Dilution Factor: 1
Lab File ID: XJ10083A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10075A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.10	4.000	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW07102023	Date Analyzed: 10/13/23 10:28
Lab Samp ID: J087-03	Dilution Factor: 1
Lab File ID: XJ10083A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10076A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.10	4.000	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:00
Sample ID	: TMW23102023	Date Analyzed:	10/13/23 11:17 # 10/17/23 06:11
Lab Samp ID	: J087-04 #J087-04I	Dilution Factor:	1 # 5
Lab File ID	: XJ10084A #XJ16016A	Matrix	: WATER
Ext Btch ID	: EXJ010W	% Moisture	: NA
Calib. Ref.	: XJ10075A #XJ16014A	Instrument ID	: T-081

	PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
	HMX	ND	1.0	0.10	0.20
#	RDX	46	5.0	0.50	1.0
	1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
	1,3-DINITROBENZENE	ND	1.0	0.10	0.20
	TETRYL	ND	1.0	0.10	0.20
	NITROBENZENE	ND	1.0	0.10	0.20
	2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
	4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
	2-NITROTOLUENE	ND	1.0	0.10	0.20
	3-NITROTOLUENE	ND	1.0	0.10	0.20
	4-NITROTOLUENE	ND	1.0	0.10	0.20

	SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
	3,4-DINITROTOLUENE	3.73	4.000	93.2	60-140
#	3,4-DINITROTOLUENE	3.93	4.000	98.2	60-140

Members of the Associated File

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW23102023	Date Analyzed: 10/13/23 11:17
Lab Samp ID: J087-04	Dilution Factor: 1
Lab File ID: XJ10084A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10075A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	46E	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.73	4.000	93.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:00
Sample ID:	TMW23102023	Date Analyzed:	10/13/23 11:17
Lab Samp ID:	J087-04	Dilution Factor:	1
Lab File ID:	XJ10084A	Matrix :	WATER
Ext Btch ID:	EXJ010W	% Moisture :	NA
Calib. Ref.:	XJ10076A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.73	4.000	93.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW23102023DL	Date Analyzed: 10/17/23 06:11
Lab Samp ID: J087-04I	Dilution Factor: 5
Lab File ID: XJ16016A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ16014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	5.0	0.50	1.0
RDX	46	5.0	0.50	1.0
1,3,5-TRINITROBENZENE	ND	5.0	0.50	1.0
1,3-DINITROBENZENE	ND	5.0	0.50	1.0
TETRYL	ND	5.0	0.50	1.0
NITROBENZENE	ND	5.0	0.50	1.0
2,4,6-TRINITROTOLUENE	ND	5.0	0.50	1.0
4-AMINO-2,6-DINITROTOLUENE	ND	5.0	0.50	1.0
2-AMINO-4,6-DINITROTOLUENE	ND	5.0	0.50	1.0
2,6-DINITROTOLUENE	ND	5.0	0.50	1.0
2,4-DINITROTOLUENE	ND	5.0	0.50	1.0
2-NITROTOLUENE	ND	5.0	0.50	1.0
3-NITROTOLUENE	ND	5.0	0.50	1.0
4-NITROTOLUENE	ND	5.0	0.50	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.93	4.00	98.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW01102023	Date Analyzed: 10/13/23 12:13
Lab Samp ID: J087-05	Dilution Factor: 1
Lab File ID: XJ10085A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10075A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	0.29J	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.79	4.000	94.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW01102023	Date Analyzed: 10/13/23 12:13
Lab Samp ID: J087-05	Dilution Factor: 1
Lab File ID: XJ10085A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10076A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.79	4.000	94.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: MW29102023	Date Analyzed: 10/13/23 19:12
Lab Samp ID: J087-06	Dilution Factor: 1
Lab File ID: XJ10093A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10088A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.80	4.000	94.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: MW29102023	Date Analyzed: 10/13/23 19:12
Lab Samp ID: J087-06	Dilution Factor: 1
Lab File ID: XJ10093A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10089A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.80	4.000	94.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:00
Sample ID:	TMW41102023	Date Analyzed:	10/13/23 20:01
Lab Samp ID:	J087-07	Dilution Factor:	1
Lab File ID:	XJ10094A	Matrix :	WATER
Ext Btch ID:	EXJ010W	% Moisture :	NA
Calib. Ref.:	XJ10088A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW41102023	Date Analyzed: 10/13/23 20:01
Lab Samp ID: J087-07	Dilution Factor: 1
Lab File ID: XJ10094A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10089A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: MW28102023	Date Analyzed: 10/13/23 20:57
Lab Samp ID: J087-08	Dilution Factor: 1
Lab File ID: XJ10095A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10088A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: MW28102023	Date Analyzed: 10/13/23 20:57
Lab Samp ID: J087-08	Dilution Factor: 1
Lab File ID: XJ10095A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10089A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW55102023	Date Analyzed: 10/13/23 21:46
Lab Samp ID: J087-09	Dilution Factor: 1
Lab File ID: XJ10096A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10088A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.66	4.000	91.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW55102023	Date Analyzed: 10/13/23 21:46
Lab Samp ID: J087-09	Dilution Factor: 1
Lab File ID: XJ10096A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10089A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.66	4.000	91.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW22102023	Date Analyzed: 10/13/23 22:42
Lab Samp ID: J087-10	Dilution Factor: 1
Lab File ID: XJ10097A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10088A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.54	4.000	88.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW22102023	Date Analyzed: 10/13/23 22:42
Lab Samp ID: J087-10	Dilution Factor: 1
Lab File ID: XJ10097A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10089A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.54	4.000	88.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW02102023	Date Analyzed: 10/13/23 23:31
Lab Samp ID: J087-11	Dilution Factor: 1
Lab File ID: XJ10098A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10088A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW02102023	Date Analyzed: 10/13/23 23:31
Lab Samp ID: J087-11	Dilution Factor: 1
Lab File ID: XJ10098A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10089A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	0.19J	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: FDUP05-102023	Date Analyzed: 10/14/23 00:27
Lab Samp ID: J087-12	Dilution Factor: 1
Lab File ID: XJ10099A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10088A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.83	4.000	95.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:00
Sample ID:	FDUP05-102023	Date Analyzed:	10/14/23 00:27
Lab Samp ID:	J087-12	Dilution Factor:	1
Lab File ID:	XJ10099A	Matrix :	WATER
Ext Btch ID:	EXJ010W	% Moisture :	NA
Calib. Ref.:	XJ10089A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	0.12J	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.83	4.000	95.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW62102023	Date Analyzed: 10/14/23 04:46
Lab Samp ID: J087-13	Dilution Factor: 1
Lab File ID: XJ10104A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10102A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	15	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.84	4.000	96.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:00
Sample ID:	TMW62102023	Date Analyzed:	10/14/23 04:46
Lab Samp ID:	J087-13	Dilution Factor:	1
Lab File ID:	XJ10104A	Matrix :	WATER
Ext Btch ID:	EXJ010W	% Moisture :	NA
Calib. Ref.:	XJ10103A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.84	4.000	96.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 12:00
Sample ID: TMW39S102023	Date Analyzed: 10/14/23 05:42
Lab Samp ID: J087-14	Dilution Factor: 1
Lab File ID: XJ10105A	Matrix : WATER
Ext Btch ID: EXJ010W	% Moisture : NA
Calib. Ref.: XJ10102A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.63	4.000	90.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 12:00
Sample ID:	TMW39S102023	Date Analyzed:	10/14/23 05:42
Lab Samp ID:	J087-14	Dilution Factor:	1
Lab File ID:	XJ10105A	Matrix :	WATER
Ext Btch ID:	EXJ010W	% Moisture :	NA
Calib. Ref.:	XJ10103A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.63	4.000	90.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: TMW51102023	Date Analyzed: 10/12/23 14:19
Lab Samp ID: J087-15	Dilution Factor: 1
Lab File ID: XJ10060A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10053A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.89	4.000	97.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: TMW51102023	Date Analyzed: 10/12/23 14:19
Lab Samp ID: J087-15	Dilution Factor: 1
Lab File ID: XJ10060A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10054A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.89	4.000	97.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: TMW40D102023	Date Analyzed: 10/12/23 15:15
Lab Samp ID: J087-16	Dilution Factor: 1
Lab File ID: XJ10061A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10053A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.81	4.000	95.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: TMW40D102023	Date Analyzed: 10/12/23 15:15
Lab Samp ID: J087-16	Dilution Factor: 1
Lab File ID: XJ10061A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10054A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.81	4.000	95.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: TMW48102023	Date Analyzed: 10/12/23 16:04
Lab Samp ID: J087-17	Dilution Factor: 1
Lab File ID: XJ10062A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10053A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.80	4.000	95.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: TMW48102023	Date Analyzed: 10/12/23 16:04
Lab Samp ID: J087-17	Dilution Factor: 1
Lab File ID: XJ10062A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10054A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.80	4.000	95.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: MW25102023	Date Analyzed: 10/12/23 17:00
Lab Samp ID: J087-18	Dilution Factor: 1
Lab File ID: XJ10063A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10053A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/06/23
Project	: USACE WINGATE	Date Received	: 10/07/23
Batch No.	: 23J087	Date Extracted	: 10/10/23 12:15
Sample ID	: MW25102023	Date Analyzed	: 10/12/23 17:00
Lab Samp ID	: J087-18	Dilution Factor	: 1
Lab File ID	: XJ10063A	Matrix	: WATER
Ext Btch ID	: EXJ008W	% Moisture	: NA
Calib. Ref.	: XJ10054A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: TMW25102023	Date Analyzed: 10/12/23 17:49
Lab Samp ID: J087-19	Dilution Factor: 1
Lab File ID: XJ10064A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10053A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.92	4.000	97.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 12:15
Sample ID: TMW25102023	Date Analyzed: 10/12/23 17:49
Lab Samp ID: J087-19	Dilution Factor: 1
Lab File ID: XJ10064A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10054A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.92	4.000	97.9	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW8332
NITROGLYCERIN AND PETN

A total of eighteen(18) water samples were received on 10/07/23 to be analyzed for Nitroglycerin And PETN in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. EXJ007WB and EXJ009WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. EXJ007WL/EXJ007WC and EXJ009WL/EXJ009WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J087-05M/J087-05S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ007WB	1	NA	10/11/2313:46	10/10/2311:45	NJ11003A	NJ11002A	EXJ007W	Method Blank
LCS1W	EXJ007WL	1	NA	10/11/2313:55	10/10/2311:45	NJ11004A	NJ11002A	EXJ007W	Lab Control Sample (LCS)
LCD1W	EXJ007WC	1	NA	10/11/2314:05	10/10/2311:45	NJ11005A	NJ11002A	EXJ007W	LCS Duplicate
MBLK2W	EXJ009WB	1	NA	10/13/2309:48	10/11/2311:30	NJ13003A	NJ13002A	EXJ009W	Method Blank
LCS2W	EXJ009WL	1	NA	10/13/2309:57	10/11/2311:30	NJ13004A	NJ13002A	EXJ009W	Lab Control Sample (LCS)
LCD2W	EXJ009WC	1	NA	10/13/2310:06	10/11/2311:30	NJ13005A	NJ13002A	EXJ009W	LCS Duplicate
TMW29102023	J087-02	1	NA	10/13/2310:15	10/11/2311:30	NJ13006A	NJ13002A	EXJ009W	Field Sample
TMW07102023	J087-03	1	NA	10/13/2310:24	10/11/2311:30	NJ13007A	NJ13002A	EXJ009W	Field Sample
TMW23102023	J087-04	1	NA	10/13/2310:33	10/11/2311:30	NJ13008A	NJ13002A	EXJ009W	Field Sample
TMW01102023	J087-05	1	NA	10/13/2310:42	10/11/2311:30	NJ13009A	NJ13002A	EXJ009W	Field Sample
MW29102023	J087-06	1	NA	10/13/2311:10	10/11/2311:30	NJ13012A	NJ13002A	EXJ009W	Field Sample
TMW41102023	J087-07	1	NA	10/13/2311:28	10/11/2311:30	NJ13014A	NJ13013A	EXJ009W	Field Sample
MW28102023	J087-08	1	NA	10/13/2311:37	10/11/2311:30	NJ13015A	NJ13013A	EXJ009W	Field Sample
TMW55102023	J087-09	1	NA	10/13/2311:46	10/11/2311:30	NJ13016A	NJ13013A	EXJ009W	Field Sample
TMW22102023	J087-10	1	NA	10/13/2311:55	10/11/2311:30	NJ13017A	NJ13013A	EXJ009W	Field Sample
TMW02102023	J087-11	1	NA	10/13/2312:04	10/11/2311:30	NJ13018A	NJ13013A	EXJ009W	Field Sample
FDUP05-102023	J087-12	1	NA	10/13/2312:13	10/11/2311:30	NJ13019A	NJ13013A	EXJ009W	Field Sample
TMW62102023	J087-13	1	NA	10/13/2312:22	10/11/2311:30	NJ13020A	NJ13013A	EXJ009W	Field Sample
TMW39S102023	J087-14	1	NA	10/13/2312:31	10/11/2311:30	NJ13021A	NJ13013A	EXJ009W	Field Sample
TMW51102023	J087-15	1	NA	10/11/2314:14	10/10/2311:45	NJ11006A	NJ11002A	EXJ007W	Field Sample
TMW40D102023	J087-16	1	NA	10/11/2314:23	10/10/2311:45	NJ11007A	NJ11002A	EXJ007W	Field Sample
TMW48102023	J087-17	1	NA	10/11/2314:32	10/10/2311:45	NJ11008A	NJ11002A	EXJ007W	Field Sample
MW25102023	J087-18	1	NA	10/11/2314:41	10/10/2311:45	NJ11009A	NJ11002A	EXJ007W	Field Sample
TMW25102023	J087-19	1	NA	10/11/2314:50	10/10/2311:45	NJ11010A	NJ11002A	EXJ007W	Field Sample
TMW01102023MS	J087-05M	1	NA	10/13/2310:51	10/11/2311:30	NJ13010A	NJ13002A	EXJ009W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	1	NA	10/13/2311:01	10/11/2311:30	NJ13011A	NJ13002A	EXJ009W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 11:30
Sample ID: TMW29102023	Date Analyzed: 10/13/23 10:15
Lab Samp ID: J087-02	Dilution Factor: 1
Lab File ID: NJ13006A	Matrix : WATER
Ext Btch ID: EXJ009W	% Moisture : NA
Calib. Ref.: NJ13002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	531	500.0	106	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 11:30
Sample ID: TMW07102023	Date Analyzed: 10/13/23 10:24
Lab Samp ID: J087-03	Dilution Factor: 1
Lab File ID: NJ13007A	Matrix : WATER
Ext Btch ID: EXJ009W	% Moisture : NA
Calib. Ref.: NJ13002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	520	500.0	104	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 11:30
Sample ID: TMW23102023	Date Analyzed: 10/13/23 10:33
Lab Samp ID: J087-04	Dilution Factor: 1
Lab File ID: NJ13008A	Matrix : WATER
Ext Btch ID: EXJ009W	% Moisture : NA
Calib. Ref.: NJ13002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	505	500.0	101	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 11:30
Sample ID: TMW01102023	Date Analyzed: 10/13/23 10:42
Lab Samp ID: J087-05	Dilution Factor: 1
Lab File ID: NJ13009A	Matrix : WATER
Ext Btch ID: EXJ009W	% Moisture : NA
Calib. Ref.: NJ13002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	537	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 11:30
Sample ID: MW29102023	Date Analyzed: 10/13/23 11:10
Lab Samp ID: J087-06	Dilution Factor: 1
Lab File ID: NJ13012A	Matrix : WATER
Ext Btch ID: EXJ009W	% Moisture : NA
Calib. Ref.: NJ13002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	530	500.0	106	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 11:30
Sample ID:	TMW41102023	Date Analyzed:	10/13/23 11:28
Lab Samp ID:	J087-07	Dilution Factor:	1
Lab File ID:	NJ13014A	Matrix :	WATER
Ext Btch ID:	EXJ009W	% Moisture :	NA
Calib. Ref.:	NJ13013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	538	500.0	108	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 11:30
Sample ID:	MW28102023	Date Analyzed:	10/13/23 11:37
Lab Samp ID:	J087-08	Dilution Factor:	1
Lab File ID:	NJ13015A	Matrix :	WATER
Ext Btch ID:	EXJ009W	% Moisture :	NA
Calib. Ref.:	NJ13013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	523	500.0	105	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 11:30
Sample ID:	TMW55102023	Date Analyzed:	10/13/23 11:46
Lab Samp ID:	J087-09	Dilution Factor:	1
Lab File ID:	NJ13016A	Matrix :	WATER
Ext Btch ID:	EXJ009W	% Moisture :	NA
Calib. Ref.:	NJ13013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	557	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 11:30
Sample ID:	TMW22102023	Date Analyzed:	10/13/23 11:55
Lab Samp ID:	J087-10	Dilution Factor:	1
Lab File ID:	NJ13017A	Matrix :	WATER
Ext Btch ID:	EXJ009W	% Moisture :	NA
Calib. Ref.:	NJ13013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	547	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 11:30
Sample ID: TMW02102023	Date Analyzed: 10/13/23 12:04
Lab Samp ID: J087-11	Dilution Factor: 1
Lab File ID: NJ13018A	Matrix : WATER
Ext Btch ID: EXJ009W	% Moisture : NA
Calib. Ref.: NJ13013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	529	500.0	106	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 11:30
Sample ID:	FDUP05-102023	Date Analyzed:	10/13/23 12:13
Lab Samp ID:	J087-12	Dilution Factor:	1
Lab File ID:	NJ13019A	Matrix :	WATER
Ext Btch ID:	EXJ009W	% Moisture :	NA
Calib. Ref.:	NJ13013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	542	500.0	108	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/11/23 11:30
Sample ID:	TMW62102023	Date Analyzed:	10/13/23 12:22
Lab Samp ID:	J087-13	Dilution Factor:	1
Lab File ID:	NJ13020A	Matrix :	WATER
Ext Btch ID:	EXJ009W	% Moisture :	NA
Calib. Ref.:	NJ13013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	541	500.0	108	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/11/23 11:30
Sample ID: TMW39S102023	Date Analyzed: 10/13/23 12:31
Lab Samp ID: J087-14	Dilution Factor: 1
Lab File ID: NJ13021A	Matrix : WATER
Ext Btch ID: EXJ009W	% Moisture : NA
Calib. Ref.: NJ13013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	555	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 11:45
Sample ID: TMW51102023	Date Analyzed: 10/11/23 14:14
Lab Samp ID: J087-15	Dilution Factor: 1
Lab File ID: NJ11006A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	549	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 11:45
Sample ID: TMW40D102023	Date Analyzed: 10/11/23 14:23
Lab Samp ID: J087-16	Dilution Factor: 1
Lab File ID: NJ11007A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	549	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 11:45
Sample ID: TMW48102023	Date Analyzed: 10/11/23 14:32
Lab Samp ID: J087-17	Dilution Factor: 1
Lab File ID: NJ11008A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	551	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J087	Date Extracted:	10/10/23 11:45
Sample ID:	MW25102023	Date Analyzed:	10/11/23 14:41
Lab Samp ID:	J087-18	Dilution Factor:	1
Lab File ID:	NJ11009A	Matrix :	WATER
Ext Btch ID:	EXJ007W	% Moisture :	NA
Calib. Ref.:	NJ11002A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	550	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J087	Date Extracted: 10/10/23 11:45
Sample ID: TMW25102023	Date Analyzed: 10/11/23 14:50
Lab Samp ID: J087-19	Dilution Factor: 1
Lab File ID: NJ11010A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	559	500.0	112	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW6020A
METALS BY ICP-MS

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Chromium(0.34J <1/2 LOQ) was detected at trace level in IMJ029WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ029WL/IMJ029WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J087-05M/J087-05S - Percent recovery for Sodium(195X) was not within MS. Percent recoveries for Calcium(39X) and Magnesium(7X) was not within MSD QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ029WB	1	NA	10/26/2312:47	10/25/2310:02	H6J20020	H6J20018	IMJ029W	Method Blank
LCS1W	IMJ029WL	1	NA	10/26/2312:50	10/25/2310:02	H6J20021	H6J20018	IMJ029W	Lab Control Sample (LCS)
LCD1W	IMJ029WC	1	NA	10/26/2312:52	10/25/2310:02	H6J20022	H6J20018	IMJ029W	LCS Duplicate
TMW33102023	J087-01I	10	NA	10/26/2313:04	10/25/2310:02	H6J20026	H6J20018	IMJ029W	Diluted Sample
TMW29102023	J087-02G	5	NA	10/26/2313:07	10/25/2310:02	H6J20027	H6J20018	IMJ029W	Diluted Sample
TMW07102023	J087-03I	10	NA	10/26/2313:10	10/25/2310:02	H6J20028	H6J20018	IMJ029W	Diluted Sample
TMW23102023	J087-04G	5	NA	10/26/2313:13	10/25/2310:02	H6J20029	H6J20018	IMJ029W	Diluted Sample
TMW01102023	J087-05A	5	NA	10/26/2313:22	10/25/2310:02	H6J20032	H6J20030	IMJ029W	Analytical Spike Sample
TMW01102023	J087-05G	5	NA	10/26/2313:24	10/25/2310:02	H6J20033	H6J20030	IMJ029W	Diluted Sample
TMW01102023	J087-05J	25	NA	10/26/2313:27	10/25/2310:02	H6J20034	H6J20030	IMJ029W	Diluted Sample
TMW01102023MS	J087-05M	5	NA	10/26/2313:30	10/25/2310:02	H6J20035	H6J20030	IMJ029W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	5	NA	10/26/2313:33	10/25/2310:02	H6J20036	H6J20030	IMJ029W	MS Duplicate (MSD)
MW29102023	J087-06G	5	NA	10/26/2313:36	10/25/2310:02	H6J20037	H6J20030	IMJ029W	Diluted Sample
TMW41102023	J087-07G	5	NA	10/26/2313:39	10/25/2310:02	H6J20038	H6J20030	IMJ029W	Diluted Sample
MW28102023	J087-08G	5	NA	10/26/2313:42	10/25/2310:02	H6J20039	H6J20030	IMJ029W	Diluted Sample
TMW55102023	J087-09G	5	NA	10/26/2313:45	10/25/2310:02	H6J20040	H6J20030	IMJ029W	Diluted Sample
TMW22102023	J087-10G	5	NA	10/26/2313:48	10/25/2310:02	H6J20041	H6J20030	IMJ029W	Diluted Sample
TMW02102023	J087-11G	5	NA	10/26/2313:56	10/25/2310:02	H6J20044	H6J20042	IMJ029W	Diluted Sample
FDUP05-102023	J087-12G	5	NA	10/26/2313:59	10/25/2310:02	H6J20045	H6J20042	IMJ029W	Diluted Sample
TMW62102023	J087-13G	5	NA	10/26/2314:02	10/25/2310:02	H6J20046	H6J20042	IMJ029W	Diluted Sample
TMW39S102023	J087-14G	5	NA	10/26/2314:05	10/25/2310:02	H6J20047	H6J20042	IMJ029W	Diluted Sample
TMW51102023	J087-15G	5	NA	10/26/2314:08	10/25/2310:02	H6J20048	H6J20042	IMJ029W	Diluted Sample
TMW40D102023	J087-16G	5	NA	10/26/2314:11	10/25/2310:02	H6J20049	H6J20042	IMJ029W	Diluted Sample
TMW48102023	J087-17G	5	NA	10/26/2314:14	10/25/2310:02	H6J20050	H6J20042	IMJ029W	Diluted Sample
MW25102023	J087-18I	10	NA	10/26/2314:17	10/25/2310:02	H6J20051	H6J20042	IMJ029W	Diluted Sample
TMW25102023	J087-19G	5	NA	10/26/2314:20	10/25/2310:02	H6J20052	H6J20042	IMJ029W	Diluted Sample
TMW33102023	J087-01T	100	NA	10/26/2314:23	10/25/2310:02	H6J20053	H6J20042	IMJ029W	Diluted Sample
TMW29102023	J087-02T	50	NA	10/26/2314:31	10/25/2310:02	H6J20056	H6J20054	IMJ029W	Diluted Sample
TMW07102023	J087-03T	50	NA	10/26/2314:34	10/25/2310:02	H6J20057	H6J20054	IMJ029W	Diluted Sample
TMW23102023	J087-04T	50	NA	10/26/2314:37	10/25/2310:02	H6J20058	H6J20054	IMJ029W	Diluted Sample
TMW01102023	J087-05A	50	NA	10/26/2314:40	10/25/2310:02	H6J20059	H6J20054	IMJ029W	Analytical Spike Sample
TMW01102023	J087-05T	50	NA	10/26/2314:43	10/25/2310:02	H6J20060	H6J20054	IMJ029W	Diluted Sample
TMW01102023	J087-05J	250	NA	10/26/2314:46	10/25/2310:02	H6J20061	H6J20054	IMJ029W	Diluted Sample
TMW01102023MS	J087-05M	50	NA	10/26/2314:49	10/25/2310:02	H6J20062	H6J20054	IMJ029W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	50	NA	10/26/2314:52	10/25/2310:02	H6J20063	H6J20054	IMJ029W	MS Duplicate (MSD)
MW29102023	J087-06T	50	NA	10/26/2314:55	10/25/2310:02	H6J20064	H6J20054	IMJ029W	Diluted Sample
TMW41102023	J087-07T	50	NA	10/26/2314:57	10/25/2310:02	H6J20065	H6J20054	IMJ029W	Diluted Sample
MW28102023	J087-08T	50	NA	10/26/2315:06	10/25/2310:02	H6J20068	H6J20066	IMJ029W	Diluted Sample
TMW55102023	J087-09T	50	NA	10/26/2315:09	10/25/2310:02	H6J20069	H6J20066	IMJ029W	Diluted Sample
TMW22102023	J087-10T	50	NA	10/26/2315:12	10/25/2310:02	H6J20070	H6J20066	IMJ029W	Diluted Sample
TMW02102023	J087-11T	50	NA	10/26/2315:15	10/25/2310:02	H6J20071	H6J20066	IMJ029W	Diluted Sample
FDUP05-102023	J087-12T	50	NA	10/26/2315:18	10/25/2310:02	H6J20072	H6J20066	IMJ029W	Diluted Sample
TMW62102023	J087-13T	50	NA	10/26/2315:21	10/25/2310:02	H6J20073	H6J20066	IMJ029W	Diluted Sample
TMW39S102023	J087-14T	50	NA	10/26/2315:24	10/25/2310:02	H6J20074	H6J20066	IMJ029W	Diluted Sample
TMW51102023	J087-15T	50	NA	10/26/2315:26	10/25/2310:02	H6J20075	H6J20066	IMJ029W	Diluted Sample
TMW40D102023	J087-16T	50	NA	10/26/2315:29	10/25/2310:02	H6J20076	H6J20066	IMJ029W	Diluted Sample
TMW48102023	J087-17T	50	NA	10/26/2315:32	10/25/2310:02	H6J20077	H6J20066	IMJ029W	Diluted Sample
MW25102023	J087-18T	50	NA	10/26/2315:41	10/25/2310:02	H6J20080	H6J20078	IMJ029W	Diluted Sample
TMW25102023	J087-19T	50	NA	10/26/2315:44	10/25/2310:02	H6J20081	H6J20078	IMJ029W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW33102023	Date Analyzed:	10/26/23 13:04
Lab Samp ID:	J087-01I	Dilution Factor:	10
Lab File ID:	H6J20026	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	15	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	32000	1000	200	500
Manganese	150	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	TMW33102023	Date Analyzed:	10/26/23 14:23
Lab Samp ID:	J087-01T	Dilution Factor:	100
Lab File ID:	H6J20053	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2500000	20000	5000	10000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW33102023	Date Analyzed:	10/26/23 13:04
Lab Samp ID:	J087-01I	Dilution Factor:	10
Lab File ID:	H6J20026	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	15	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	32000	1000	200	500
Manganese	150	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	2400000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW33102023	Date Analyzed:	10/26/23 14:23
Lab Samp ID:	J087-01T	Dilution Factor:	100
Lab File ID:	H6J20053	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	ND	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	110000	20000	5000	10000
Chromium	21J	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	33000	10000	2000	5000
Manganese	150	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	2500000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC. Date Collected: 10/06/23 07:25
Project : USACE WINGATE Date Received: 10/07/23
SDG NO. : 23J087 Date Extracted: 10/25/23 10:02
Sample ID: TMW29102023 Date Analyzed: 10/26/23 13:07
Lab Samp ID: J087-02G Dilution Factor: 5
Lab File ID: H6J20027 Matrix: WATER
Ext Btch ID: IMJ029W % Moisture: NA
Calib. Ref.: H6J20018 Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6100	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.1J	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	0.59J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	46000	1000	250	500
Chromium	6.7	5.0	0.50	1.0
Cobalt	2.9J	3.7	0.50	1.0
Copper	5.2J	10	2.5	5.0
Iron	3900	1000	120	250
Lead	3.9J	5.0	0.25	0.50
Magnesium	9100	500	100	250
Manganese	170	5.0	1.2	2.5
Nickel	6.7	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	17	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW29102023 Date Analyzed: 10/26/23 14:31
Lab Samp ID: J087-02T Dilution Factor: 50
Lab File ID: H6J20056 Matrix: WATER
Ext Btch ID: IMJ029W % Moisture: NA
Calib. Ref.: H6J20054 Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	550000	10000	2500	5000

Sample Amount : 50ml Final Volume:50ml
Prepared by : THuang Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:25
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW29102023	Date Analyzed:	10/26/23 13:07
Lab Samp ID:	J087-02G	Dilution Factor:	5
Lab File ID:	H6J20027	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6100	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.1J	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	0.59J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	46000	1000	250	500
Chromium	6.7	5.0	0.50	1.0
Cobalt	2.9J	3.7	0.50	1.0
Copper	5.2J	10	2.5	5.0
Iron	3900	1000	120	250
Lead	3.9J	5.0	0.25	0.50
Magnesium	9100	500	100	250
Manganese	170	5.0	1.2	2.5
Nickel	6.7	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	17	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	540000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW29102023
Lab Samp ID: J087-02T
Lab File ID: H6J20056
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20054

Date Collected: 10/06/23 07:25
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 14:31
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6000	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	130	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	47000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	4000J	10000	1200	2500
Lead	2.7J	50	2.5	5.0
Magnesium	9000	5000	1000	2500
Manganese	180	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	16J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	550000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW07102023	Date Analyzed:	10/26/23 13:10
Lab Samp ID:	J087-03I	Dilution Factor:	10
Lab File ID:	H6J20028	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	19	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	63000	2000	500	1000
Chromium	1.8J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	11000	1000	200	500
Manganese	370	10	2.5	5.0
Nickel	3.5J	10	2.5	5.0
Potassium	3100	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	TMW07102023	Date Analyzed:	10/26/23 14:34
Lab Samp ID:	J087-03T	Dilution Factor:	50
Lab File ID:	H6J20057	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1300000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW07102023	Date Analyzed:	10/26/23 13:10
Lab Samp ID:	J087-03I	Dilution Factor:	10
Lab File ID:	H6J20028	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	19	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	63000	2000	500	1000
Chromium	1.8J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	11000	1000	200	500
Manganese	370	10	2.5	5.0
Nickel	3.5J	10	2.5	5.0
Potassium	3100	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1300000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW07102023	Date Analyzed:	10/26/23 14:34
Lab Samp ID:	J087-03T	Dilution Factor:	50
Lab File ID:	H6J20057	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	19J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	61000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	370	50	12	25
Nickel	ND	50	12	25
Potassium	3300J	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW23102023
Lab Samp ID: J087-04G
Lab File ID: H6J20029
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20018

Date Collected: 10/06/23 07:55
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:13
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	970	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.89J	5.0	0.62	1.2
Barium	25	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	17000	1000	250	500
Chromium	1.9J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	330J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4700	500	100	250
Manganese	6.6	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	410J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW23102023
Lab Samp ID: J087-04T
Lab File ID: H6J20058
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20054

Date Analyzed: 10/26/23 14:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	740000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW23102023	Date Analyzed:	10/26/23 13:13
Lab Samp ID:	J087-04G	Dilution Factor:	5
Lab File ID:	H6J20029	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	970	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.89J	5.0	0.62	1.2
Barium	25	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	17000	1000	250	500
Chromium	1.9J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	330J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4700	500	100	250
Manganese	6.6	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	410J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	750000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW23102023	Date Analyzed:	10/26/23 14:37
Lab Samp ID:	J087-04T	Dilution Factor:	50
Lab File ID:	H6J20058	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	24J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	18000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4900J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	740000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW01102023
Lab Samp ID: J087-05G
Lab File ID: H6J20033
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20030

Date Collected: 10/06/23 08:05
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:24
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	120000	1000	250	500
Chromium	0.75J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.8J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	20000	500	100	250
Manganese	17	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	280J	1000	250	500
Selenium	2.4J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	13	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW01102023
Lab Samp ID: J087-05T
Lab File ID: H6J20060
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20054

Date Analyzed: 10/26/23 14:43
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW01102023	Date Analyzed:	10/26/23 13:24
Lab Samp ID:	J087-05G	Dilution Factor:	5
Lab File ID:	H6J20033	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	120000	1000	250	500
Chromium	0.75J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.8J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	20000	500	100	250
Manganese	17	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	280J	1000	250	500
Selenium	2.4J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	560000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	13	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW01102023	Date Analyzed:	10/26/23 14:43
Lab Samp ID:	J087-05T	Dilution Factor:	50
Lab File ID:	H6J20060	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	120000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	21000	5000	1000	2500
Manganese	17J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	580000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: MW29102023
Lab Samp ID: J087-06G
Lab File ID: H6J20037
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20030

Date Collected: 10/06/23 08:20
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:36
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	10000	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	7.0	5.0	0.62	1.2
Barium	290	5.0	1.2	2.5
Beryllium	1.4J	2.5	0.50	1.0
Cadmium	1.8J	5.0	0.50	1.0
Calcium	82000	1000	250	500
Chromium	38	5.0	0.50	1.0
Cobalt	8.3	3.7	0.50	1.0
Copper	680	10	2.5	5.0
Iron	11000	1000	120	250
Lead	11	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	720	5.0	1.2	2.5
Nickel	28	5.0	1.2	2.5
Potassium	2200	1000	250	500
Selenium	12	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	28	5.0	1.2	2.5
Zinc	78J	100	25	50

Sample ID: MW29102023
Lab Samp ID: J087-06T
Lab File ID: H6J20064
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20054

Date Analyzed: 10/26/23 14:55
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	940000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW29102023	Date Analyzed:	10/26/23 13:36
Lab Samp ID:	J087-06G	Dilution Factor:	5
Lab File ID:	H6J20037	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	10000	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	7.0	5.0	0.62	1.2
Barium	290	5.0	1.2	2.5
Beryllium	1.4J	2.5	0.50	1.0
Cadmium	1.8J	5.0	0.50	1.0
Calcium	82000	1000	250	500
Chromium	38	5.0	0.50	1.0
Cobalt	8.3	3.7	0.50	1.0
Copper	680	10	2.5	5.0
Iron	11000	1000	120	250
Lead	11	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	720	5.0	1.2	2.5
Nickel	28	5.0	1.2	2.5
Potassium	2200	1000	250	500
Selenium	12	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	930000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	28	5.0	1.2	2.5
Zinc	78J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW29102023	Date Analyzed:	10/26/23 14:55
Lab Samp ID:	J087-06T	Dilution Factor:	50
Lab File ID:	H6J20064	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	11000	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	280	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	83000	10000	2500	5000
Chromium	37J	50	5.0	10
Cobalt	8.0J	37	5.0	10
Copper	710	100	25	50
Iron	11000	10000	1200	2500
Lead	9.5J	50	2.5	5.0
Magnesium	13000	5000	1000	2500
Manganese	760	50	12	25
Nickel	30J	50	12	25
Potassium	2600J	10000	2500	5000
Selenium	11J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	940000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	17J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW41102023
Lab Samp ID: J087-07G
Lab File ID: H6J20038
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20030

Date Collected: 10/06/23 08:35
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:39
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	200J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	16000	1000	250	500
Chromium	1.3J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3800	500	100	250
Manganese	2.7J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	520J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW41102023
Lab Samp ID: J087-07T
Lab File ID: H6J20065
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20054

Date Analyzed: 10/26/23 14:57
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	890000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW41102023	Date Analyzed:	10/26/23 13:39
Lab Samp ID:	J087-07G	Dilution Factor:	5
Lab File ID:	H6J20038	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	200J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	16000	1000	250	500
Chromium	1.3J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3800	500	100	250
Manganese	2.7J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	520J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	850000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW41102023	Date Analyzed:	10/26/23 14:57
Lab Samp ID:	J087-07T	Dilution Factor:	50
Lab File ID:	H6J20065	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	18000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4000J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	890000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: MW28102023
Lab Samp ID: J087-08G
Lab File ID: H6J20039
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20030

Date Collected: 10/06/23 08:50
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:42
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3100	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.6J	5.0	0.62	1.2
Barium	110	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	91000	1000	250	500
Chromium	4.6J	5.0	0.50	1.0
Cobalt	2.3J	3.7	0.50	1.0
Copper	41	10	2.5	5.0
Iron	3200	1000	120	250
Lead	2.9J	5.0	0.25	0.50
Magnesium	19000	500	100	250
Manganese	240	5.0	1.2	2.5
Nickel	5.0J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	16	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	11	5.0	1.2	2.5
Zinc	33J	100	25	50

Sample ID: MW28102023
Lab Samp ID: J087-08T
Lab File ID: H6J20068
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20066

Date Analyzed: 10/26/23 15:06
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW28102023	Date Analyzed:	10/26/23 13:42
Lab Samp ID:	J087-08G	Dilution Factor:	5
Lab File ID:	H6J20039	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3100	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.6J	5.0	0.62	1.2
Barium	110	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	91000	1000	250	500
Chromium	4.6J	5.0	0.50	1.0
Cobalt	2.3J	3.7	0.50	1.0
Copper	41	10	2.5	5.0
Iron	3200	1000	120	250
Lead	2.9J	5.0	0.25	0.50
Magnesium	19000	500	100	250
Manganese	240	5.0	1.2	2.5
Nickel	5.0J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	16	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	11	5.0	1.2	2.5
Zinc	33J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW28102023	Date Analyzed:	10/26/23 15:06
Lab Samp ID:	J087-08T	Dilution Factor:	50
Lab File ID:	H6J20068	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3200J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	110	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	92000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	44J	100	25	50
Iron	3300J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	20000	5000	1000	2500
Manganese	250	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	16J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW55102023
Lab Samp ID: J087-09G
Lab File ID: H6J20040
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20030

Date Collected: 10/06/23 09:15
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:45
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1000	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.8	5.0	0.62	1.2
Barium	22	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7800	1000	250	500
Chromium	3.9J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	8.6J	10	2.5	5.0
Iron	730J	1000	120	250
Lead	0.33J	5.0	0.25	0.50
Magnesium	1100	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	2.2J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	20	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW55102023
Lab Samp ID: J087-09T
Lab File ID: H6J20069
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20066

Date Analyzed: 10/26/23 15:09
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	610000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW55102023	Date Analyzed:	10/26/23 13:45
Lab Samp ID:	J087-09G	Dilution Factor:	5
Lab File ID:	H6J20040	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1000	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.8	5.0	0.62	1.2
Barium	22	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7800	1000	250	500
Chromium	3.9J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	8.6J	10	2.5	5.0
Iron	730J	1000	120	250
Lead	0.33J	5.0	0.25	0.50
Magnesium	1100	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	2.2J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	590000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	20	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW55102023	Date Analyzed:	10/26/23 15:09
Lab Samp ID:	J087-09T	Dilution Factor:	50
Lab File ID:	H6J20069	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1000J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	22J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	8600J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1200J	5000	1000	2500
Manganese	21J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	610000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW22102023
Lab Samp ID: J087-10G
Lab File ID: H6J20041
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20030

Date Collected: 10/06/23 09:20
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:48
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	910	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	5.0	0.62	1.2
Barium	41	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	39000	1000	250	500
Chromium	2.7J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	460J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	38	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW22102023
Lab Samp ID: J087-10T
Lab File ID: H6J20070
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20066

Date Analyzed: 10/26/23 15:12
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	890000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW22102023	Date Analyzed:	10/26/23 13:48
Lab Samp ID:	J087-10G	Dilution Factor:	5
Lab File ID:	H6J20041	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	910	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	5.0	0.62	1.2
Barium	41	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	39000	1000	250	500
Chromium	2.7J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	460J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	38	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	840000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW22102023	Date Analyzed:	10/26/23 15:12
Lab Samp ID:	J087-10T	Dilution Factor:	50
Lab File ID:	H6J20070	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	41J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	39000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	12000	5000	1000	2500
Manganese	39J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	890000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW02102023
Lab Samp ID: J087-11G
Lab File ID: H6J20044
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20042

Date Collected: 10/06/23 09:45
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:56
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	8.3	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	75	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	42	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW02102023
Lab Samp ID: J087-11T
Lab File ID: H6J20071
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20066

Date Analyzed: 10/26/23 15:15
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW02102023	Date Analyzed:	10/26/23 13:56
Lab Samp ID:	J087-11G	Dilution Factor:	5
Lab File ID:	H6J20044	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	8.3	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	75	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	42	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW02102023	Date Analyzed:	10/26/23 15:15
Lab Samp ID:	J087-11T	Dilution Factor:	50
Lab File ID:	H6J20071	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	25000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3100J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	72	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	33J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: FDUP05-102023
Lab Samp ID: J087-12G
Lab File ID: H6J20045
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20042

Date Collected: 10/06/23 09:50
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 13:59
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.0J	5.0	0.62	1.2
Barium	8.3	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	74	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	42	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP05-102023
Lab Samp ID: J087-12T
Lab File ID: H6J20072
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20066

Date Analyzed: 10/26/23 15:18
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:50
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	FDUP05-102023	Date Analyzed:	10/26/23 13:59
Lab Samp ID:	J087-12G	Dilution Factor:	5
Lab File ID:	H6J20045	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.0J	5.0	0.62	1.2
Barium	8.3	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	74	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	42	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:50
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	FDUP05-102023	Date Analyzed:	10/26/23 15:18
Lab Samp ID:	J087-12T	Dilution Factor:	50
Lab File ID:	H6J20072	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	27000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3000J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	73	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	31J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 10:10
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: TMW62102023	Date Analyzed: 10/26/23 14:02
Lab Samp ID: J087-13G	Dilution Factor: 5
Lab File ID: H6J20046	Matrix: WATER
Ext Btch ID: IMJ029W	% Moisture: NA
Calib. Ref.: H6J20042	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	4400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	3.5J	5.0	0.50	1.0
Cobalt	2.5J	3.7	0.50	1.0
Copper	6.7J	10	2.5	5.0
Iron	2800	1000	120	250
Lead	2.3J	5.0	0.25	0.50
Magnesium	8200	500	100	250
Manganese	410	5.0	1.2	2.5
Nickel	3.9J	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW62102023	Date Analyzed: 10/26/23 15:21
Lab Samp ID: J087-13T	Dilution Factor: 50
Lab File ID: H6J20073	Matrix: WATER
Ext Btch ID: IMJ029W	% Moisture: NA
Calib. Ref.: H6J20066	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW62102023	Date Analyzed:	10/26/23 14:02
Lab Samp ID:	J087-13G	Dilution Factor:	5
Lab File ID:	H6J20046	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	4400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	130	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	3.5J	5.0	0.50	1.0
Cobalt	2.5J	3.7	0.50	1.0
Copper	6.7J	10	2.5	5.0
Iron	2800	1000	120	250
Lead	2.3J	5.0	0.25	0.50
Magnesium	8200	500	100	250
Manganese	410	5.0	1.2	2.5
Nickel	3.9J	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	750000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW62102023	Date Analyzed:	10/26/23 15:21
Lab Samp ID:	J087-13T	Dilution Factor:	50
Lab File ID:	H6J20073	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	4600J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	120	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	38000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	2900J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8700	5000	1000	2500
Manganese	440	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	760000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW39S102023
Lab Samp ID: J087-14G
Lab File ID: H6J20047
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20042

Date Collected: 10/06/23 11:00
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 14:05
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	400J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	66000	1000	250	500
Chromium	1.8J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	230J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	15000	500	100	250
Manganese	9.8	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	9.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW39S102023
Lab Samp ID: J087-14T
Lab File ID: H6J20074
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20066

Date Analyzed: 10/26/23 15:24
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	790000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW39S102023	Date Analyzed:	10/26/23 14:05
Lab Samp ID:	J087-14G	Dilution Factor:	5
Lab File ID:	H6J20047	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	400J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	66000	1000	250	500
Chromium	1.8J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	230J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	15000	500	100	250
Manganese	9.8	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	9.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	750000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW39S102023	Date Analyzed:	10/26/23 15:24
Lab Samp ID:	J087-14T	Dilution Factor:	50
Lab File ID:	H6J20074	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	69000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	15000	5000	1000	2500
Manganese	13J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	11J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	790000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW51102023
Lab Samp ID: J087-15G
Lab File ID: H6J20048
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20042

Date Collected: 10/06/23 11:30
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 14:08
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	150J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	10	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	19000	1000	250	500
Chromium	0.59J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3000	500	100	250
Manganese	35	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	5.4	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.2	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW51102023
Lab Samp ID: J087-15T
Lab File ID: H6J20075
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20066

Date Analyzed: 10/26/23 15:26
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	710000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 11:30
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: TMW51102023	Date Analyzed: 10/26/23 14:08
Lab Samp ID: J087-15G	Dilution Factor: 5
Lab File ID: H6J20048	Matrix: WATER
Ext Btch ID: IMJ029W	% Moisture: NA
Calib. Ref.: H6J20042	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	150J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	10	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	19000	1000	250	500
Chromium	0.59J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3000	500	100	250
Manganese	35	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	5.4	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	690000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.2	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW51102023	Date Analyzed:	10/26/23 15:26
Lab Samp ID:	J087-15T	Dilution Factor:	50
Lab File ID:	H6J20075	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	20000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3200J	5000	1000	2500
Manganese	42J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	710000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW40D102023	Date Analyzed:	10/26/23 14:11
Lab Samp ID:	J087-16G	Dilution Factor:	5
Lab File ID:	H6J20049	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.4	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2000	500	100	250
Manganese	54	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	2.7J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW40D102023	Date Analyzed:	10/26/23 15:29
Lab Samp ID:	J087-16T	Dilution Factor:	50
Lab File ID:	H6J20076	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	730000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW40D102023	Date Analyzed:	10/26/23 14:11
Lab Samp ID:	J087-16G	Dilution Factor:	5
Lab File ID:	H6J20049	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.4	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2000	500	100	250
Manganese	54	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	2.7J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	720000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW40D102023	Date Analyzed:	10/26/23 15:29
Lab Samp ID:	J087-16T	Dilution Factor:	50
Lab File ID:	H6J20076	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1100J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	16000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2100J	5000	1000	2500
Manganese	60	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	730000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW48102023
Lab Samp ID: J087-17G
Lab File ID: H6J20050
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20042

Date Collected: 10/06/23 13:05
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 14:14
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	820	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.0J	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	65000	1000	250	500
Chromium	0.76J	5.0	0.50	1.0
Cobalt	0.57J	3.7	0.50	1.0
Copper	4.2J	10	2.5	5.0
Iron	730J	1000	120	250
Lead	0.86J	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	4.8J	5.0	0.75	1.5
Silver	4.4J	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	4.9J	5.0	1.2	2.5
Zinc	49J	100	25	50

Sample ID: TMW48102023
Lab Samp ID: J087-17T
Lab File ID: H6J20077
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20066

Date Analyzed: 10/26/23 15:32
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	670000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW48102023	Date Analyzed:	10/26/23 14:14
Lab Samp ID:	J087-17G	Dilution Factor:	5
Lab File ID:	H6J20050	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	820	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.0J	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	65000	1000	250	500
Chromium	0.76J	5.0	0.50	1.0
Cobalt	0.57J	3.7	0.50	1.0
Copper	4.2J	10	2.5	5.0
Iron	730J	1000	120	250
Lead	0.86J	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	4.8J	5.0	0.75	1.5
Silver	4.4J	5.0	0.50	1.0
Sodium	660000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.9J	5.0	1.2	2.5
Zinc	49J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW48102023	Date Analyzed:	10/26/23 15:32
Lab Samp ID:	J087-17T	Dilution Factor:	50
Lab File ID:	H6J20077	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	19J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	67000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	12000	5000	1000	2500
Manganese	110	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	670000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: MW25102023
Lab Samp ID: J087-18I
Lab File ID: H6J20051
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20042

Date Collected: 10/06/23 13:40
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 14:17
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	840J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	25	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	470J	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	21000	1000	200	500
Manganese	53	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1100J	2000	500	1000
Selenium	67	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	3.1J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW25102023
Lab Samp ID: J087-18T
Lab File ID: H6J20080
Ext Btch ID: IMJ029W
Calib. Ref.: H6J20078

Date Analyzed: 10/26/23 15:41
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1400000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 13:40
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: MW25102023	Date Analyzed: 10/26/23 14:17
Lab Samp ID: J087-18I	Dilution Factor: 10
Lab File ID: H6J20051	Matrix: WATER
Ext Btch ID: IMJ029W	% Moisture: NA
Calib. Ref.: H6J20042	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	840J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	25	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	470J	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	21000	1000	200	500
Manganese	53	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1100J	2000	500	1000
Selenium	67	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1300000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	3.1J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW25102023	Date Analyzed:	10/26/23 15:41
Lab Samp ID:	J087-18T	Dilution Factor:	50
Lab File ID:	H6J20080	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	24J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	110000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	21000	5000	1000	2500
Manganese	56	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	69	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1400000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW25102023	Date Analyzed:	10/26/23 14:20
Lab Samp ID:	J087-19G	Dilution Factor:	5
Lab File ID:	H6J20052	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	100J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.85J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	51000	1000	250	500
Chromium	0.65J	5.0	0.50	1.0
Cobalt	0.90J	3.7	0.50	1.0
Copper	4.6J	10	2.5	5.0
Iron	210J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	670	5.0	1.2	2.5
Nickel	3.8J	5.0	1.2	2.5
Potassium	260J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW25102023	Date Analyzed:	10/26/23 15:44
Lab Samp ID:	J087-19T	Dilution Factor:	50
Lab File ID:	H6J20081	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	860000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 14:00
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: TMW25102023	Date Analyzed: 10/26/23 14:20
Lab Samp ID: J087-19G	Dilution Factor: 5
Lab File ID: H6J20052	Matrix: WATER
Ext Btch ID: IMJ029W	% Moisture: NA
Calib. Ref.: H6J20042	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	100J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.85J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	51000	1000	250	500
Chromium	0.65J	5.0	0.50	1.0
Cobalt	0.90J	3.7	0.50	1.0
Copper	4.6J	10	2.5	5.0
Iron	210J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	670	5.0	1.2	2.5
Nickel	3.8J	5.0	1.2	2.5
Potassium	260J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	870000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW25102023	Date Analyzed:	10/26/23 15:44
Lab Samp ID:	J087-19T	Dilution Factor:	50
Lab File ID:	H6J20081	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	18J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	53000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	720	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	860000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MBLK1W	Date Analyzed:	10/26/23 12:47
Lab Samp ID:	IMJ029WB	Dilution Factor:	1
Lab File ID:	H6J20020	Matrix:	WATER
Ext Btch ID:	IMJ029W	% Moisture:	NA
Calib. Ref.:	H6J20018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	0.34J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ030WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ030WL/IMJ030WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J087-05M/J087-05S - Percent recoveries for Calcium(39X) and Sodium(195X) were not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ030WB	1	NA	10/26/2312:55	10/25/2310:02	H6J20023	H6J20018	IMJ030W	Method Blank
LCS1W	IMJ030WL	1	NA	10/26/2312:58	10/25/2310:02	H6J20024	H6J20018	IMJ030W	Lab Control Sample (LCS)
LCD1W	IMJ030WC	1	NA	10/26/2313:01	10/25/2310:02	H6J20025	H6J20018	IMJ030W	LCS Duplicate
TMW33102023	J087-01I	10	NA	10/26/2315:53	10/25/2310:02	H6J20084	H6J20082	IMJ030W	Diluted Sample
TMW29102023	J087-02G	5	NA	10/26/2315:56	10/25/2310:02	H6J20085	H6J20082	IMJ030W	Diluted Sample
TMW07102023	J087-03I	10	NA	10/26/2315:58	10/25/2310:02	H6J20086	H6J20082	IMJ030W	Diluted Sample
TMW23102023	J087-04G	5	NA	10/26/2316:01	10/25/2310:02	H6J20087	H6J20082	IMJ030W	Diluted Sample
TMW01102023	J087-05A	5	NA	10/26/2316:04	10/25/2310:02	H6J20088	H6J20082	IMJ030W	Analytical Spike Sample
TMW01102023	J087-05G	5	NA	10/26/2316:07	10/25/2310:02	H6J20089	H6J20082	IMJ030W	Diluted Sample
TMW01102023	J087-05J	25	NA	10/26/2316:10	10/25/2310:02	H6J20090	H6J20082	IMJ030W	Diluted Sample
TMW01102023MS	J087-05M	5	NA	10/26/2316:13	10/25/2310:02	H6J20091	H6J20082	IMJ030W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	5	NA	10/26/2316:16	10/25/2310:02	H6J20092	H6J20082	IMJ030W	MS Duplicate (MSD)
MW29102023	J087-06G	5	NA	10/26/2316:19	10/25/2310:02	H6J20093	H6J20082	IMJ030W	Diluted Sample
TMW41102023	J087-07G	5	NA	10/26/2316:28	10/25/2310:02	H6J20096	H6J20094	IMJ030W	Diluted Sample
MW28102023	J087-08G	5	NA	10/26/2316:30	10/25/2310:02	H6J20097	H6J20094	IMJ030W	Diluted Sample
TMW55102023	J087-09G	5	NA	10/26/2316:33	10/25/2310:02	H6J20098	H6J20094	IMJ030W	Diluted Sample
TMW22102023	J087-10G	5	NA	10/26/2316:36	10/25/2310:02	H6J20099	H6J20094	IMJ030W	Diluted Sample
TMW02102023	J087-11G	5	NA	10/26/2316:39	10/25/2310:02	H6J20100	H6J20094	IMJ030W	Diluted Sample
FDUP05-102023	J087-12G	5	NA	10/26/2316:42	10/25/2310:02	H6J20101	H6J20094	IMJ030W	Diluted Sample
TMW62102023	J087-13G	5	NA	10/26/2316:45	10/25/2310:02	H6J20102	H6J20094	IMJ030W	Diluted Sample
TMW39S102023	J087-14G	5	NA	10/26/2316:48	10/25/2310:02	H6J20103	H6J20094	IMJ030W	Diluted Sample
TMW51102023	J087-15G	5	NA	10/26/2316:51	10/25/2310:02	H6J20104	H6J20094	IMJ030W	Diluted Sample
TMW40D102023	J087-16G	5	NA	10/26/2316:54	10/25/2310:02	H6J20105	H6J20094	IMJ030W	Diluted Sample
TMW48102023	J087-17G	5	NA	10/26/2317:03	10/25/2310:02	H6J20108	H6J20106	IMJ030W	Diluted Sample
MW25102023	J087-18I	10	NA	10/26/2317:05	10/25/2310:02	H6J20109	H6J20106	IMJ030W	Diluted Sample
TMW25102023	J087-19G	5	NA	10/26/2317:08	10/25/2310:02	H6J20110	H6J20106	IMJ030W	Diluted Sample
TMW33102023	J087-01T	100	NA	10/26/2317:11	10/25/2310:02	H6J20111	H6J20106	IMJ030W	Diluted Sample
TMW29102023	J087-02T	50	NA	10/26/2317:14	10/25/2310:02	H6J20112	H6J20106	IMJ030W	Diluted Sample
TMW07102023	J087-03T	50	NA	10/26/2317:17	10/25/2310:02	H6J20113	H6J20106	IMJ030W	Diluted Sample
TMW23102023	J087-04T	50	NA	10/26/2317:20	10/25/2310:02	H6J20114	H6J20106	IMJ030W	Diluted Sample
TMW01102023	J087-05A	50	NA	10/26/2317:29	10/25/2310:02	H6J20117	H6J20115	IMJ030W	Analytical Spike Sample
TMW01102023	J087-05T	50	NA	10/26/2317:32	10/25/2310:02	H6J20118	H6J20115	IMJ030W	Diluted Sample
TMW01102023	J087-05J	250	NA	10/26/2317:35	10/25/2310:02	H6J20119	H6J20115	IMJ030W	Diluted Sample
TMW01102023MS	J087-05M	50	NA	10/26/2317:38	10/25/2310:02	H6J20120	H6J20115	IMJ030W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	50	NA	10/26/2317:41	10/25/2310:02	H6J20121	H6J20115	IMJ030W	MS Duplicate (MSD)
MW29102023	J087-06T	50	NA	10/26/2317:43	10/25/2310:02	H6J20122	H6J20115	IMJ030W	Diluted Sample
TMW41102023	J087-07T	50	NA	10/26/2317:46	10/25/2310:02	H6J20123	H6J20115	IMJ030W	Diluted Sample
MW28102023	J087-08T	50	NA	10/26/2317:49	10/25/2310:02	H6J20124	H6J20115	IMJ030W	Diluted Sample
TMW55102023	J087-09T	50	NA	10/26/2317:52	10/25/2310:02	H6J20125	H6J20115	IMJ030W	Diluted Sample
TMW22102023	J087-10T	50	NA	10/26/2317:55	10/25/2310:02	H6J20126	H6J20115	IMJ030W	Diluted Sample
TMW02102023	J087-11T	50	NA	10/26/2318:04	10/25/2310:02	H6J20129	H6J20127	IMJ030W	Diluted Sample
FDUP05-102023	J087-12T	50	NA	10/26/2318:07	10/25/2310:02	H6J20130	H6J20127	IMJ030W	Diluted Sample
TMW62102023	J087-13T	50	NA	10/26/2318:10	10/25/2310:02	H6J20131	H6J20127	IMJ030W	Diluted Sample
TMW39S102023	J087-14T	50	NA	10/26/2318:13	10/25/2310:02	H6J20132	H6J20127	IMJ030W	Diluted Sample
TMW51102023	J087-15T	50	NA	10/26/2318:16	10/25/2310:02	H6J20133	H6J20127	IMJ030W	Diluted Sample
TMW40D102023	J087-16T	50	NA	10/26/2318:18	10/25/2310:02	H6J20134	H6J20127	IMJ030W	Diluted Sample
TMW48102023	J087-17T	50	NA	10/26/2318:21	10/25/2310:02	H6J20135	H6J20127	IMJ030W	Diluted Sample
MW25102023	J087-18T	50	NA	10/26/2318:24	10/25/2310:02	H6J20136	H6J20127	IMJ030W	Diluted Sample
TMW25102023	J087-19T	50	NA	10/26/2318:27	10/25/2310:02	H6J20137	H6J20127	IMJ030W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW33102023
Lab Samp ID: J087-01I
Lab File ID: H6J20084
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20082

Date Collected: 10/06/23 07:20
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 15:53
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	14	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	33000	1000	200	500
Manganese	26	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW33102023
Lab Samp ID: J087-01T
Lab File ID: H6J20111
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20106

Date Analyzed: 10/26/23 17:11
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2500000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW33102023	Date Analyzed:	10/26/23 15:53
Lab Samp ID:	J087-01I	Dilution Factor:	10
Lab File ID:	H6J20084	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20082	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	14	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	33000	1000	200	500
Manganese	26	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	2400000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW33102023	Date Analyzed:	10/26/23 17:11
Lab Samp ID:	J087-01T	Dilution Factor:	100
Lab File ID:	H6J20111	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	ND	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	110000	20000	5000	10000
Chromium	ND	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	33000	10000	2000	5000
Manganese	28J	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	2500000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW29102023
Lab Samp ID: J087-02G
Lab File ID: H6J20085
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20082

Date Collected: 10/06/23 07:25
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 15:56
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.74J	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	39000	1000	250	500
Chromium	0.65J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7600	500	100	250
Manganese	5.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	17	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW29102023
Lab Samp ID: J087-02T
Lab File ID: H6J20112
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20106

Date Analyzed: 10/26/23 17:14
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:25
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW29102023	Date Analyzed:	10/26/23 15:56
Lab Samp ID:	J087-02G	Dilution Factor:	5
Lab File ID:	H6J20085	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20082	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.74J	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	39000	1000	250	500
Chromium	0.65J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7600	500	100	250
Manganese	5.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	17	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	560000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 07:25
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: TMW29102023	Date Analyzed: 10/26/23 17:14
Lab Samp ID: J087-02T	Dilution Factor: 50
Lab File ID: H6J20112	Matrix: WATER
Ext Btch ID: IMJ030W	% Moisture: NA
Calib. Ref.: H6J20106	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	40000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7700	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	16J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	580000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW07102023
Lab Samp ID: J087-03I
Lab File ID: H6J20086
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20082

Date Collected: 10/06/23 07:45
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 15:58
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	58000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	11000	1000	200	500
Manganese	280	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	3600	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW07102023
Lab Samp ID: J087-03T
Lab File ID: H6J20113
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20106

Date Analyzed: 10/26/23 17:17
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW07102023	Date Analyzed:	10/26/23 15:58
Lab Samp ID:	J087-03I	Dilution Factor:	10
Lab File ID:	H6J20086	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20082	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	58000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	11000	1000	200	500
Manganese	280	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	3600	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1200000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 07:45
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: TMW07102023	Date Analyzed: 10/26/23 17:17
Lab Samp ID: J087-03T	Dilution Factor: 50
Lab File ID: H6J20113	Matrix: WATER
Ext Btch ID: IMJ030W	% Moisture: NA
Calib. Ref.: H6J20106	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	60000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	300	50	12	25
Nickel	ND	50	12	25
Potassium	3900J	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW23102023
Lab Samp ID: J087-04G
Lab File ID: H6J20087
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20082

Date Collected: 10/06/23 07:55
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:01
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.81J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	17000	1000	250	500
Chromium	0.71J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4600	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	330J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW23102023
Lab Samp ID: J087-04T
Lab File ID: H6J20114
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20106

Date Analyzed: 10/26/23 17:20
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW23102023	Date Analyzed:	10/26/23 16:01
Lab Samp ID:	J087-04G	Dilution Factor:	5
Lab File ID:	H6J20087	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20082	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.81J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	17000	1000	250	500
Chromium	0.71J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4600	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	330J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	760000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 07:55
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW23102023	Date Analyzed:	10/26/23 17:20
Lab Samp ID:	J087-04T	Dilution Factor:	50
Lab File ID:	H6J20114	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	20J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	18000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4700J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	760000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW01102023
Lab Samp ID: J087-05G
Lab File ID: H6J20089
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20082

Date Collected: 10/06/23 08:05
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:07
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.64J	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	120000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.4J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	20000	500	100	250
Manganese	16	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	2.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	13	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW01102023
Lab Samp ID: J087-05T
Lab File ID: H6J20118
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20115

Date Analyzed: 10/26/23 17:32
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	590000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW01102023	Date Analyzed:	10/26/23 16:07
Lab Samp ID:	J087-05G	Dilution Factor:	5
Lab File ID:	H6J20089	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20082	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.64J	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	120000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.4J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	20000	500	100	250
Manganese	16	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	2.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	580000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	13	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW01102023	Date Analyzed:	10/26/23 17:32
Lab Samp ID:	J087-05T	Dilution Factor:	50
Lab File ID:	H6J20118	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	120000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	21000	5000	1000	2500
Manganese	18J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	590000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW29102023	Date Analyzed:	10/26/23 16:19
Lab Samp ID:	J087-06G	Dilution Factor:	5
Lab File ID:	H6J20093	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20082	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	5.0	0.62	1.2
Barium	34	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	44000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	52	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8900	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	460J	1000	250	500
Selenium	16	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	MW29102023	Date Analyzed:	10/26/23 17:43
Lab Samp ID:	J087-06T	Dilution Factor:	50
Lab File ID:	H6J20122	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	950000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 08:20
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: MW29102023	Date Analyzed: 10/26/23 16:19
Lab Samp ID: J087-06G	Dilution Factor: 5
Lab File ID: H6J20093	Matrix: WATER
Ext Btch ID: IMJ030W	% Moisture: NA
Calib. Ref.: H6J20082	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	5.0	0.62	1.2
Barium	34	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	44000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	52	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8900	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	460J	1000	250	500
Selenium	16	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	920000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 08:20
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: MW29102023	Date Analyzed: 10/26/23 17:43
Lab Samp ID: J087-06T	Dilution Factor: 50
Lab File ID: H6J20122	Matrix: WATER
Ext Btch ID: IMJ030W	% Moisture: NA
Calib. Ref.: H6J20115	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	35J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	45000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	52J	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	9200	5000	1000	2500
Manganese	22J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	17J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	950000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW41102023
Lab Samp ID: J087-07G
Lab File ID: H6J20096
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20094

Date Collected: 10/06/23 08:35
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:28
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	10	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	0.63J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3700	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW41102023
Lab Samp ID: J087-07T
Lab File ID: H6J20123
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20115

Date Analyzed: 10/26/23 17:46
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	870000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW41102023	Date Analyzed:	10/26/23 16:28
Lab Samp ID:	J087-07G	Dilution Factor:	5
Lab File ID:	H6J20096	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	10	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	0.63J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3700	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	850000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW41102023	Date Analyzed:	10/26/23 17:46
Lab Samp ID:	J087-07T	Dilution Factor:	50
Lab File ID:	H6J20123	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	16000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3900J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	870000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: MW28102023
Lab Samp ID: J087-08G
Lab File ID: H6J20097
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20094

Date Collected: 10/06/23 08:50
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:30
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.83J	5.0	0.62	1.2
Barium	32	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	78000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	11	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	17000	500	100	250
Manganese	6.7	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	500J	1000	250	500
Selenium	15	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW28102023
Lab Samp ID: J087-08T
Lab File ID: H6J20124
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20115

Date Analyzed: 10/26/23 17:49
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW28102023	Date Analyzed:	10/26/23 16:30
Lab Samp ID:	J087-08G	Dilution Factor:	5
Lab File ID:	H6J20097	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.83J	5.0	0.62	1.2
Barium	32	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	78000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	11	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	17000	500	100	250
Manganese	6.7	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	500J	1000	250	500
Selenium	15	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 08:50
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW28102023	Date Analyzed:	10/26/23 17:49
Lab Samp ID:	J087-08T	Dilution Factor:	50
Lab File ID:	H6J20124	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	32J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	78000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	18000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	14J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW55102023
Lab Samp ID: J087-09G
Lab File ID: H6J20098
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20094

Date Collected: 10/06/23 09:15
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:33
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.3	5.0	0.62	1.2
Barium	9.2	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7100	1000	250	500
Chromium	16	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.6J	10	2.5	5.0
Iron	130J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	790	500	100	250
Manganese	1.5J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	860J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	16	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW55102023
Lab Samp ID: J087-09T
Lab File ID: H6J20125
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20115

Date Analyzed: 10/26/23 17:52
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW55102023	Date Analyzed:	10/26/23 16:33
Lab Samp ID:	J087-09G	Dilution Factor:	5
Lab File ID:	H6J20098	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.3	5.0	0.62	1.2
Barium	9.2	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7100	1000	250	500
Chromium	16	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.6J	10	2.5	5.0
Iron	130J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	790	500	100	250
Manganese	1.5J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	860J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	570000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	16	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:15
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW55102023	Date Analyzed:	10/26/23 17:52
Lab Samp ID:	J087-09T	Dilution Factor:	50
Lab File ID:	H6J20125	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7900J	10000	2500	5000
Chromium	13J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	600000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW22102023
Lab Samp ID: J087-10G
Lab File ID: H6J20099
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20094

Date Collected: 10/06/23 09:20
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:36
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.81J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	37000	1000	250	500
Chromium	0.89J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.7J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	4.1J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW22102023
Lab Samp ID: J087-10T
Lab File ID: H6J20126
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20115

Date Analyzed: 10/26/23 17:55
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	880000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 09:20
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: TMW22102023	Date Analyzed: 10/26/23 16:36
Lab Samp ID: J087-10G	Dilution Factor: 5
Lab File ID: H6J20099	Matrix: WATER
Ext Btch ID: IMJ030W	% Moisture: NA
Calib. Ref.: H6J20094	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.81J	5.0	0.62	1.2
Barium	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	37000	1000	250	500
Chromium	0.89J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.7J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	860000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.1J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:20
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW22102023	Date Analyzed:	10/26/23 17:55
Lab Samp ID:	J087-10T	Dilution Factor:	50
Lab File ID:	H6J20126	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20115	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	38000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	12000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	880000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW02102023
Lab Samp ID: J087-11G
Lab File ID: H6J20100
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20094

Date Collected: 10/06/23 09:45
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:39
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.90J	5.0	0.62	1.2
Barium	8.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	74	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	40	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW02102023
Lab Samp ID: J087-11T
Lab File ID: H6J20129
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20127

Date Analyzed: 10/26/23 18:04
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW02102023	Date Analyzed:	10/26/23 16:39
Lab Samp ID:	J087-11G	Dilution Factor:	5
Lab File ID:	H6J20100	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.90J	5.0	0.62	1.2
Barium	8.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	74	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	40	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW02102023	Date Analyzed:	10/26/23 18:04
Lab Samp ID:	J087-11T	Dilution Factor:	50
Lab File ID:	H6J20129	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	25000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3000J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	74	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	25J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:50
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	FDUP05-102023	Date Analyzed:	10/26/23 16:42
Lab Samp ID:	J087-12G	Dilution Factor:	5
Lab File ID:	H6J20101	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.96J	5.0	0.62	1.2
Barium	8.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	74	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	41	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	FDUP05-102023	Date Analyzed:	10/26/23 18:07
Lab Samp ID:	J087-12T	Dilution Factor:	50
Lab File ID:	H6J20130	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 09:50
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	FDUP05-102023	Date Analyzed:	10/26/23 16:42
Lab Samp ID:	J087-12G	Dilution Factor:	5
Lab File ID:	H6J20101	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.96J	5.0	0.62	1.2
Barium	8.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	24000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	74	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	41	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 09:50
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: FDUP05-102023	Date Analyzed: 10/26/23 18:07
Lab Samp ID: J087-12T	Dilution Factor: 50
Lab File ID: H6J20130	Matrix: WATER
Ext Btch ID: IMJ030W	% Moisture: NA
Calib. Ref.: H6J20127	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	25000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3000J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	74	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	26J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW62102023	Date Analyzed:	10/26/23 16:45
Lab Samp ID:	J087-13G	Dilution Factor:	5
Lab File ID:	H6J20102	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	29000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6800	500	100	250
Manganese	5.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	1.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW62102023	Date Analyzed:	10/26/23 18:10
Lab Samp ID:	J087-13T	Dilution Factor:	50
Lab File ID:	H6J20131	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	750000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 10:10
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: TMW62102023	Date Analyzed: 10/26/23 16:45
Lab Samp ID: J087-13G	Dilution Factor: 5
Lab File ID: H6J20102	Matrix: WATER
Ext Btch ID: IMJ030W	% Moisture: NA
Calib. Ref.: H6J20094	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	29000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6800	500	100	250
Manganese	5.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	1.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	730000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 10:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW62102023	Date Analyzed:	10/26/23 18:10
Lab Samp ID:	J087-13T	Dilution Factor:	50
Lab File ID:	H6J20131	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	16J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	30000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7100	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	750000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW39S102023
Lab Samp ID: J087-14G
Lab File ID: H6J20103
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20094

Date Collected: 10/06/23 11:00
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:48
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	64000	1000	250	500
Chromium	1.2J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	8.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW39S102023
Lab Samp ID: J087-14T
Lab File ID: H6J20132
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20127

Date Analyzed: 10/26/23 18:13
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	770000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW39S102023	Date Analyzed:	10/26/23 16:48
Lab Samp ID:	J087-14G	Dilution Factor:	5
Lab File ID:	H6J20103	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	64000	1000	250	500
Chromium	1.2J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	8.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	750000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/06/23 11:00
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J087	Date Extracted: 10/25/23 10:02
Sample ID: TMW39S102023	Date Analyzed: 10/26/23 18:13
Lab Samp ID: J087-14T	Dilution Factor: 50
Lab File ID: H6J20132	Matrix: WATER
Ext Btch ID: IMJ030W	% Moisture: NA
Calib. Ref.: H6J20127	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	67000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	15000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	8.2J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	770000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW51102023
Lab Samp ID: J087-15G
Lab File ID: H6J20104
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20094

Date Collected: 10/06/23 11:30
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:51
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	18000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	990J	1000	250	500
Selenium	5.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	4.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW51102023
Lab Samp ID: J087-15T
Lab File ID: H6J20133
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20127

Date Analyzed: 10/26/23 18:16
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	710000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW51102023	Date Analyzed:	10/26/23 16:51
Lab Samp ID:	J087-15G	Dilution Factor:	5
Lab File ID:	H6J20104	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	18000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	990J	1000	250	500
Selenium	5.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	690000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:30
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW51102023	Date Analyzed:	10/26/23 18:16
Lab Samp ID:	J087-15T	Dilution Factor:	50
Lab File ID:	H6J20133	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	19000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3000J	5000	1000	2500
Manganese	33J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	710000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW40D102023
Lab Samp ID: J087-16G
Lab File ID: H6J20105
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20094

Date Collected: 10/06/23 11:45
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 16:54
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2000	500	100	250
Manganese	55	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	2.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW40D102023
Lab Samp ID: J087-16T
Lab File ID: H6J20134
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20127

Date Analyzed: 10/26/23 18:18
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	750000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW40D102023	Date Analyzed:	10/26/23 16:54
Lab Samp ID:	J087-16G	Dilution Factor:	5
Lab File ID:	H6J20105	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20094	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2000	500	100	250
Manganese	55	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	2.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	730000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 11:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW40D102023	Date Analyzed:	10/26/23 18:18
Lab Samp ID:	J087-16T	Dilution Factor:	50
Lab File ID:	H6J20134	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	16000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2100J	5000	1000	2500
Manganese	55	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	750000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: TMW48102023
Lab Samp ID: J087-17G
Lab File ID: H6J20108
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20106

Date Collected: 10/06/23 13:05
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 17:03
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	66000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	59	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	4.9J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW48102023
Lab Samp ID: J087-17T
Lab File ID: H6J20135
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20127

Date Analyzed: 10/26/23 18:21
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	690000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW48102023	Date Analyzed:	10/26/23 17:03
Lab Samp ID:	J087-17G	Dilution Factor:	5
Lab File ID:	H6J20108	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	66000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	59	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	4.9J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	660000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW48102023	Date Analyzed:	10/26/23 18:21
Lab Samp ID:	J087-17T	Dilution Factor:	50
Lab File ID:	H6J20135	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	69000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	13000	5000	1000	2500
Manganese	61	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	690000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J087
Sample ID: MW25102023
Lab Samp ID: J087-18I
Lab File ID: H6J20109
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20106

Date Collected: 10/06/23 13:40
Date Received: 10/07/23
Date Extracted: 10/25/23 10:02
Date Analyzed: 10/26/23 17:05
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	21000	1000	200	500
Manganese	20	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	900J	2000	500	1000
Selenium	67	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW25102023
Lab Samp ID: J087-18T
Lab File ID: H6J20136
Ext Btch ID: IMJ030W
Calib. Ref.: H6J20127

Date Analyzed: 10/26/23 18:24
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1400000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW25102023	Date Analyzed:	10/26/23 17:05
Lab Samp ID:	J087-18I	Dilution Factor:	10
Lab File ID:	H6J20109	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	110000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	21000	1000	200	500
Manganese	20	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	900J	2000	500	1000
Selenium	67	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1400000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 13:40
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MW25102023	Date Analyzed:	10/26/23 18:24
Lab Samp ID:	J087-18T	Dilution Factor:	50
Lab File ID:	H6J20136	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	110000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	22000	5000	1000	2500
Manganese	21J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	69	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1400000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW25102023	Date Analyzed:	10/26/23 17:08
Lab Samp ID:	J087-19G	Dilution Factor:	5
Lab File ID:	H6J20110	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	51000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	67	5.0	1.2	2.5
Nickel	1.7J	5.0	1.2	2.5
Potassium	250J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW25102023	Date Analyzed:	10/26/23 18:27
Lab Samp ID:	J087-19T	Dilution Factor:	50
Lab File ID:	H6J20137	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	890000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW25102023	Date Analyzed:	10/26/23 17:08
Lab Samp ID:	J087-19G	Dilution Factor:	5
Lab File ID:	H6J20110	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20106	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	51000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	67	5.0	1.2	2.5
Nickel	1.7J	5.0	1.2	2.5
Potassium	250J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	860000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/06/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	TMW25102023	Date Analyzed:	10/26/23 18:27
Lab Samp ID:	J087-19T	Dilution Factor:	50
Lab File ID:	H6J20137	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20127	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	52000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	68	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	890000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J087	Date Extracted:	10/25/23 10:02
Sample ID:	MBLK1W	Date Analyzed:	10/26/23 12:55
Lab Samp ID:	IMJ030WB	Dilution Factor:	1
Lab File ID:	H6J20023	Matrix:	WATER
Ext Btch ID:	IMJ030W	% Moisture:	NA
Calib. Ref.:	H6J20018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ026WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ026WL/HGJ026WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J087-05M/J087-05S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ026WB	1	NA	10/27/2315:51	10/27/2311:56	M47J013041	M47J013	23HGJ026W	Method Blank
LCS1W	HGJ026WL	1	NA	10/27/2315:53	10/27/2311:56	M47J013042	M47J013	23HGJ026W	Lab Control Sample (LCS)
LCD1W	HGJ026WC	1	NA	10/27/2315:55	10/27/2311:56	M47J013043	M47J013	23HGJ026W	LCS Duplicate
TMW33102023	J087-01	1	NA	10/27/2315:57	10/27/2311:56	M47J013044	M47J013	23HGJ026W	Field Sample
TMW29102023	J087-02	1	NA	10/27/2315:59	10/27/2311:56	M47J013045	M47J013	23HGJ026W	Field Sample
TMW07102023	J087-03	1	NA	10/27/2316:04	10/27/2311:56	M47J013048	M47J013	23HGJ026W	Field Sample
TMW23102023	J087-04	1	NA	10/27/2316:06	10/27/2311:56	M47J013049	M47J013	23HGJ026W	Field Sample
TMW01102023MS	J087-05M	1	NA	10/27/2316:07	10/27/2311:56	M47J013050	M47J013	23HGJ026W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	1	NA	10/27/2316:09	10/27/2311:56	M47J013051	M47J013	23HGJ026W	MS Duplicate (MSD)
TMW01102023	J087-05	1	NA	10/27/2316:13	10/27/2311:56	M47J013053	M47J013	23HGJ026W	Field Sample
MW29102023	J087-06	1	NA	10/27/2316:17	10/27/2311:56	M47J013055	M47J013	23HGJ026W	Field Sample
TMW41102023	J087-07	1	NA	10/27/2316:19	10/27/2311:56	M47J013056	M47J013	23HGJ026W	Field Sample
MW28102023	J087-08	1	NA	10/27/2316:21	10/27/2311:56	M47J013057	M47J013	23HGJ026W	Field Sample
TMW55102023	J087-09	1	NA	10/27/2316:27	10/27/2311:56	M47J013060	M47J013	23HGJ026W	Field Sample
TMW22102023	J087-10	1	NA	10/27/2316:29	10/27/2311:56	M47J013061	M47J013	23HGJ026W	Field Sample
TMW02102023	J087-11	1	NA	10/27/2316:31	10/27/2311:56	M47J013062	M47J013	23HGJ026W	Field Sample
FDUP05-102023	J087-12	1	NA	10/27/2316:32	10/27/2311:56	M47J013063	M47J013	23HGJ026W	Field Sample
TMW62102023	J087-13	1	NA	10/27/2316:34	10/27/2311:56	M47J013064	M47J013	23HGJ026W	Field Sample
TMW39S102023	J087-14	1	NA	10/27/2316:36	10/27/2311:56	M47J013065	M47J013	23HGJ026W	Field Sample
TMW51102023	J087-15	1	NA	10/27/2316:38	10/27/2311:56	M47J013066	M47J013	23HGJ026W	Field Sample
TMW40D102023	J087-16	1	NA	10/27/2316:40	10/27/2311:56	M47J013067	M47J013	23HGJ026W	Field Sample
TMW48102023	J087-17	1	NA	10/27/2316:41	10/27/2311:56	M47J013068	M47J013	23HGJ026W	Field Sample
MW25102023	J087-18	1	NA	10/27/2316:43	10/27/2311:56	M47J013069	M47J013	23HGJ026W	Field Sample
TMW25102023	J087-19	1	NA	10/27/2316:49	10/27/2311:56	M47J013072	M47J013	23HGJ026W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ026WB	ND	1	NA	0.50	0.10	0.20	10/27/2315:51	10/27/2311:56	M47J013041	M47J013	23HGJ026W	NA	NA
LCS1W	HGJ026WL	2.6	1	NA	0.50	0.10	0.20	10/27/2315:53	10/27/2311:56	M47J013042	M47J013	23HGJ026W	NA	NA
LCD1W	HGJ026WC	2.6	1	NA	0.50	0.10	0.20	10/27/2315:55	10/27/2311:56	M47J013043	M47J013	23HGJ026W	NA	NA
TMW33102023	J087-01	ND	1	NA	0.50	0.10	0.20	10/27/2315:57	10/27/2311:56	M47J013044	M47J013	23HGJ026W	10/06/2307:20	10/07/23
TMW29102023	J087-02	ND	1	NA	0.50	0.10	0.20	10/27/2315:59	10/27/2311:56	M47J013045	M47J013	23HGJ026W	10/06/2307:25	10/07/23
TMW07102023	J087-03	ND	1	NA	0.50	0.10	0.20	10/27/2316:04	10/27/2311:56	M47J013048	M47J013	23HGJ026W	10/06/2307:45	10/07/23
TMW23102023	J087-04	ND	1	NA	0.50	0.10	0.20	10/27/2316:06	10/27/2311:56	M47J013049	M47J013	23HGJ026W	10/06/2307:55	10/07/23
TMW01102023MS	J087-05M	2.7	1	NA	0.50	0.10	0.20	10/27/2316:07	10/27/2311:56	M47J013050	M47J013	23HGJ026W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05S	2.7	1	NA	0.50	0.10	0.20	10/27/2316:09	10/27/2311:56	M47J013051	M47J013	23HGJ026W	10/06/2308:05	10/07/23
TMW01102023	J087-05	ND	1	NA	0.50	0.10	0.20	10/27/2316:13	10/27/2311:56	M47J013053	M47J013	23HGJ026W	10/06/2308:05	10/07/23
MW29102023	J087-06	ND	1	NA	0.50	0.10	0.20	10/27/2316:17	10/27/2311:56	M47J013055	M47J013	23HGJ026W	10/06/2308:20	10/07/23
TMW41102023	J087-07	ND	1	NA	0.50	0.10	0.20	10/27/2316:19	10/27/2311:56	M47J013056	M47J013	23HGJ026W	10/06/2308:35	10/07/23
MW28102023	J087-08	ND	1	NA	0.50	0.10	0.20	10/27/2316:21	10/27/2311:56	M47J013057	M47J013	23HGJ026W	10/06/2308:50	10/07/23
TMW55102023	J087-09	ND	1	NA	0.50	0.10	0.20	10/27/2316:27	10/27/2311:56	M47J013060	M47J013	23HGJ026W	10/06/2309:15	10/07/23
TMW22102023	J087-10	ND	1	NA	0.50	0.10	0.20	10/27/2316:29	10/27/2311:56	M47J013061	M47J013	23HGJ026W	10/06/2309:20	10/07/23
TMW02102023	J087-11	ND	1	NA	0.50	0.10	0.20	10/27/2316:31	10/27/2311:56	M47J013062	M47J013	23HGJ026W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12	ND	1	NA	0.50	0.10	0.20	10/27/2316:32	10/27/2311:56	M47J013063	M47J013	23HGJ026W	10/06/2309:50	10/07/23
TMW62102023	J087-13	ND	1	NA	0.50	0.10	0.20	10/27/2316:34	10/27/2311:56	M47J013064	M47J013	23HGJ026W	10/06/2310:10	10/07/23
TMW39S102023	J087-14	ND	1	NA	0.50	0.10	0.20	10/27/2316:36	10/27/2311:56	M47J013065	M47J013	23HGJ026W	10/06/2311:00	10/07/23
TMW51102023	J087-15	ND	1	NA	0.50	0.10	0.20	10/27/2316:38	10/27/2311:56	M47J013066	M47J013	23HGJ026W	10/06/2311:30	10/07/23
TMW40D102023	J087-16	ND	1	NA	0.50	0.10	0.20	10/27/2316:40	10/27/2311:56	M47J013067	M47J013	23HGJ026W	10/06/2311:45	10/07/23
TMW48102023	J087-17	ND	1	NA	0.50	0.10	0.20	10/27/2316:41	10/27/2311:56	M47J013068	M47J013	23HGJ026W	10/06/2313:05	10/07/23
MW25102023	J087-18	ND	1	NA	0.50	0.10	0.20	10/27/2316:43	10/27/2311:56	M47J013069	M47J013	23HGJ026W	10/06/2313:40	10/07/23
TMW25102023	J087-19	ND	1	NA	0.50	0.10	0.20	10/27/2316:49	10/27/2311:56	M47J013072	M47J013	23HGJ026W	10/06/2314:00	10/07/23

Note: Detection limits are reported relative to sample result significant figures.

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ECO & ASSOCIATES, INC.
PROJECT : USACE WINGATE
BATCH NO. : 23J087
METHOD : METHOD SW7470A

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: HGJ026WB	HGJ026WL	HGJ026WC
LAB FILE ID	: M47J013041	M47J013042	M47J013043
DATE PREPARED	: 10/27/2311:56	10/27/2311:56	10/27/2311:56
DATE ANALYZED	: 10/27/2315:51	10/27/2315:53	10/27/2315:55
PREP BATCH	: 23HGJ026W	23HGJ026W	23HGJ026W
CALIBRATION REF	: M47J013	M47J013	M47J013

ACCESSION:

PARAMETERS	MBResult (ug/L)	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Mercury	ND	2.50	2.61	104	2.50	2.58	103	1	82-119	20

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : ECO & ASSOCIATES, INC.
PROJECT : USACE WINGATE
BATCH NO. : 23J087
METHOD : METHOD SW7470A

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: TMW01102023	TMW01102023MS	TMW01102023MSD
LAB SAMPLE ID	: J087-05	J087-05M	J087-05S
LAB FILE ID	: M47J013053	M47J013050	M47J013051
DATE PREPARED	: 10/27/2311:56	10/27/2311:56	10/27/2311:56
DATE ANALYZED	: 10/27/2316:13	10/27/2316:07	10/27/2316:09
PREP BATCH	: 23HGJ026W	23HGJ026W	23HGJ026W
CALIBRATION REF	: M47J013	M47J013	M47J013

ACCESSION:

PARAMETERS	PSResult (ug/L)	SpikeAmt (ug/L)	MSResult (ug/L)	MSRec (%)	SpikeAmt (ug/L)	MSDResult (ug/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Mercury	ND	2.50	2.67	107	2.50	2.66	106	0	82-119	20

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ027WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ027WL/HGJ027WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J087-05M/J087-05S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J087
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ027WB	1	NA	10/28/2313:44	10/28/2310:05	M47J014012	M47J014	23HGJ027W	Method Blank
LCS1W	HGJ027WL	1	NA	10/28/2313:47	10/28/2310:05	M47J014013	M47J014	23HGJ027W	Lab Control Sample (LCS)
LCD1W	HGJ027WC	1	NA	10/28/2313:48	10/28/2310:05	M47J014014	M47J014	23HGJ027W	LCS Duplicate
TMW33102023	J087-01	1	NA	10/28/2314:07	10/28/2310:05	M47J014024	M47J014	23HGJ027W	Field Sample
TMW29102023	J087-02	1	NA	10/28/2314:08	10/28/2310:05	M47J014025	M47J014	23HGJ027W	Field Sample
TMW07102023	J087-03	1	NA	10/28/2314:10	10/28/2310:05	M47J014026	M47J014	23HGJ027W	Field Sample
TMW23102023	J087-04	1	NA	10/28/2314:12	10/28/2310:05	M47J014027	M47J014	23HGJ027W	Field Sample
TMW01102023MS	J087-05M	1	NA	10/28/2314:13	10/28/2310:05	M47J014028	M47J014	23HGJ027W	Matrix Spike Sample (MS)
TMW01102023MSD	J087-05S	1	NA	10/28/2314:15	10/28/2310:05	M47J014029	M47J014	23HGJ027W	MS Duplicate (MSD)
TMW01102023	J087-05	1	NA	10/28/2314:19	10/28/2310:05	M47J014031	M47J014	23HGJ027W	Field Sample
MW29102023	J087-06	1	NA	10/28/2314:23	10/28/2310:05	M47J014033	M47J014	23HGJ027W	Field Sample
TMW41102023	J087-07	1	NA	10/28/2314:29	10/28/2310:05	M47J014036	M47J014	23HGJ027W	Field Sample
MW28102023	J087-08	1	NA	10/28/2314:31	10/28/2310:05	M47J014037	M47J014	23HGJ027W	Field Sample
TMW55102023	J087-09	1	NA	10/28/2314:33	10/28/2310:05	M47J014038	M47J014	23HGJ027W	Field Sample
TMW22102023	J087-10	1	NA	10/28/2314:35	10/28/2310:05	M47J014039	M47J014	23HGJ027W	Field Sample
TMW02102023	J087-11	1	NA	10/28/2314:37	10/28/2310:05	M47J014040	M47J014	23HGJ027W	Field Sample
FDUP05-102023	J087-12	1	NA	10/28/2314:39	10/28/2310:05	M47J014041	M47J014	23HGJ027W	Field Sample
TMW62102023	J087-13	1	NA	10/28/2314:41	10/28/2310:05	M47J014042	M47J014	23HGJ027W	Field Sample
TMW39S102023	J087-14	1	NA	10/28/2314:43	10/28/2310:05	M47J014043	M47J014	23HGJ027W	Field Sample
TMW51102023	J087-15	1	NA	10/28/2314:44	10/28/2310:05	M47J014044	M47J014	23HGJ027W	Field Sample
TMW40D102023	J087-16	1	NA	10/28/2314:46	10/28/2310:05	M47J014045	M47J014	23HGJ027W	Field Sample
TMW48102023	J087-17	1	NA	10/28/2314:52	10/28/2310:05	M47J014048	M47J014	23HGJ027W	Field Sample
MW25102023	J087-18	1	NA	10/28/2314:53	10/28/2310:05	M47J014049	M47J014	23HGJ027W	Field Sample
TMW25102023	J087-19	1	NA	10/28/2314:55	10/28/2310:05	M47J014050	M47J014	23HGJ027W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ027WB	ND	1	NA	0.50	0.10	0.20	10/28/2313:44	10/28/2310:05	M47J014012	M47J014	23HGJ027W	NA	NA
LCS1W	HGJ027WL	2.5	1	NA	0.50	0.10	0.20	10/28/2313:47	10/28/2310:05	M47J014013	M47J014	23HGJ027W	NA	NA
LCD1W	HGJ027WC	2.5	1	NA	0.50	0.10	0.20	10/28/2313:48	10/28/2310:05	M47J014014	M47J014	23HGJ027W	NA	NA
TMW33102023	J087-01	ND	1	NA	0.50	0.10	0.20	10/28/2314:07	10/28/2310:05	M47J014024	M47J014	23HGJ027W	10/06/2307:20	10/07/23
TMW29102023	J087-02	ND	1	NA	0.50	0.10	0.20	10/28/2314:08	10/28/2310:05	M47J014025	M47J014	23HGJ027W	10/06/2307:25	10/07/23
TMW07102023	J087-03	ND	1	NA	0.50	0.10	0.20	10/28/2314:10	10/28/2310:05	M47J014026	M47J014	23HGJ027W	10/06/2307:45	10/07/23
TMW23102023	J087-04	ND	1	NA	0.50	0.10	0.20	10/28/2314:12	10/28/2310:05	M47J014027	M47J014	23HGJ027W	10/06/2307:55	10/07/23
TMW01102023MS	J087-05M	2.7	1	NA	0.50	0.10	0.20	10/28/2314:13	10/28/2310:05	M47J014028	M47J014	23HGJ027W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05S	2.7	1	NA	0.50	0.10	0.20	10/28/2314:15	10/28/2310:05	M47J014029	M47J014	23HGJ027W	10/06/2308:05	10/07/23
TMW01102023	J087-05	ND	1	NA	0.50	0.10	0.20	10/28/2314:19	10/28/2310:05	M47J014031	M47J014	23HGJ027W	10/06/2308:05	10/07/23
MW29102023	J087-06	ND	1	NA	0.50	0.10	0.20	10/28/2314:23	10/28/2310:05	M47J014033	M47J014	23HGJ027W	10/06/2308:20	10/07/23
TMW41102023	J087-07	ND	1	NA	0.50	0.10	0.20	10/28/2314:29	10/28/2310:05	M47J014036	M47J014	23HGJ027W	10/06/2308:35	10/07/23
MW28102023	J087-08	ND	1	NA	0.50	0.10	0.20	10/28/2314:31	10/28/2310:05	M47J014037	M47J014	23HGJ027W	10/06/2308:50	10/07/23
TMW55102023	J087-09	ND	1	NA	0.50	0.10	0.20	10/28/2314:33	10/28/2310:05	M47J014038	M47J014	23HGJ027W	10/06/2309:15	10/07/23
TMW22102023	J087-10	ND	1	NA	0.50	0.10	0.20	10/28/2314:35	10/28/2310:05	M47J014039	M47J014	23HGJ027W	10/06/2309:20	10/07/23
TMW02102023	J087-11	ND	1	NA	0.50	0.10	0.20	10/28/2314:37	10/28/2310:05	M47J014040	M47J014	23HGJ027W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12	ND	1	NA	0.50	0.10	0.20	10/28/2314:39	10/28/2310:05	M47J014041	M47J014	23HGJ027W	10/06/2309:50	10/07/23
TMW62102023	J087-13	ND	1	NA	0.50	0.10	0.20	10/28/2314:41	10/28/2310:05	M47J014042	M47J014	23HGJ027W	10/06/2310:10	10/07/23
TMW39S102023	J087-14	ND	1	NA	0.50	0.10	0.20	10/28/2314:43	10/28/2310:05	M47J014043	M47J014	23HGJ027W	10/06/2311:00	10/07/23
TMW51102023	J087-15	ND	1	NA	0.50	0.10	0.20	10/28/2314:44	10/28/2310:05	M47J014044	M47J014	23HGJ027W	10/06/2311:30	10/07/23
TMW40D102023	J087-16	ND	1	NA	0.50	0.10	0.20	10/28/2314:46	10/28/2310:05	M47J014045	M47J014	23HGJ027W	10/06/2311:45	10/07/23
TMW48102023	J087-17	ND	1	NA	0.50	0.10	0.20	10/28/2314:52	10/28/2310:05	M47J014048	M47J014	23HGJ027W	10/06/2313:05	10/07/23
MW25102023	J087-18	ND	1	NA	0.50	0.10	0.20	10/28/2314:53	10/28/2310:05	M47J014049	M47J014	23HGJ027W	10/06/2313:40	10/07/23
TMW25102023	J087-19	ND	1	NA	0.50	0.10	0.20	10/28/2314:55	10/28/2310:05	M47J014050	M47J014	23HGJ027W	10/06/2314:00	10/07/23

Note: Detection limits are reported relative to sample result significant figures.

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ECO & ASSOCIATES, INC.
PROJECT : USACE WINGATE
BATCH NO. : 23J087
METHOD : METHOD SW7470A (DISSOLVED)

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: HGJ027WB	HGJ027WL	HGJ027WC
LAB FILE ID	: M47J014012	M47J014013	M47J014014
DATE PREPARED	: 10/28/2310:05	10/28/2310:05	10/28/2310:05
DATE ANALYZED	: 10/28/2313:44	10/28/2313:47	10/28/2313:48
PREP BATCH	: 23HGJ027W	23HGJ027W	23HGJ027W
CALIBRATION REF	: M47J014	M47J014	M47J014

ACCESSION:

PARAMETERS	MBResult (ug/L)	SpikeAmt (ug/L)	LCSResult (ug/L)	LCSRec (%)	SpikeAmt (ug/L)	LCDResult (ug/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Mercury	ND	2.50	2.47	99	2.50	2.54	102	3	82-119	20

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : ECO & ASSOCIATES, INC.
PROJECT : USACE WINGATE
BATCH NO. : 23J087
METHOD : METHOD SW7470A (DISSOLVED)

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: TMW01102023	TMW01102023MS	TMW01102023MSD
LAB SAMPLE ID	: J087-05	J087-05M	J087-05S
LAB FILE ID	: M47J014031	M47J014028	M47J014029
DATE PREPARED	: 10/28/2310:05	10/28/2310:05	10/28/2310:05
DATE ANALYZED	: 10/28/2314:19	10/28/2314:13	10/28/2314:15
PREP BATCH	: 23HGJ027W	23HGJ027W	23HGJ027W
CALIBRATION REF	: M47J014	M47J014	M47J014

ACCESSION:

PARAMETERS	PSResult (ug/L)	SpikeAmt (ug/L)	MSResult (ug/L)	MSRec (%)	SpikeAmt (ug/L)	MSDResult (ug/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Mercury	ND	2.50	2.65	106	2.50	2.71	108	2	82-119	20

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23J087

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of sixteen(16) water samples were received on 10/07/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. PLJ011WB and PLJ012WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- PLJ011WL/PLJ011WC were within LCS limits.
- PLJ012WL/PLJ012WC were within LCS limits.
Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J087-05M/J087-05S - Percent recovery for Perchlorate(16X) was not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples J087-02I, -04I, -06J, -08I, -10I, -13I, and -18I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ011WB	ND	1	NA	0.20	0.050	0.10	10/18/2311:12	NA	23MJ18007	MJ18004	PLJ011W	NA	NA
LCS1W	PLJ011WL	0.22	1	NA	0.20	0.050	0.10	10/18/2311:27	NA	23MJ18008	MJ18004	PLJ011W	NA	NA
LCD1W	PLJ011WC	0.22	1	NA	0.20	0.050	0.10	10/18/2311:42	NA	23MJ18009	MJ18004	PLJ011W	NA	NA
TMW29102023	J087-02I	ND	5	NA	1.0	0.25	0.50	10/18/2312:40	NA	23MJ18012	MJ18004	PLJ011W	10/06/2307:25	10/07/23
TMW23102023	J087-04I	ND	5	NA	1.0	0.25	0.50	10/18/2312:55	NA	23MJ18013	MJ18004	PLJ011W	10/06/2307:55	10/07/23
TMW01102023	J087-05I	310	100	NA	20	5.0	10	10/18/2313:09	NA	23MJ18014	MJ18004	PLJ011W	10/06/2308:05	10/07/23
TMW01102023MS	J087-05M	310	100	NA	20	5.0	10	10/18/2313:24	NA	23MJ18015	MJ18004	PLJ011W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05S	330	100	NA	20	5.0	10	10/18/2313:39	NA	23MJ18016	MJ18004	PLJ011W	10/06/2308:05	10/07/23
MW29102023	J087-06J	0.34J	5	NA	1.0	0.25	0.50	10/18/2314:28	NA	23MJ18019	MJ18017	PLJ011W	10/06/2308:20	10/07/23
TMW41102023	J087-07I	16	5	NA	1.0	0.25	0.50	10/18/2314:42	NA	23MJ18020	MJ18017	PLJ011W	10/06/2308:35	10/07/23
MW28102023	J087-08I	ND	5	NA	1.0	0.25	0.50	10/18/2314:57	NA	23MJ18021	MJ18017	PLJ011W	10/06/2308:50	10/07/23
TMW55102023	J087-09	ND	1	NA	0.20	0.050	0.10	10/18/2315:12	NA	23MJ18022	MJ18017	PLJ011W	10/06/2309:15	10/07/23
TMW22102023	J087-10I	ND	5	NA	1.0	0.25	0.50	10/18/2315:26	NA	23MJ18023	MJ18017	PLJ011W	10/06/2309:20	10/07/23
TMW02102023	J087-11I	7.8	5	NA	1.0	0.25	0.50	10/18/2315:41	NA	23MJ18024	MJ18017	PLJ011W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12I	8.3	5	NA	1.0	0.25	0.50	10/18/2315:56	NA	23MJ18025	MJ18017	PLJ011W	10/06/2309:50	10/07/23
TMW62102023	J087-13I	ND	5	NA	1.0	0.25	0.50	10/18/2316:10	NA	23MJ18026	MJ18017	PLJ011W	10/06/2310:10	10/07/23
TMW51102023	J087-15I	630	200	NA	40	10	20	10/18/2316:54	NA	23MJ18029	MJ18028	PLJ011W	10/06/2311:30	10/07/23
TMW40D102023	J087-16I	280	100	NA	20	5.0	10	10/18/2317:09	NA	23MJ18030	MJ18028	PLJ011W	10/06/2311:45	10/07/23
TMW48102023	J087-17I	500	200	NA	40	10	20	10/18/2317:23	NA	23MJ18031	MJ18028	PLJ011W	10/06/2313:05	10/07/23
MW25102023	J087-18I	ND	5	NA	1.0	0.25	0.50	10/18/2317:38	NA	23MJ18032	MJ18028	PLJ011W	10/06/2313:40	10/07/23
MBLK2W	PLJ012WB	ND	1	NA	0.20	0.050	0.10	10/19/2311:25	NA	23MJ19007	MJ19004	PLJ012W	NA	NA
LCS2W	PLJ012WL	0.21	1	NA	0.20	0.050	0.10	10/19/2311:40	NA	23MJ19008	MJ19004	PLJ012W	NA	NA
LCD2W	PLJ012WC	0.22	1	NA	0.20	0.050	0.10	10/19/2311:55	NA	23MJ19009	MJ19004	PLJ012W	NA	NA
TMW39S102023	J087-14I	790	400	NA	80	20	40	10/19/2312:18	NA	23MJ19010	MJ19004	PLJ012W	10/06/2311:00	10/07/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD 9056A
BROMIDE

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ012WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ012WL/ICJ012WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J087-05M/J087-05S - Percent recovery for Bromide(2X) was not within MS. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples J087-01I, -03I, -07I, -11I, -12I, and -18I were reported at 2X dilution factor due to high conductivity. Samples J087-04I, -06I, -08I, -10I, -13I, and -19I were reported at a 2X dilution factor due to yellow color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD 9056A
CHLORIDE-CL

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Chloride-Cl in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, three(3) method blanks were analyzed. ICJ014WB, ICJ022WB and ICJ060WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, three(3) sets of LCS/LCD were analyzed. ICJ014WL/ICJ014WC, ICJ022WL/ICJ022WC and ICJ060WL/ICJ060WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J087-05JM/J087-05JS - Percent recovery for Chloride-Cl(1X) was not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD 9056A
FLUORIDE

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ012WB and ICJ014WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ012WL/ICJ012WC and ICJ014WL/ICJ014WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Fluoride-F was within MS QC limits in J087-05M/J087-05S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J087-01I, -03I, -07I, -11I, -12I, and -18I were reported at 2X dilution factor due to high conductivity. Samples J087-04I, -06I, -08I, -10I, -13I, and -19I were reported at a 2X dilution factor due to yellow color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW9056A
NITRATE-N

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, four(4) method blanks were analyzed. ICJ012WB, ICJ014WB, ICJ016WB and ICJ018WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, four(4) sets of LCS/LCD were analyzed. ICJ012WL/ICJ012WC, ICJ014WL/ICJ014WC, ICJ016WL/ICJ016WC and ICJ018WL/ICJ018WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Nitrate was within MS QC limits in J087-05IM/J087-05IS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J087-01I and -03I were reported at 2X dilution factor due to high conductivity. Sample J087-19I was reported at a 2X dilution factor due to yellow color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD SW9056A
NITRITE-N

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, three(3) method blanks were analyzed. ICJ012WB, ICJ014WB and ICJ016WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, three(3) sets of LCS/LCD were analyzed. ICJ012WL/ICJ012WC, ICJ014WL/ICJ014WC and ICJ016WL/ICJ016WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J087-05M/J087-05S - Percent recovery for Nitrite was not within MS/MSD QC limits. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples J087-01I, -03I, -07I, -11I, -12I, and -18I were reported at 2X dilution factor due to high conductivity. Samples J087-04I, -06I, -08I, -10I, -13I, and -19I were reported at a 2X dilution factor due to yellow color. Samples J087-16I and -17I were reported at a 2X dilution factor due to chloride interference. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD 9056A
ORTHOPHOSPHATE-P

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ012WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ012WL/ICJ012WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Orthophosphate-P was within MS QC limits in J087-05M/J087-05S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J087-01I, -03I, -07I, -11I, -12I, and -18I were reported at 2X dilution factor due to high conductivity. Samples J087-04I, -06I, -08I, -10I, -13I, and -19I were reported at a 2X dilution factor due to yellow color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J087

METHOD 9056A
SULFATE

A total of nineteen(19) water samples were received on 10/07/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ014WB and ICJ060WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ014WL/ICJ014WC and ICJ060WL/ICJ060WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Sulfate was within MS QC limits in J087-05KM/J087-05KS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ012WB	ND	1	NA	0.5	0.13	0.25	10/07/2312:45	NA	AJ08-03	AJ08-01	ICJ012W	NA	NA
LCS1W	ICJ012WL	0.98	1	NA	0.5	0.13	0.25	10/07/2313:05	NA	AJ08-04	AJ08-01	ICJ012W	NA	NA
LCD1W	ICJ012WC	0.98	1	NA	0.5	0.13	0.25	10/07/2313:26	NA	AJ08-05	AJ08-01	ICJ012W	NA	NA
TMW01102023	J087-05	1.8	1	NA	0.5	0.13	0.25	10/07/2313:46	NA	AJ08-06	AJ08-01	ICJ012W	10/06/2308:05	10/07/23
TMW33102023	J087-01I	2.2	2	NA	1	0.26	0.5	10/07/2314:06	NA	AJ08-07	AJ08-01	ICJ012W	10/06/2307:20	10/07/23
TMW29102023	J087-02	0.75	1	NA	0.5	0.13	0.25	10/07/2314:26	NA	AJ08-08	AJ08-01	ICJ012W	10/06/2307:25	10/07/23
TMW07102023	J087-03I	0.79J	2	NA	1	0.26	0.5	10/07/2314:47	NA	AJ08-09	AJ08-01	ICJ012W	10/06/2307:45	10/07/23
TMW23102023	J087-04I	0.89J	2	NA	1	0.26	0.5	10/07/2315:07	NA	AJ08-10	AJ08-01	ICJ012W	10/06/2307:55	10/07/23
MW29102023	J087-06I	0.94J	2	NA	1	0.26	0.5	10/07/2315:27	NA	AJ08-11	AJ08-01	ICJ012W	10/06/2308:20	10/07/23
TMW41102023	J087-07I	1.8	2	NA	1	0.26	0.5	10/07/2315:48	NA	AJ08-12	AJ08-01	ICJ012W	10/06/2308:35	10/07/23
MW28102023	J087-08I	0.78J	2	NA	1	0.26	0.5	10/07/2316:48	NA	AJ08-15	AJ08-13	ICJ012W	10/06/2308:50	10/07/23
TMW55102023	J087-09	0.62	1	NA	0.5	0.13	0.25	10/07/2317:09	NA	AJ08-16	AJ08-13	ICJ012W	10/06/2309:15	10/07/23
TMW22102023	J087-10I	1.0J	2	NA	1	0.26	0.5	10/07/2317:29	NA	AJ08-17	AJ08-13	ICJ012W	10/06/2309:20	10/07/23
TMW02102023	J087-11I	2.0	2	NA	1	0.26	0.5	10/07/2317:49	NA	AJ08-18	AJ08-13	ICJ012W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12I	2.0	2	NA	1	0.26	0.5	10/07/2318:10	NA	AJ08-19	AJ08-13	ICJ012W	10/06/2309:50	10/07/23
TMW62102023	J087-13I	0.84J	2	NA	1	0.26	0.5	10/07/2318:30	NA	AJ08-20	AJ08-13	ICJ012W	10/06/2310:10	10/07/23
TMW39S102023	J087-14	1.8	1	NA	0.5	0.13	0.25	10/07/2318:50	NA	AJ08-21	AJ08-13	ICJ012W	10/06/2311:00	10/07/23
TMW51102023	J087-15	1.0	1	NA	0.5	0.13	0.25	10/07/2319:11	NA	AJ08-22	AJ08-13	ICJ012W	10/06/2311:30	10/07/23
TMW40D102023	J087-16	0.92	1	NA	0.5	0.13	0.25	10/07/2319:31	NA	AJ08-23	AJ08-13	ICJ012W	10/06/2311:45	10/07/23
TMW48102023	J087-17	1.2	1	NA	0.5	0.13	0.25	10/07/2319:51	NA	AJ08-24	AJ08-13	ICJ012W	10/06/2313:05	10/07/23
MW25102023	J087-18I	1.4	2	NA	1	0.26	0.5	10/07/2320:52	NA	AJ08-27	AJ08-25	ICJ012W	10/06/2313:40	10/07/23
TMW25102023	J087-19I	1.2	2	NA	1	0.26	0.5	10/07/2321:12	NA	AJ08-28	AJ08-25	ICJ012W	10/06/2314:00	10/07/23
TMW01102023DUP	J087-05D	1.8	1	NA	0.5	0.13	0.25	10/07/2321:53	NA	AJ08-30	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MS	J087-05M	2.7	1	NA	0.5	0.13	0.25	10/07/2322:13	NA	AJ08-31	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05S	2.7	1	NA	0.5	0.13	0.25	10/07/2322:33	NA	AJ08-32	AJ08-25	ICJ012W	10/06/2308:05	10/07/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ014WB	ND	1	NA	0.2	0.05	0.1	10/08/2300:55	NA	AJ08-39	AJ08-37	ICJ014W	NA	NA
LCS1W	ICJ014WL	1.9	1	NA	0.2	0.05	0.1	10/08/2301:16	NA	AJ08-40	AJ08-37	ICJ014W	NA	NA
LCD1W	ICJ014WC	1.9	1	NA	0.2	0.05	0.1	10/08/2301:36	NA	AJ08-41	AJ08-37	ICJ014W	NA	NA
TMW02102023	J087-11K	290	100	NA	20	5	10	10/08/2307:21	NA	AJ08-58	AJ08-49	ICJ014W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12K	260	100	NA	20	5	10	10/08/2308:02	NA	AJ08-60	AJ08-49	ICJ014W	10/06/2309:50	10/07/23
TMW62102023	J087-13J	67	25	NA	5	1.2	2.5	10/08/2309:02	NA	AJ08-63	AJ08-61	ICJ014W	10/06/2310:10	10/07/23
MBLK2W	ICJ022WB	ND	1	NA	0.2	0.05	0.1	10/11/2303:58	NA	AJ12-45	AJ12-43	ICJ022W	NA	NA
LCS2W	ICJ022WL	1.9	1	NA	0.2	0.05	0.1	10/11/2304:18	NA	AJ12-46	AJ12-43	ICJ022W	NA	NA
LCD2W	ICJ022WC	1.9	1	NA	0.2	0.05	0.1	10/11/2304:39	NA	AJ12-47	AJ12-43	ICJ022W	NA	NA
TMW01102023	J087-05J	230	100	NA	20	5	10	10/11/2310:03	NA	AJ12-63	AJ12-55	ICJ022W	10/06/2308:05	10/07/23
TMW01102023DUP	J087-05JD	230	100	NA	20	5	10	10/11/2310:24	NA	AJ12-64	AJ12-55	ICJ022W	10/06/2308:05	10/07/23
TMW01102023MS	J087-05JM	390	100	NA	20	5	10	10/11/2310:44	NA	AJ12-65	AJ12-55	ICJ022W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05JS	390	100	NA	20	5	10	10/11/2311:04	NA	AJ12-66	AJ12-55	ICJ022W	10/06/2308:05	10/07/23
MBLK3W	ICJ060WB	ND	1	NA	0.2	0.05	0.1	10/30/2318:34	NA	AJ36-03	AJ36-01	ICJ060W	NA	NA
LCS3W	ICJ060WL	1.9	1	NA	0.2	0.05	0.1	10/30/2318:54	NA	AJ36-04	AJ36-01	ICJ060W	NA	NA
LCD3W	ICJ060WC	1.9	1	NA	0.2	0.05	0.1	10/30/2319:14	NA	AJ36-05	AJ36-01	ICJ060W	NA	NA
TMW33102023	J087-01K	870	200	NA	40	10	20	10/30/2320:35	NA	AJ36-09	AJ36-01	ICJ060W	10/06/2307:20	10/07/23
TMW29102023	J087-02J	64	25	NA	5	1.2	2.5	10/30/2321:16	NA	AJ36-11	AJ36-01	ICJ060W	10/06/2307:25	10/07/23
TMW07102023	J087-03J	170	100	NA	20	5	10	10/30/2321:36	NA	AJ36-12	AJ36-01	ICJ060W	10/06/2307:45	10/07/23
TMW23102023	J087-04K	170	200	NA	40	10	20	10/30/2322:57	NA	AJ36-16	AJ36-13	ICJ060W	10/06/2307:55	10/07/23
MW29102023	J087-06K	180	100	NA	20	5	10	10/31/2300:38	NA	AJ36-21	AJ36-13	ICJ060W	10/06/2308:20	10/07/23
TMW41102023	J087-07K	260	100	NA	20	5	10	10/31/2300:59	NA	AJ36-22	AJ36-13	ICJ060W	10/06/2308:35	10/07/23
MW28102023	J087-08K	140	100	NA	20	5	10	10/31/2301:19	NA	AJ36-23	AJ36-13	ICJ060W	10/06/2308:50	10/07/23
TMW55102023	J087-09I	120	40	NA	8	2	4	10/31/2301:39	NA	AJ36-24	AJ36-13	ICJ060W	10/06/2309:15	10/07/23
TMW22102023	J087-10K	140	50	NA	10	2.5	5	10/31/2302:40	NA	AJ36-27	AJ36-25	ICJ060W	10/06/2309:20	10/07/23
TMW39S102023	J087-14K	190	100	NA	20	5	10	10/31/2303:20	NA	AJ36-29	AJ36-25	ICJ060W	10/06/2311:00	10/07/23
TMW51102023	J087-15K	120	100	NA	20	5	10	10/31/2303:41	NA	AJ36-30	AJ36-25	ICJ060W	10/06/2311:30	10/07/23
TMW40D102023	J087-16J	130	100	NA	20	5	10	10/31/2304:01	NA	AJ36-31	AJ36-25	ICJ060W	10/06/2311:45	10/07/23
TMW48102023	J087-17K	140	100	NA	20	5	10	10/31/2304:21	NA	AJ36-32	AJ36-25	ICJ060W	10/06/2313:05	10/07/23
MW25102023	J087-18K	310	100	NA	20	5	10	10/31/2304:41	NA	AJ36-33	AJ36-25	ICJ060W	10/06/2313:40	10/07/23
TMW25102023	J087-19J	160	100	NA	20	5	10	10/31/2305:22	NA	AJ36-35	AJ36-25	ICJ060W	10/06/2314:00	10/07/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ012WB	ND	1	NA	0.1	0.025	0.05	10/07/2312:45	NA	AJ08-03	AJ08-01	ICJ012W	NA	NA
LCS1W	ICJ012WL	0.94	1	NA	0.1	0.025	0.05	10/07/2313:05	NA	AJ08-04	AJ08-01	ICJ012W	NA	NA
LCD1W	ICJ012WC	0.94	1	NA	0.1	0.025	0.05	10/07/2313:26	NA	AJ08-05	AJ08-01	ICJ012W	NA	NA
TMW01102023	J087-05	0.42	1	NA	0.1	0.025	0.05	10/07/2313:46	NA	AJ08-06	AJ08-01	ICJ012W	10/06/2308:05	10/07/23
TMW29102023	J087-02	1.2	1	NA	0.1	0.025	0.05	10/07/2314:26	NA	AJ08-08	AJ08-01	ICJ012W	10/06/2307:25	10/07/23
TMW07102023	J087-03I	0.53	2	NA	0.2	0.05	0.1	10/07/2314:47	NA	AJ08-09	AJ08-01	ICJ012W	10/06/2307:45	10/07/23
TMW23102023	J087-04I	0.72	2	NA	0.2	0.05	0.1	10/07/2315:07	NA	AJ08-10	AJ08-01	ICJ012W	10/06/2307:55	10/07/23
MW29102023	J087-06I	0.73	2	NA	0.2	0.05	0.1	10/07/2315:27	NA	AJ08-11	AJ08-01	ICJ012W	10/06/2308:20	10/07/23
TMW41102023	J087-07I	0.70	2	NA	0.2	0.05	0.1	10/07/2315:48	NA	AJ08-12	AJ08-01	ICJ012W	10/06/2308:35	10/07/23
MW28102023	J087-08I	0.55	2	NA	0.2	0.05	0.1	10/07/2316:48	NA	AJ08-15	AJ08-13	ICJ012W	10/06/2308:50	10/07/23
TMW55102023	J087-09	0.75	1	NA	0.1	0.025	0.05	10/07/2317:09	NA	AJ08-16	AJ08-13	ICJ012W	10/06/2309:15	10/07/23
TMW22102023	J087-10I	0.94	2	NA	0.2	0.05	0.1	10/07/2317:29	NA	AJ08-17	AJ08-13	ICJ012W	10/06/2309:20	10/07/23
TMW02102023	J087-11I	0.32	2	NA	0.2	0.05	0.1	10/07/2317:49	NA	AJ08-18	AJ08-13	ICJ012W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12I	0.33	2	NA	0.2	0.05	0.1	10/07/2318:10	NA	AJ08-19	AJ08-13	ICJ012W	10/06/2309:50	10/07/23
TMW62102023	J087-13I	0.94	2	NA	0.2	0.05	0.1	10/07/2318:30	NA	AJ08-20	AJ08-13	ICJ012W	10/06/2310:10	10/07/23
TMW39S102023	J087-14	0.50	1	NA	0.1	0.025	0.05	10/07/2318:50	NA	AJ08-21	AJ08-13	ICJ012W	10/06/2311:00	10/07/23
TMW51102023	J087-15	0.39	1	NA	0.1	0.025	0.05	10/07/2319:11	NA	AJ08-22	AJ08-13	ICJ012W	10/06/2311:30	10/07/23
TMW40D102023	J087-16	0.43	1	NA	0.1	0.025	0.05	10/07/2319:31	NA	AJ08-23	AJ08-13	ICJ012W	10/06/2311:45	10/07/23
TMW48102023	J087-17	0.34	1	NA	0.1	0.025	0.05	10/07/2319:51	NA	AJ08-24	AJ08-13	ICJ012W	10/06/2313:05	10/07/23
MW25102023	J087-18I	0.35	2	NA	0.2	0.05	0.1	10/07/2320:52	NA	AJ08-27	AJ08-25	ICJ012W	10/06/2313:40	10/07/23
TMW25102023	J087-19I	0.67	2	NA	0.2	0.05	0.1	10/07/2321:12	NA	AJ08-28	AJ08-25	ICJ012W	10/06/2314:00	10/07/23
TMW01102023DUP	J087-05D	0.42	1	NA	0.1	0.025	0.05	10/07/2321:53	NA	AJ08-30	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MS	J087-05M	1.4	1	NA	0.1	0.025	0.05	10/07/2322:13	NA	AJ08-31	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05S	1.4	1	NA	0.1	0.025	0.05	10/07/2322:33	NA	AJ08-32	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
MBLK2W	ICJ014WB	ND	1	NA	0.1	0.025	0.05	10/08/2300:55	NA	AJ08-39	AJ08-37	ICJ014W	NA	NA
LCS2W	ICJ014WL	0.95	1	NA	0.1	0.025	0.05	10/08/2301:16	NA	AJ08-40	AJ08-37	ICJ014W	NA	NA
LCD2W	ICJ014WC	0.94	1	NA	0.1	0.025	0.05	10/08/2301:36	NA	AJ08-41	AJ08-37	ICJ014W	NA	NA
TMW33102023	J087-01J	0.60	5	NA	0.5	0.12	0.25	10/08/2303:38	NA	AJ08-47	AJ08-37	ICJ014W	10/06/2307:20	10/07/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ012WB	ND	1	NA	0.1	0.03	0.06	10/07/2312:45	NA	AJ08-03	AJ08-01	ICJ012W	NA	NA
LCS1W	ICJ012WL	0.98	1	NA	0.1	0.03	0.06	10/07/2313:05	NA	AJ08-04	AJ08-01	ICJ012W	NA	NA
LCD1W	ICJ012WC	0.98	1	NA	0.1	0.03	0.06	10/07/2313:26	NA	AJ08-05	AJ08-01	ICJ012W	NA	NA
TMW33102023	J087-01I	ND	2	NA	0.2	0.06	0.12	10/07/2314:06	NA	AJ08-07	AJ08-01	ICJ012W	10/06/2307:20	10/07/23
TMW07102023	J087-03I	0.18J	2	NA	0.2	0.06	0.12	10/07/2314:47	NA	AJ08-09	AJ08-01	ICJ012W	10/06/2307:45	10/07/23
TMW55102023	J087-09	0.33	1	NA	0.1	0.03	0.06	10/07/2317:09	NA	AJ08-16	AJ08-13	ICJ012W	10/06/2309:15	10/07/23
TMW40D102023	J087-16	1.5	1	NA	0.1	0.03	0.06	10/07/2319:31	NA	AJ08-23	AJ08-13	ICJ012W	10/06/2311:45	10/07/23
TMW25102023	J087-19I	0.34	2	NA	0.2	0.06	0.12	10/07/2321:12	NA	AJ08-28	AJ08-25	ICJ012W	10/06/2314:00	10/07/23
TMW01102023	J087-05I	10	20	NA	2	0.6	1.2	10/07/2322:54	NA	AJ08-33	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023DUP	J087-05ID	9.6	20	NA	2	0.6	1.2	10/07/2323:14	NA	AJ08-34	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MS	J087-05IM	30	20	NA	2	0.6	1.2	10/07/2323:34	NA	AJ08-35	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05IS	30	20	NA	2	0.6	1.2	10/07/2323:55	NA	AJ08-36	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
MBLK2W	ICJ014WB	ND	1	NA	0.1	0.03	0.06	10/08/2300:55	NA	AJ08-39	AJ08-37	ICJ014W	NA	NA
LCS2W	ICJ014WL	0.98	1	NA	0.1	0.03	0.06	10/08/2301:16	NA	AJ08-40	AJ08-37	ICJ014W	NA	NA
LCD2W	ICJ014WC	0.98	1	NA	0.1	0.03	0.06	10/08/2301:36	NA	AJ08-41	AJ08-37	ICJ014W	NA	NA
TMW29102023	J087-02I	4.4	5	NA	0.5	0.15	0.3	10/08/2303:58	NA	AJ08-48	AJ08-37	ICJ014W	10/06/2307:25	10/07/23
TMW23102023	J087-04J	32	20	NA	2	0.6	1.2	10/08/2304:59	NA	AJ08-51	AJ08-49	ICJ014W	10/06/2307:55	10/07/23
MW29102023	J087-06J	7.4	5	NA	0.5	0.15	0.3	10/08/2305:19	NA	AJ08-52	AJ08-49	ICJ014W	10/06/2308:20	10/07/23
TMW41102023	J087-07J	5.2	5	NA	0.5	0.15	0.3	10/08/2305:40	NA	AJ08-53	AJ08-49	ICJ014W	10/06/2308:35	10/07/23
MW28102023	J087-08J	8.9	10	NA	1	0.3	0.6	10/08/2306:00	NA	AJ08-54	AJ08-49	ICJ014W	10/06/2308:50	10/07/23
TMW22102023	J087-10J	14	10	NA	1	0.3	0.6	10/08/2306:40	NA	AJ08-56	AJ08-49	ICJ014W	10/06/2309:20	10/07/23
TMW02102023	J087-11K	78	100	NA	10	3	6	10/08/2307:21	NA	AJ08-58	AJ08-49	ICJ014W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12K	76	100	NA	10	3	6	10/08/2308:02	NA	AJ08-60	AJ08-49	ICJ014W	10/06/2309:50	10/07/23
TMW62102023	J087-13J	24	25	NA	2.5	0.75	1.5	10/08/2309:02	NA	AJ08-63	AJ08-61	ICJ014W	10/06/2310:10	10/07/23
TMW39S102023	J087-14J	8.9	10	NA	1	0.3	0.6	10/08/2309:43	NA	AJ08-65	AJ08-61	ICJ014W	10/06/2311:00	10/07/23
TMW51102023	J087-15J	6.9	5	NA	0.5	0.15	0.3	10/08/2310:24	NA	AJ08-67	AJ08-61	ICJ014W	10/06/2311:30	10/07/23
MBLK3W	ICJ016WB	ND	1	NA	0.1	0.03	0.06	10/08/2315:08	NA	AJ08-81	AJ08-79	ICJ016W	NA	NA
LCS3W	ICJ016WL	0.99	1	NA	0.1	0.03	0.06	10/08/2315:28	NA	AJ08-82	AJ08-79	ICJ016W	NA	NA
LCD3W	ICJ016WC	0.99	1	NA	0.1	0.03	0.06	10/08/2315:48	NA	AJ08-83	AJ08-79	ICJ016W	NA	NA
TMW48102023	J087-17J	8.8	10	NA	1	0.3	0.6	10/08/2316:29	NA	AJ08-85	AJ08-79	ICJ016W	10/06/2313:05	10/07/23
MBLK4W	ICJ018WB	ND	1	NA	0.1	0.03	0.06	10/09/2316:55	NA	AJ10-03	AJ10-01	ICJ018W	NA	NA
LCS4W	ICJ018WL	1.0	1	NA	0.1	0.03	0.06	10/09/2317:15	NA	AJ10-04	AJ10-01	ICJ018W	NA	NA
LCD4W	ICJ018WC	1.0	1	NA	0.1	0.03	0.06	10/09/2317:35	NA	AJ10-05	AJ10-01	ICJ018W	NA	NA
MW25102023	J087-18J	54	50	NA	5	1.5	3	10/09/2319:37	NA	AJ10-11	AJ10-01	ICJ018W	10/06/2313:40	10/07/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ012WB	ND	1	NA	0.1	0.03	0.06	10/07/2312:45	NA	AJ08-03	AJ08-01	ICJ012W	NA	NA
LCS1W	ICJ012WL	2.0	1	NA	0.1	0.03	0.06	10/07/2313:05	NA	AJ08-04	AJ08-01	ICJ012W	NA	NA
LCD1W	ICJ012WC	2.0	1	NA	0.1	0.03	0.06	10/07/2313:26	NA	AJ08-05	AJ08-01	ICJ012W	NA	NA
TMW01102023	J087-05	ND	1	NA	0.1	0.03	0.06	10/07/2313:46	NA	AJ08-06	AJ08-01	ICJ012W	10/06/2308:05	10/07/23
TMW33102023	J087-01I	ND	2	NA	0.2	0.06	0.12	10/07/2314:06	NA	AJ08-07	AJ08-01	ICJ012W	10/06/2307:20	10/07/23
TMW29102023	J087-02	ND	1	NA	0.1	0.03	0.06	10/07/2314:26	NA	AJ08-08	AJ08-01	ICJ012W	10/06/2307:25	10/07/23
TMW07102023	J087-03I	ND	2	NA	0.2	0.06	0.12	10/07/2314:47	NA	AJ08-09	AJ08-01	ICJ012W	10/06/2307:45	10/07/23
TMW23102023	J087-04I	ND	2	NA	0.2	0.06	0.12	10/07/2315:07	NA	AJ08-10	AJ08-01	ICJ012W	10/06/2307:55	10/07/23
MW29102023	J087-06I	ND	2	NA	0.2	0.06	0.12	10/07/2315:27	NA	AJ08-11	AJ08-01	ICJ012W	10/06/2308:20	10/07/23
TMW41102023	J087-07I	ND	2	NA	0.2	0.06	0.12	10/07/2315:48	NA	AJ08-12	AJ08-01	ICJ012W	10/06/2308:35	10/07/23
MW28102023	J087-08I	ND	2	NA	0.2	0.06	0.12	10/07/2316:48	NA	AJ08-15	AJ08-13	ICJ012W	10/06/2308:50	10/07/23
TMW55102023	J087-09	ND	1	NA	0.1	0.03	0.06	10/07/2317:09	NA	AJ08-16	AJ08-13	ICJ012W	10/06/2309:15	10/07/23
TMW22102023	J087-10I	ND	2	NA	0.2	0.06	0.12	10/07/2317:29	NA	AJ08-17	AJ08-13	ICJ012W	10/06/2309:20	10/07/23
TMW02102023	J087-11I	ND	2	NA	0.2	0.06	0.12	10/07/2317:49	NA	AJ08-18	AJ08-13	ICJ012W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12I	ND	2	NA	0.2	0.06	0.12	10/07/2318:10	NA	AJ08-19	AJ08-13	ICJ012W	10/06/2309:50	10/07/23
TMW62102023	J087-13I	ND	2	NA	0.2	0.06	0.12	10/07/2318:30	NA	AJ08-20	AJ08-13	ICJ012W	10/06/2310:10	10/07/23
TMW39S102023	J087-14	ND	1	NA	0.1	0.03	0.06	10/07/2318:50	NA	AJ08-21	AJ08-13	ICJ012W	10/06/2311:00	10/07/23
TMW51102023	J087-15	ND	1	NA	0.1	0.03	0.06	10/07/2319:11	NA	AJ08-22	AJ08-13	ICJ012W	10/06/2311:30	10/07/23
MW25102023	J087-18I	ND	2	NA	0.2	0.06	0.12	10/07/2320:52	NA	AJ08-27	AJ08-25	ICJ012W	10/06/2313:40	10/07/23
TMW25102023	J087-19I	ND	2	NA	0.2	0.06	0.12	10/07/2321:12	NA	AJ08-28	AJ08-25	ICJ012W	10/06/2314:00	10/07/23
TMW01102023DUP	J087-05D	ND	1	NA	0.1	0.03	0.06	10/07/2321:53	NA	AJ08-30	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MS	J087-05M	2.4	1	NA	0.1	0.03	0.06	10/07/2322:13	NA	AJ08-31	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05S	2.4	1	NA	0.1	0.03	0.06	10/07/2322:33	NA	AJ08-32	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
MBLK2W	ICJ014WB	ND	1	NA	0.1	0.03	0.06	10/08/2300:55	NA	AJ08-39	AJ08-37	ICJ014W	NA	NA
LCS2W	ICJ014WL	2.0	1	NA	0.1	0.03	0.06	10/08/2301:16	NA	AJ08-40	AJ08-37	ICJ014W	NA	NA
LCD2W	ICJ014WC	2.0	1	NA	0.1	0.03	0.06	10/08/2301:36	NA	AJ08-41	AJ08-37	ICJ014W	NA	NA
TMW40D102023	J087-16I	0.17J	2	NA	0.2	0.06	0.12	10/08/2310:44	NA	AJ08-68	AJ08-61	ICJ014W	10/06/2311:45	10/07/23
MBLK3W	ICJ016WB	ND	1	NA	0.1	0.03	0.06	10/08/2315:08	NA	AJ08-81	AJ08-79	ICJ016W	NA	NA
LCS3W	ICJ016WL	2.0	1	NA	0.1	0.03	0.06	10/08/2315:28	NA	AJ08-82	AJ08-79	ICJ016W	NA	NA
LCD3W	ICJ016WC	2.0	1	NA	0.1	0.03	0.06	10/08/2315:48	NA	AJ08-83	AJ08-79	ICJ016W	NA	NA
TMW48102023	J087-17I	0.14J	2	NA	0.2	0.06	0.12	10/08/2316:09	NA	AJ08-84	AJ08-79	ICJ016W	10/06/2313:05	10/07/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ012WB	ND	1	NA	0.5	0.12	0.25	10/07/2312:45	NA	AJ08-03	AJ08-01	ICJ012W	NA	NA
LCS1W	ICJ012WL	1.9	1	NA	0.5	0.12	0.25	10/07/2313:05	NA	AJ08-04	AJ08-01	ICJ012W	NA	NA
LCD1W	ICJ012WC	1.9	1	NA	0.5	0.12	0.25	10/07/2313:26	NA	AJ08-05	AJ08-01	ICJ012W	NA	NA
TMW01102023	J087-05	ND	1	NA	0.5	0.12	0.25	10/07/2313:46	NA	AJ08-06	AJ08-01	ICJ012W	10/06/2308:05	10/07/23
TMW33102023	J087-01I	ND	2	NA	1	0.25	0.5	10/07/2314:06	NA	AJ08-07	AJ08-01	ICJ012W	10/06/2307:20	10/07/23
TMW29102023	J087-02	0.20J	1	NA	0.5	0.12	0.25	10/07/2314:26	NA	AJ08-08	AJ08-01	ICJ012W	10/06/2307:25	10/07/23
TMW07102023	J087-03I	ND	2	NA	1	0.25	0.5	10/07/2314:47	NA	AJ08-09	AJ08-01	ICJ012W	10/06/2307:45	10/07/23
TMW23102023	J087-04I	ND	2	NA	1	0.25	0.5	10/07/2315:07	NA	AJ08-10	AJ08-01	ICJ012W	10/06/2307:55	10/07/23
MW29102023	J087-06I	ND	2	NA	1	0.25	0.5	10/07/2315:27	NA	AJ08-11	AJ08-01	ICJ012W	10/06/2308:20	10/07/23
TMW41102023	J087-07I	ND	2	NA	1	0.25	0.5	10/07/2315:48	NA	AJ08-12	AJ08-01	ICJ012W	10/06/2308:35	10/07/23
MW28102023	J087-08I	ND	2	NA	1	0.25	0.5	10/07/2316:48	NA	AJ08-15	AJ08-13	ICJ012W	10/06/2308:50	10/07/23
TMW55102023	J087-09	0.21J	1	NA	0.5	0.12	0.25	10/07/2317:09	NA	AJ08-16	AJ08-13	ICJ012W	10/06/2309:15	10/07/23
TMW22102023	J087-10I	ND	2	NA	1	0.25	0.5	10/07/2317:29	NA	AJ08-17	AJ08-13	ICJ012W	10/06/2309:20	10/07/23
TMW02102023	J087-11I	ND	2	NA	1	0.25	0.5	10/07/2317:49	NA	AJ08-18	AJ08-13	ICJ012W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12I	ND	2	NA	1	0.25	0.5	10/07/2318:10	NA	AJ08-19	AJ08-13	ICJ012W	10/06/2309:50	10/07/23
TMW62102023	J087-13I	ND	2	NA	1	0.25	0.5	10/07/2318:30	NA	AJ08-20	AJ08-13	ICJ012W	10/06/2310:10	10/07/23
TMW39S102023	J087-14	ND	1	NA	0.5	0.12	0.25	10/07/2318:50	NA	AJ08-21	AJ08-13	ICJ012W	10/06/2311:00	10/07/23
TMW51102023	J087-15	ND	1	NA	0.5	0.12	0.25	10/07/2319:11	NA	AJ08-22	AJ08-13	ICJ012W	10/06/2311:30	10/07/23
TMW40D102023	J087-16	ND	1	NA	0.5	0.12	0.25	10/07/2319:31	NA	AJ08-23	AJ08-13	ICJ012W	10/06/2311:45	10/07/23
TMW48102023	J087-17	ND	1	NA	0.5	0.12	0.25	10/07/2319:51	NA	AJ08-24	AJ08-13	ICJ012W	10/06/2313:05	10/07/23
MW25102023	J087-18I	ND	2	NA	1	0.25	0.5	10/07/2320:52	NA	AJ08-27	AJ08-25	ICJ012W	10/06/2313:40	10/07/23
TMW25102023	J087-19I	ND	2	NA	1	0.25	0.5	10/07/2321:12	NA	AJ08-28	AJ08-25	ICJ012W	10/06/2314:00	10/07/23
TMW01102023DUP	J087-05D	ND	1	NA	0.5	0.12	0.25	10/07/2321:53	NA	AJ08-30	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MS	J087-05M	1.8	1	NA	0.5	0.12	0.25	10/07/2322:13	NA	AJ08-31	AJ08-25	ICJ012W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05S	1.8	1	NA	0.5	0.12	0.25	10/07/2322:33	NA	AJ08-32	AJ08-25	ICJ012W	10/06/2308:05	10/07/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J087

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ014WB	ND	1	NA	0.5	0.13	0.25	10/08/2300:55	NA	AJ08-39	AJ08-37	ICJ014W	NA	NA
LCS1W	ICJ014WL	4.6	1	NA	0.5	0.13	0.25	10/08/2301:16	NA	AJ08-40	AJ08-37	ICJ014W	NA	NA
LCD1W	ICJ014WC	4.6	1	NA	0.5	0.13	0.25	10/08/2301:36	NA	AJ08-41	AJ08-37	ICJ014W	NA	NA
TMW02102023	J087-11K	1200	100	NA	50	13	25	10/08/2307:21	NA	AJ08-58	AJ08-49	ICJ014W	10/06/2309:45	10/07/23
FDUP05-102023	J087-12K	1100	100	NA	50	13	25	10/08/2308:02	NA	AJ08-60	AJ08-49	ICJ014W	10/06/2309:50	10/07/23
MBLK2W	ICJ060WB	ND	1	NA	0.5	0.13	0.25	10/30/2318:34	NA	AJ36-03	AJ36-01	ICJ060W	NA	NA
LCS2W	ICJ060WL	4.9	1	NA	0.5	0.13	0.25	10/30/2318:54	NA	AJ36-04	AJ36-01	ICJ060W	NA	NA
LCD2W	ICJ060WC	4.9	1	NA	0.5	0.13	0.25	10/30/2319:14	NA	AJ36-05	AJ36-01	ICJ060W	NA	NA
TMW33102023	J087-01T	2900	400	NA	200	52	100	10/30/2320:56	NA	AJ36-10	AJ36-01	ICJ060W	10/06/2307:20	10/07/23
TMW29102023	J087-02J	360	25	NA	12	3.3	6.2	10/30/2321:16	NA	AJ36-11	AJ36-01	ICJ060W	10/06/2307:25	10/07/23
TMW07102023	J087-03K	1700	400	NA	200	52	100	10/30/2322:37	NA	AJ36-15	AJ36-13	ICJ060W	10/06/2307:45	10/07/23
TMW23102023	J087-04K	960	200	NA	100	26	50	10/30/2322:57	NA	AJ36-16	AJ36-13	ICJ060W	10/06/2307:55	10/07/23
TMW01102023	J087-05K	850	200	NA	100	26	50	10/30/2323:17	NA	AJ36-17	AJ36-13	ICJ060W	10/06/2308:05	10/07/23
TMW01102023DUP	J087-05KD	840	200	NA	100	26	50	10/30/2323:38	NA	AJ36-18	AJ36-13	ICJ060W	10/06/2308:05	10/07/23
TMW01102023MS	J087-05KM	1800	200	NA	100	26	50	10/30/2323:58	NA	AJ36-19	AJ36-13	ICJ060W	10/06/2308:05	10/07/23
TMW01102023MSD	J087-05KS	1800	200	NA	100	26	50	10/31/2300:18	NA	AJ36-20	AJ36-13	ICJ060W	10/06/2308:05	10/07/23
MW29102023	J087-06K	730	100	NA	50	13	25	10/31/2300:38	NA	AJ36-21	AJ36-13	ICJ060W	10/06/2308:20	10/07/23
TMW41102023	J087-07K	920	100	NA	50	13	25	10/31/2300:59	NA	AJ36-22	AJ36-13	ICJ060W	10/06/2308:35	10/07/23
MW28102023	J087-08K	1300	100	NA	50	13	25	10/31/2301:19	NA	AJ36-23	AJ36-13	ICJ060W	10/06/2308:50	10/07/23
TMW55102023	J087-09I	750	40	NA	20	5.2	10	10/31/2301:39	NA	AJ36-24	AJ36-13	ICJ060W	10/06/2309:15	10/07/23
TMW22102023	J087-10K	820	50	NA	25	6.5	12	10/31/2302:40	NA	AJ36-27	AJ36-25	ICJ060W	10/06/2309:20	10/07/23
TMW62102023	J087-13K	650	100	NA	50	13	25	10/31/2303:00	NA	AJ36-28	AJ36-25	ICJ060W	10/06/2310:10	10/07/23
TMW39S102023	J087-14K	1000	100	NA	50	13	25	10/31/2303:20	NA	AJ36-29	AJ36-25	ICJ060W	10/06/2311:00	10/07/23
TMW51102023	J087-15K	920	100	NA	50	13	25	10/31/2303:41	NA	AJ36-30	AJ36-25	ICJ060W	10/06/2311:30	10/07/23
TMW40D102023	J087-16J	980	100	NA	50	13	25	10/31/2304:01	NA	AJ36-31	AJ36-25	ICJ060W	10/06/2311:45	10/07/23
TMW48102023	J087-17K	920	100	NA	50	13	25	10/31/2304:21	NA	AJ36-32	AJ36-25	ICJ060W	10/06/2313:05	10/07/23
MW25102023	J087-18K	1700	100	NA	50	13	25	10/31/2304:41	NA	AJ36-33	AJ36-25	ICJ060W	10/06/2313:40	10/07/23
TMW25102023	J087-19J	830	100	NA	50	13	25	10/31/2305:22	NA	AJ36-35	AJ36-25	ICJ060W	10/06/2314:00	10/07/23

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-27-2023
EMAX Batch No.: 23J091

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/07/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW36S102023	J091-01	10/05/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
MW36D102023	J091-02	10/05/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
TMW08102023	J091-03	10/05/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW31S102023	J091-04	10/05/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9
TMW10102023	J091-05	10/05/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS TPH-DRO
FDUP04-102023	J091-06	10/05/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS TPH-DRO
QC05102023EB	J091-07	10/05/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS)
MW03102023	J091-08	10/05/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS TPH-DRO
QC05102023TB	J091-09	10/05/23	WATER	VOCS BY 8260C TPH GASOLINE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of nine(9) water samples were received on 10/07/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All calibration requirements were satisfied, except for Naphthalene was detected biased high(%D=20.8) in CCV(data file ID RJG142). However, note that Naphthalene was not detected in the associated field samples. Note that" Minimum Response Factor" for all analytes were within method recommended response factors with the exception of 2-Butanone. However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VOE2J08B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. All analytes were within LCS limits in VOE2J08L/VOE2J08Y,except for Percent recovery for Naphthalene in LCS. RPDs for Dichlorodifluoromethane(RPD=29*), and Trichlorofluoromethane(RPD=26*) were greater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : E2

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOE2J08L	1	NA	10/13/2312:58	10/13/2312:58	RJG143	RJG046	VOE2J08	Lab Control Sample (LCS)
LCD1W	VOE2J08Y	1	NA	10/13/2314:07	10/13/2314:07	RJG145	RJG046	VOE2J08	LCS Duplicate
MBLK1W	VOE2J08B	1	NA	10/13/2315:20	10/13/2315:20	RJG147	RJG046	VOE2J08	Method Blank
QC05102023TB	23J091-09	1	NA	10/13/2319:07	10/13/2319:07	RJG155	RJG046	VOE2J08	Field Sample
MW36S102023	23J091-01	1	NA	10/13/2319:31	10/13/2319:31	RJG156	RJG046	VOE2J08	Field Sample
MW36D102023	23J091-02	1	NA	10/13/2319:56	10/13/2319:56	RJG157	RJG046	VOE2J08	Field Sample
TMW08102023	23J091-03	1	NA	10/13/2320:20	10/13/2320:20	RJG158	RJG046	VOE2J08	Field Sample
TMW31S102023	23J091-04	1	NA	10/13/2320:45	10/13/2320:45	RJG159	RJG046	VOE2J08	Field Sample
TMW10102023	23J091-05	1	NA	10/13/2321:09	10/13/2321:09	RJG160	RJG046	VOE2J08	Field Sample
FDUP04-102023	23J091-06	1	NA	10/13/2321:33	10/13/2321:33	RJG161	RJG046	VOE2J08	Field Sample
QC05102023EB	23J091-07	1	NA	10/13/2321:57	10/13/2321:57	RJG162	RJG046	VOE2J08	Field Sample
MW03102023	23J091-08	1	NA	10/13/2322:22	10/13/2322:22	RJG163	RJG046	VOE2J08	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 19:31
Sample ID	: MW36S102023	Date Analyzed:	10/13/23 19:31
Lab Samp ID:	23J091-01	Dilution Factor:	1
Lab File ID:	RJG156	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.2	10.0	112	81-118
4-Bromofluorobenzene	10.3	10.0	103	85-114
Toluene-d8	10.2	10.0	102	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 19:56
Sample ID	: MW36D102023	Date Analyzed:	10/13/23 19:56
Lab Samp ID:	23J091-02	Dilution Factor:	1
Lab File ID:	RJG157	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.5	10.0	115	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	10.2	10.0	102	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 20:20
Sample ID	: TMW08102023	Date Analyzed:	10/13/23 20:20
Lab Samp ID:	23J091-03	Dilution Factor:	1
Lab File ID:	RJG158	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.5	10.0	115	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	10.2	10.0	102	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 09:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 20:45
Sample ID	: TMW31S102023	Date Analyzed:	10/13/23 20:45
Lab Samp ID:	23J091-04	Dilution Factor:	1
Lab File ID:	RJG159	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.2	10.0	112	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	10.2	10.0	102	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:05
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 21:09
Sample ID	: TMW10102023	Date Analyzed:	10/13/23 21:09
Lab Samp ID:	23J091-05	Dilution Factor:	1
Lab File ID:	RJG160	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	6.5J	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.3	10.0	113	81-118
4-Bromofluorobenzene	9.67	10.0	97	85-114
Toluene-d8	9.94	10.0	99	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 21:33
Sample ID	: FDUP04-102023	Date Analyzed:	10/13/23 21:33
Lab Samp ID:	23J091-06	Dilution Factor:	1
Lab File ID:	RJG161	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.4	10.0	114	81-118
4-Bromofluorobenzene	9.71	10.0	97	85-114
Toluene-d8	10.2	10.0	102	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 21:57
Sample ID	: QC05102023EB	Date Analyzed:	10/13/23 21:57
Lab Samp ID:	23J091-07	Dilution Factor:	1
Lab File ID:	RJG162	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	1.4	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	2.0	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	0.67J	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.2	10.0	112	81-118
4-Bromofluorobenzene	9.98	10.0	100	85-114
Toluene-d8	10.2	10.0	102	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 22:22
Sample ID	: MW03102023	Date Analyzed:	10/13/23 22:22
Lab Samp ID:	23J091-08	Dilution Factor:	1
Lab File ID:	RJG163	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.8	10.0	118	81-118
4-Bromofluorobenzene	9.92	10.0	99	85-114
Toluene-d8	10.2	10.0	102	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/13/23 19:07
Sample ID	: QC05102023TB	Date Analyzed:	10/13/23 19:07
Lab Samp ID:	23J091-09	Dilution Factor:	1
Lab File ID:	RJG155	Matrix:	WATER
Ext Btch ID:	VOE2J08	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	9.85	10.0	98	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS + APPENDIX 9

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of five(5) water samples were received on 10/07/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were four(4)CCVs (Data file IDs: RJJ296, RJJ297, RJJ331 and RJJ332) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: SVJ024WL/SVJ024WC - Percent recovery for Phenol in LCS was lightly biased low but within EMAX's QC limit. Percent recoveries for 2,4-Dinitrotoluene, 4,6-Dinitro-2-Methylphenol, bis(2-Ethylhexyl) Phthalate, Butylbenzylphthalate, Chrysene, and Pyrene in LCD were biased high in LCD. RPDs for several analytes were greater than RPD QC limit. The rest of the analytes were in control. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. For this SDG, all surrogate recoveries were within QC limits except for Phenol-D5 in SVJ024WL. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of five(5) water samples were received on 10/07/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ299 and RJJ330) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ024WL/CLJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of five(5) water samples were received on 10/07/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method 3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJJ297 and RJJ331) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CLJ024WL/CLJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	SVJ024WL	1	NA	10/13/2311:37	10/11/2316:45	RJJ304	RGJ087	23SVJ024W	Lab Control Sample (LCS)
LCD1W	SVJ024WC	1	NA	10/13/2311:56	10/11/2316:45	RJJ305	RGJ087	23SVJ024W	LCS Duplicate
MBLK1W	SVJ024WB	1	NA	10/13/2312:52	10/11/2316:45	RJJ308	RGJ087	23SVJ024W	Method Blank
MW36S102023	23J091-01	1	NA	10/13/2317:52	10/11/2316:45	RJJ324	RGJ087	23SVJ024W	Field Sample
MW36D102023	23J091-02	1	NA	10/13/2318:11	10/11/2316:45	RJJ325	RGJ087	23SVJ024W	Field Sample
TMW08102023	23J091-03	1	NA	10/13/2318:30	10/11/2316:45	RJJ326	RGJ087	23SVJ024W	Field Sample
TMW31S102023	23J091-04	1	NA	10/13/2318:48	10/11/2316:45	RJJ327	RGJ087	23SVJ024W	Field Sample
QC05102023EB	23J091-07	1	NA	10/13/2319:07	10/11/2316:45	RJJ328	RGJ087	23SVJ024W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	CLJ024WL	1	NA	10/13/2312:15	10/11/2316:45	RJJ306	RGJ100	23SVJ024W	Lab Control Sample (LCS)
LCD1W	CLJ024WC	1	NA	10/13/2312:33	10/11/2316:45	RJJ307	RGJ100	23SVJ024W	LCS Duplicate
MBLK1W	SVJ024WB	1	NA	10/13/2312:52	10/11/2316:45	RJJ308	RGJ100	23SVJ024W	Method Blank
MW36S102023	23J091-01	1	NA	10/13/2317:52	10/11/2316:45	RJJ324	RGJ100	23SVJ024W	Field Sample
MW36D102023	23J091-02	1	NA	10/13/2318:11	10/11/2316:45	RJJ325	RGJ100	23SVJ024W	Field Sample
TMW08102023	23J091-03	1	NA	10/13/2318:30	10/11/2316:45	RJJ326	RGJ100	23SVJ024W	Field Sample
TMW31S102023	23J091-04	1	NA	10/13/2318:48	10/11/2316:45	RJJ327	RGJ100	23SVJ024W	Field Sample
QC05102023EB	23J091-07	1	NA	10/13/2319:07	10/11/2316:45	RJJ328	RGJ100	23SVJ024W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	CLJ024WL	1	NA	10/13/2312:15	10/11/2316:45	RJJ306	RGJ079	23SVJ024W	Lab Control Sample (LCS)
LCD1W	CLJ024WC	1	NA	10/13/2312:33	10/11/2316:45	RJJ307	RGJ079	23SVJ024W	LCS Duplicate
MBLK1W	SVJ024WB	1	NA	10/13/2312:52	10/11/2316:45	RJJ308	RGJ079	23SVJ024W	Method Blank
MW36S102023	23J091-01	1	NA	10/13/2317:52	10/11/2316:45	RJJ324	RGJ079	23SVJ024W	Field Sample
MW36D102023	23J091-02	1	NA	10/13/2318:11	10/11/2316:45	RJJ325	RGJ079	23SVJ024W	Field Sample
TMW08102023	23J091-03	1	NA	10/13/2318:30	10/11/2316:45	RJJ326	RGJ079	23SVJ024W	Field Sample
TMW31S102023	23J091-04	1	NA	10/13/2318:48	10/11/2316:45	RJJ327	RGJ079	23SVJ024W	Field Sample
QC05102023EB	23J091-07	1	NA	10/13/2319:07	10/11/2316:45	RJJ328	RGJ079	23SVJ024W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: MW36S102023	Date Analyzed:	10/13/23 17:52
Lab Samp ID:	23J091-01	Dilution Factor:	1
Lab File ID:	RJJ324	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.5	11
1,2-Dichlorobenzene	ND	11	2.8	5.5
1,2-Diphenylhydrazine	ND	11	2.8	5.5
1,3-Dichlorobenzene	ND	11	2.8	5.5
1,4-Dichlorobenzene	ND	11	2.8	5.5
2,4,5-Trichlorophenol	ND	11	2.8	5.5
2,4,6-Trichlorophenol	ND	11	2.8	5.5
2,4-Dichlorophenol	ND	11	2.8	5.5
2,4-Dimethylphenol	ND	11	2.8	5.5
2,4-Dinitrophenol	ND	22	2.8	5.5
2,4-Dinitrotoluene	ND	11	2.8	5.5
2,6-Dinitrotoluene	ND	11	2.8	5.5
2-Chloronaphthalene	ND	11	2.8	5.5
2-Chlorophenol	ND	11	2.8	5.5
2-Methylnaphthalene	ND	11	2.8	5.5
2-Methylphenol	ND	11	2.8	5.5
2-Nitroaniline	ND	11	2.8	5.5
2-Nitrophenol	ND	11	2.8	5.5
3,3'-Dichlorobenzidine	ND	11	2.8	5.5
3/4-Methylphenol	ND	11	2.8	5.5
3-Nitroaniline	ND	11	2.8	5.5
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.5
4-Bromophenyl phenyl ether	ND	11	2.8	5.5
4-Chloro-3-methylphenol	ND	11	2.8	5.5
4-Chloroaniline	ND	22	5.5	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.5
4-Nitroaniline	ND	11	2.8	5.5
4-Nitrophenol	ND	22	2.8	5.5
Acenaphthene	ND	11	2.8	5.5
Acenaphthylene	ND	11	2.8	5.5
Anthracene	ND	11	2.8	5.5
Benzo(a)anthracene	ND	11	2.8	5.5
Benzo(a)pyrene	ND	11	2.8	5.5
Benzo(b)fluoranthene	ND	11	2.8	5.5
Benzo(g,h,i)perylene	ND	11	2.8	5.5
Benzo(k)fluoranthene	ND	11	2.8	5.5
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.5
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.5
bis(2-Chloroethoxy)methane	ND	11	2.8	5.5
bis(2-Chloroethyl) ether	ND	11	2.8	5.5
bis(2-Ethylhexyl) phthalate	ND	22	5.5	11
Butylbenzylphthalate	ND	11	2.8	5.5
Carbazole	ND	11	2.8	5.5
Chrysene	ND	11	2.8	5.5
Dibenzo(a,h)anthracene	ND	11	2.8	5.5
Dibenzofuran	ND	11	2.8	5.5
Diethylphthalate	ND	11	2.8	5.5
Dimethylphthalate	ND	11	2.8	5.5
Di-n-butyl phthalate	ND	11	2.8	5.5
Di-n-octyl phthalate	ND	11	2.8	5.5
Fluoranthene	ND	11	2.8	5.5
Fluorene	ND	11	2.8	5.5
Hexachlorobenzene	ND	11	2.8	5.5
Hexachlorobutadiene	ND	11	2.8	5.5
Hexachloroethane	ND	11	2.8	5.5
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.5
Isophorone	ND	11	2.8	5.5
Naphthalene	ND	11	2.8	5.5
Nitrobenzene	ND	11	2.8	5.5
N-Nitrosodimethylamine	ND	11	2.8	5.5
n-Nitroso-di-n-propylamine	ND	11	2.8	5.5
n-Nitrosodiphenylamine	ND	11	2.8	5.5
Pentachlorophenol	ND	22	2.8	5.5
Phenanthrene	ND	11	2.8	5.5
Phenol	ND	11	2.8	5.5
Pyrene	ND	11	2.8	5.5
Hexachlorocyclopentadiene	ND	11	2.8	5.5
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.5
2,6-Dichlorophenol	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	41.6	66.0	63	43-140
2-Fluorobiphenyl	22.3	22.0	101	44-119
2-Fluorophenol	30.7	66.0	47	19-119
Nitrobenzene-d5	22.4	22.0	102	44-120
Phenol-d5	43.3	66.0	66	40-130
Terphenyl-d14	25.8	22.0	117	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ297

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: MW36S102023	Date Analyzed:	10/13/23 17:52
Lab Samp ID:	23J091-01	Dilution Factor:	1
Lab File ID:	RJJ324	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.5

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: MW36S102023	Date Analyzed:	10/13/23 17:52
Lab Samp ID:	23J091-01	Dilution Factor:	1
Lab File ID:	RJJ324	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.5	11
Benzaldehyde	ND	22	5.5	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: MW36D102023	Date Analyzed:	10/13/23 18:11
Lab Samp ID:	23J091-02	Dilution Factor:	1
Lab File ID:	RJJ325	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	20	5.0	10
1,2-Dichlorobenzene	ND	10	2.5	5.0
1,2-Diphenylhydrazine	ND	10	2.5	5.0
1,3-Dichlorobenzene	ND	10	2.5	5.0
1,4-Dichlorobenzene	ND	10	2.5	5.0
2,4,5-Trichlorophenol	ND	10	2.5	5.0
2,4,6-Trichlorophenol	ND	10	2.5	5.0
2,4-Dichlorophenol	ND	10	2.5	5.0
2,4-Dimethylphenol	ND	10	2.5	5.0
2,4-Dinitrophenol	ND	20	2.5	5.0
2,4-Dinitrotoluene	ND	10	2.5	5.0
2,6-Dinitrotoluene	ND	10	2.5	5.0
2-Chloronaphthalene	ND	10	2.5	5.0
2-Chlorophenol	ND	10	2.5	5.0
2-Methylnaphthalene	ND	10	2.5	5.0
2-Methylphenol	ND	10	2.5	5.0
2-Nitroaniline	ND	10	2.5	5.0
2-Nitrophenol	ND	10	2.5	5.0
3,3'-Dichlorobenzidine	ND	10	2.5	5.0
3/4-Methylphenol	ND	10	2.5	5.0
3-Nitroaniline	ND	10	2.5	5.0
4,6-Dinitro-2-methylphenol	ND	20	2.5	5.0
4-Bromophenyl phenyl ether	ND	10	2.5	5.0
4-Chloro-3-methylphenol	ND	10	2.5	5.0
4-Chloroaniline	ND	20	5.0	10
4-Chlorophenyl-phenyl ether	ND	10	2.5	5.0
4-Nitroaniline	ND	10	2.5	5.0
4-Nitrophenol	ND	20	2.5	5.0
Acenaphthene	ND	10	2.5	5.0
Acenaphthylene	ND	10	2.5	5.0
Anthracene	ND	10	2.5	5.0
Benzo(a)anthracene	ND	10	2.5	5.0
Benzo(a)pyrene	ND	10	2.5	5.0
Benzo(b)fluoranthene	ND	10	2.5	5.0
Benzo(g,h,i)perylene	ND	10	2.5	5.0
Benzo(k)fluoranthene	ND	10	2.5	5.0
Benzoic Acid	ND	100	20	40
Benzyl Alcohol	ND	10	2.5	5.0
bis(2-Chloroisopropyl) ether	ND	10	2.5	5.0
bis(2-Chloroethoxy)methane	ND	10	2.5	5.0
bis(2-Chloroethyl) ether	ND	10	2.5	5.0
bis(2-Ethylhexyl) phthalate	ND	20	5.0	10
Butylbenzylphthalate	ND	10	2.5	5.0
Carbazole	ND	10	2.5	5.0
Chrysene	ND	10	2.5	5.0
Dibenzo(a,h)anthracene	ND	10	2.5	5.0
Dibenzofuran	ND	10	2.5	5.0
Diethylphthalate	ND	10	2.5	5.0
Dimethylphthalate	ND	10	2.5	5.0
Di-n-butyl phthalate	ND	10	2.5	5.0
Di-n-octyl phthalate	ND	10	2.5	5.0
Fluoranthene	ND	10	2.5	5.0
Fluorene	ND	10	2.5	5.0
Hexachlorobenzene	ND	10	2.5	5.0
Hexachlorobutadiene	ND	10	2.5	5.0
Hexachloroethane	ND	10	2.5	5.0
Indeno(1,2,3-cd)pyrene	ND	10	2.5	5.0
Isophorone	ND	10	2.5	5.0
Naphthalene	ND	10	2.5	5.0
Nitrobenzene	ND	10	2.5	5.0
N-Nitrosodimethylamine	ND	10	2.5	5.0
n-Nitroso-di-n-propylamine	ND	10	2.5	5.0
n-Nitrosodiphenylamine	ND	10	2.5	5.0
Pentachlorophenol	ND	20	2.5	5.0
Phenanthrene	ND	10	2.5	5.0
Phenol	ND	10	2.5	5.0
Pyrene	ND	10	2.5	5.0
Hexachlorocyclopentadiene	ND	10	2.5	5.0
Benzidine	ND	40	10	20
2,3,4,6-Tetrachlorophenol	ND	10	2.5	5.0
2,6-Dichlorophenol	ND	10	2.5	5.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	43.8	60.0	73	43-140
2-Fluorobiphenyl	21.2	20.0	106	44-119
2-Fluorophenol	28.4	60.0	47	19-119
Nitrobenzene-d5	21.3	20.0	106	44-120
Phenol-d5	36.6	60.0	61	40-130
Terphenyl-d14	22.9	20.0	115	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ297

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: MW36D102023	Date Analyzed:	10/13/23 18:11
Lab Samp ID:	23J091-02	Dilution Factor:	1
Lab File ID:	RJJ325	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	10	2.5	5.0

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: MW36D102023	Date Analyzed:	10/13/23 18:11
Lab Samp ID:	23J091-02	Dilution Factor:	1
Lab File ID:	RJJ325	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	20	5.0	10
Benzaldehyde	ND	20	5.0	10

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: TMW08102023	Date Analyzed:	10/13/23 18:30
Lab Samp ID:	23J091-03	Dilution Factor:	1
Lab File ID:	RJJ326	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	43
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	43	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	55.1	64.8	85	43-140
2-Fluorobiphenyl	23.0	21.6	107	44-119
2-Fluorophenol	29.4	64.8	45	19-119
Nitrobenzene-d5	24.8	21.6	115	44-120
Phenol-d5	44.5	64.8	69	40-130
Terphenyl-d14	26.8	21.6	124	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ297

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: TMW08102023	Date Analyzed:	10/13/23 18:30
Lab Samp ID:	23J091-03	Dilution Factor:	1
Lab File ID:	RJJ326	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: TMW08102023	Date Analyzed:	10/13/23 18:30
Lab Samp ID:	23J091-03	Dilution Factor:	1
Lab File ID:	RJJ326	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23 09:30
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/11/23 16:45
Sample ID : TMW31S102023	Date Analyzed: 10/13/23 18:48
Lab Samp ID: 23J091-04	Dilution Factor: 1
Lab File ID: RJJ327	Matrix: WATER
Ext Btch ID: 23SVJ024W	% Moisture: NA
Calib. Ref.: RGJ087	Instrument ID: E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	54.4	66.6	82	43-140
2-Fluorobiphenyl	21.9	22.2	99	44-119
2-Fluorophenol	34.8	66.6	52	19-119
Nitrobenzene-d5	23.2	22.2	105	44-120
Phenol-d5	46.3	66.6	70	40-130
Terphenyl-d14	26.6	22.2	120	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ297

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 09:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: TMW31S102023	Date Analyzed:	10/13/23 18:48
Lab Samp ID:	23J091-04	Dilution Factor:	1
Lab File ID:	RJJ327	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 09:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: TMW31S102023	Date Analyzed:	10/13/23 18:48
Lab Samp ID:	23J091-04	Dilution Factor:	1
Lab File ID:	RJJ327	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: QC05102023EB	Date Analyzed:	10/13/23 19:07
Lab Samp ID:	23J091-07	Dilution Factor:	1
Lab File ID:	RJJ328	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	21	5.2	11
1,2-Dichlorobenzene	ND	11	2.6	5.2
1,2-Diphenylhydrazine	ND	11	2.6	5.2
1,3-Dichlorobenzene	ND	11	2.6	5.2
1,4-Dichlorobenzene	ND	11	2.6	5.2
2,4,5-Trichlorophenol	ND	11	2.6	5.2
2,4,6-Trichlorophenol	ND	11	2.6	5.2
2,4-Dichlorophenol	ND	11	2.6	5.2
2,4-Dimethylphenol	ND	11	2.6	5.2
2,4-Dinitrophenol	ND	21	2.6	5.2
2,4-Dinitrotoluene	ND	11	2.6	5.2
2,6-Dinitrotoluene	ND	11	2.6	5.2
2-Chloronaphthalene	ND	11	2.6	5.2
2-Chlorophenol	ND	11	2.6	5.2
2-Methylnaphthalene	ND	11	2.6	5.2
2-Methylphenol	ND	11	2.6	5.2
2-Nitroaniline	ND	11	2.6	5.2
2-Nitrophenol	ND	11	2.6	5.2
3,3'-Dichlorobenzidine	ND	11	2.6	5.2
3/4-Methylphenol	ND	11	2.6	5.2
3-Nitroaniline	ND	11	2.6	5.2
4,6-Dinitro-2-methylphenol	ND	21	2.6	5.2
4-Bromophenyl phenyl ether	ND	11	2.6	5.2
4-Chloro-3-methylphenol	ND	11	2.6	5.2
4-Chloroaniline	ND	21	5.2	11
4-Chlorophenyl-phenyl ether	ND	11	2.6	5.2
4-Nitroaniline	ND	11	2.6	5.2
4-Nitrophenol	ND	21	2.6	5.2
Acenaphthene	ND	11	2.6	5.2
Acenaphthylene	ND	11	2.6	5.2
Anthracene	ND	11	2.6	5.2
Benzo(a)anthracene	ND	11	2.6	5.2
Benzo(a)pyrene	ND	11	2.6	5.2
Benzo(b)fluoranthene	ND	11	2.6	5.2
Benzo(g,h,i)perylene	ND	11	2.6	5.2
Benzo(k)fluoranthene	ND	11	2.6	5.2
Benzoic Acid	ND	100	21	42
Benzyl Alcohol	ND	11	2.6	5.2
bis(2-Chloroisopropyl) ether	ND	11	2.6	5.2
bis(2-Chloroethoxy)methane	ND	11	2.6	5.2
bis(2-Chloroethyl) ether	ND	11	2.6	5.2
bis(2-Ethylhexyl) phthalate	ND	21	5.2	11
Butylbenzylphthalate	ND	11	2.6	5.2
Carbazole	ND	11	2.6	5.2
Chrysene	ND	11	2.6	5.2
Dibenzo(a,h)anthracene	ND	11	2.6	5.2
Dibenzofuran	ND	11	2.6	5.2
Diethylphthalate	ND	11	2.6	5.2
Dimethylphthalate	ND	11	2.6	5.2
Di-n-butyl phthalate	ND	11	2.6	5.2
Di-n-octyl phthalate	ND	11	2.6	5.2
Fluoranthene	ND	11	2.6	5.2
Fluorene	ND	11	2.6	5.2
Hexachlorobenzene	ND	11	2.6	5.2
Hexachlorobutadiene	ND	11	2.6	5.2
Hexachloroethane	ND	11	2.6	5.2
Indeno(1,2,3-cd)pyrene	ND	11	2.6	5.2
Isophorone	ND	11	2.6	5.2
Naphthalene	ND	11	2.6	5.2
Nitrobenzene	ND	11	2.6	5.2
N-Nitrosodimethylamine	ND	11	2.6	5.2
n-Nitroso-di-n-propylamine	ND	11	2.6	5.2
n-Nitrosodiphenylamine	ND	11	2.6	5.2
Pentachlorophenol	ND	21	2.6	5.2
Phenanthrene	ND	11	2.6	5.2
Phenol	ND	11	2.6	5.2
Pyrene	ND	11	2.6	5.2
Hexachlorocyclopentadiene	ND	11	2.6	5.2
Benzidine	ND	42	11	21
2,3,4,6-Tetrachlorophenol	ND	11	2.6	5.2
2,6-Dichlorophenol	ND	11	2.6	5.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	52.5	63.0	83	43-140
2-Fluorobiphenyl	20.2	21.0	96	44-119
2-Fluorophenol	34.8	63.0	55	19-119
Nitrobenzene-d5	21.7	21.0	103	44-120
Phenol-d5	44.2	63.0	70	40-130
Terphenyl-d14	27.6	21.0	131	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ297

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: QC05102023EB	Date Analyzed:	10/13/23 19:07
Lab Samp ID:	23J091-07	Dilution Factor:	1
Lab File ID:	RJJ328	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.6	5.2

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 16:45
Sample ID	: QC05102023EB	Date Analyzed:	10/13/23 19:07
Lab Samp ID:	23J091-07	Dilution Factor:	1
Lab File ID:	RJJ328	Matrix:	WATER
Ext Btch ID:	23SVJ024W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	21	5.2	11
Benzaldehyde	ND	21	5.2	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of eight(8) water samples were received on 10/07/23 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. VGH7J01B and VGH7J02B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. VGH7J01L/VGH7J01C and VGH7J02L/VGH7J02C were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7J01B	1	NA	10/10/2314:05	10/10/2314:05	AJ10005A	AJ10004A	23VGH7J01	Method Blank
LCS1W	VGH7J01L	1	NA	10/10/2316:07	10/10/2316:07	AJ10008A	AJ10004A	23VGH7J01	Lab Control Sample (LCS)
LCD1W	VGH7J01C	1	NA	10/10/2316:47	10/10/2316:47	AJ10009A	AJ10004A	23VGH7J01	LCS Duplicate
MW36S102023	J091-01	1	NA	10/11/2304:15	10/11/2304:15	AJ10026A	AJ10025A	23VGH7J01	Field Sample
MW36D102023	J091-02	1	NA	10/11/2304:55	10/11/2304:55	AJ10027A	AJ10025A	23VGH7J01	Field Sample
TMW08102023	J091-03	1	NA	10/11/2305:36	10/11/2305:36	AJ10028A	AJ10025A	23VGH7J01	Field Sample
TMW10102023	J091-05	1	NA	10/11/2306:16	10/11/2306:16	AJ10029A	AJ10025A	23VGH7J01	Field Sample
FDUP04-102023	J091-06	1	NA	10/11/2306:56	10/11/2306:56	AJ10030A	AJ10025A	23VGH7J01	Field Sample
QC05102023EB	J091-07	1	NA	10/11/2307:37	10/11/2307:37	AJ10031A	AJ10025A	23VGH7J01	Field Sample
MBLK2W	VGH7J02B	1	NA	10/11/2308:17	10/11/2308:17	AJ10032A	AJ10025A	23VGH7J02	Method Blank
LCS2W	VGH7J02L	1	NA	10/11/2308:57	10/11/2308:57	AJ10033A	AJ10025A	23VGH7J02	Lab Control Sample (LCS)
LCD2W	VGH7J02C	1	NA	10/11/2309:38	10/11/2309:38	AJ10034A	AJ10025A	23VGH7J02	LCS Duplicate
MW03102023	J091-08	1	NA	10/11/2310:18	10/11/2310:18	AJ10035A	AJ10025A	23VGH7J02	Field Sample
QC05102023TB	J091-09	1	NA	10/11/2310:58	10/11/2310:58	AJ10036A	AJ10025A	23VGH7J02	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 04:15
Sample ID	: MW36S102023	Date Analyzed:	10/11/23 04:15
Lab Samp ID:	J091-01	Dilution Factor:	1
Lab File ID:	AJ10026A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10025A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	39.0	40.0	98	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: CMpang	Analyzed by	: CMpang

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 04:55
Sample ID	: MW36D102023	Date Analyzed:	10/11/23 04:55
Lab Samp ID:	J091-02	Dilution Factor:	1
Lab File ID:	AJ10027A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10025A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	38.3	40.0	96	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: CMpang	Analyzed by	: CMpang

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 05:36
Sample ID	: TMW08102023	Date Analyzed:	10/11/23 05:36
Lab Samp ID:	J091-03	Dilution Factor:	1
Lab File ID:	AJ10028A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10025A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.4	40.0	91	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: CMpang	Analyzed by	: CMpang

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:05
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 06:16
Sample ID	: TMW10102023	Date Analyzed:	10/11/23 06:16
Lab Samp ID:	J091-05	Dilution Factor:	1
Lab File ID:	AJ10029A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10025A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.7	40.0	94	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: CMpang	Analyzed by	: CMpang

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 06:56
Sample ID	: FDUP04-102023	Date Analyzed:	10/11/23 06:56
Lab Samp ID:	J091-06	Dilution Factor:	1
Lab File ID:	AJ10030A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10025A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.0	40.0	90	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: CMpang	Analyzed by	: CMpang

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 07:37
Sample ID	: QC05102023EB	Date Analyzed:	10/11/23 07:37
Lab Samp ID:	J091-07	Dilution Factor:	1
Lab File ID:	AJ10031A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10025A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	35J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.1	40.0	93	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: CMpang	Analyzed by	: CMpang

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 10:18
Sample ID	: MW03102023	Date Analyzed:	10/11/23 10:18
Lab Samp ID:	J091-08	Dilution Factor:	1
Lab File ID:	AJ10035A	Matrix:	WATER
Ext Btch ID:	23VGH7J02	% Moisture:	NA
Calib. Ref.:	AJ10025A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	38.9	40.0	97	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: CMpang	Analyzed by	: CMpang

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 10:58
Sample ID	: QC05102023TB	Date Analyzed:	10/11/23 10:58
Lab Samp ID:	J091-09	Dilution Factor:	1
Lab File ID:	AJ10036A	Matrix:	WATER
Ext Btch ID:	23VGH7J02	% Moisture:	NA
Calib. Ref.:	AJ10025A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.2	40.0	91	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: CMpang	Analyzed by	: CMpang

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of seven(7) water samples were received on 10/07/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ011WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSJ011WL/DSJ011WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ011WB	1	NA	10/12/2317:34	10/11/2312:45	LJ12012A	LJ12003A	23DSJ011W	Method Blank
LCS1W	DSJ011WL	1	NA	10/12/2317:53	10/11/2312:45	LJ12013A	LJ12003A	23DSJ011W	Lab Control Sample (LCS)
LCD1W	DSJ011WC	1	NA	10/12/2318:11	10/11/2312:45	LJ12014A	LJ12003A	23DSJ011W	LCS Duplicate
MW36S102023	J091-01	1	NA	10/12/2322:33	10/11/2312:45	LJ12028A	LJ12018A	23DSJ011W	Field Sample
MW36D102023	J091-02	1	NA	10/12/2322:51	10/11/2312:45	LJ12029A	LJ12018A	23DSJ011W	Field Sample
TMW08102023	J091-03	1	NA	10/12/2323:47	10/11/2312:45	LJ12032A	LJ12030A	23DSJ011W	Field Sample
TMW10102023	J091-05	1	NA	10/13/2300:06	10/11/2312:45	LJ12033A	LJ12030A	23DSJ011W	Field Sample
FDUP04-102023	J091-06	1	NA	10/13/2300:24	10/11/2312:45	LJ12034A	LJ12030A	23DSJ011W	Field Sample
QC05102023EB	J091-07	1	NA	10/13/2300:43	10/11/2312:45	LJ12035A	LJ12030A	23DSJ011W	Field Sample
MW03102023	J091-08	1	NA	10/13/2301:02	10/11/2312:45	LJ12036A	LJ12030A	23DSJ011W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 12:45
Sample ID	: MW36S102023	Date Analyzed:	10/12/23 22:33
Lab Samp ID:	23J091-01	Dilution Factor:	1
Lab File ID:	LJ12028A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.071J	0.54	0.054	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.763	1.08	71	60-130
Hexacosane	0.259	0.270	96	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume :	10ml
Prepared by	: RGalan	Analyzed by :	SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 12:45
Sample ID	: MW36D102023	Date Analyzed:	10/12/23 22:51
Lab Samp ID:	23J091-02	Dilution Factor:	1
Lab File ID:	LJ12029A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.58	0.058	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.836	1.15	73	60-130
Hexacosane	0.262	0.288	91	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 12:45
Sample ID	: TMW08102023	Date Analyzed:	10/12/23 23:47
Lab Samp ID:	23J091-03	Dilution Factor:	1
Lab File ID:	LJ12032A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12030A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.58	0.058	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.852	1.16	73	60-130
Hexacosane	0.284	0.290	98	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 860ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:05
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 12:45
Sample ID	: TMW10102023	Date Analyzed:	10/13/23 00:06
Lab Samp ID:	23J091-05	Dilution Factor:	1
Lab File ID:	LJ12033A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12030A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.49	0.049	0.098

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.706	0.980	72	60-130
Hexacosane	0.234	0.245	96	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1020ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 12:45
Sample ID	: FDUP04-102023	Date Analyzed:	10/13/23 00:24
Lab Samp ID:	23J091-06	Dilution Factor:	1
Lab File ID:	LJ12034A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12030A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.52	0.052	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.826	1.03	80	60-130
Hexacosane	0.253	0.257	98	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 12:45
Sample ID	: QC05102023EB	Date Analyzed:	10/13/23 00:43
Lab Samp ID:	23J091-07	Dilution Factor:	1
Lab File ID:	LJ12035A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12030A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.58	0.058	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.937	1.15	81	60-130
Hexacosane	0.284	0.288	99	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/11/23 12:45
Sample ID	: MW03102023	Date Analyzed:	10/13/23 01:02
Lab Samp ID:	23J091-08	Dilution Factor:	1
Lab File ID:	LJ12036A	Matrix:	WATER
Ext Btch ID:	23DSJ011W	% Moisture:	NA
Calib. Ref.:	LJ12030A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.51	0.051	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.754	1.02	74	60-130
Hexacosane	0.246	0.255	96	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 980ml	Final Volume :	10ml
Prepared by	: RGalan	Analyzed by :	SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW3520C/8081B
PESTICIDES

A total of five(5) water samples were received on 10/07/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ016WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ016WL/CPJ016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ016WB	1	NA	11/08/2317:17	10/12/2311:00	RK08005	RK08003	23CPJ016W	Method Blank
LCS1W	CPJ016WL	1	NA	11/08/2317:37	10/12/2311:00	RK08006	RK08003	23CPJ016W	Lab Control Sample (LCS)
LCD1W	CPJ016WC	1	NA	11/08/2317:58	10/12/2311:00	RK08007	RK08003	23CPJ016W	LCS Duplicate
MW36S102023	J091-01	1	NA	11/09/2300:27	10/12/2311:00	RK08026	RK08016	23CPJ016W	Field Sample
MW36D102023	J091-02	1	NA	11/09/2300:48	10/12/2311:00	RK08027	RK08016	23CPJ016W	Field Sample
TMW08102023	J091-03	1	NA	11/09/2302:32	10/12/2311:00	RK08032	RK08030	23CPJ016W	Field Sample
TMW31S102023	J091-04	1	NA	11/09/2302:52	10/12/2311:00	RK08033	RK08030	23CPJ016W	Field Sample
QC05102023EB	J091-07	1	NA	11/09/2303:13	10/12/2311:00	RK08034	RK08030	23CPJ016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/12/23 11:00
Sample ID	: MW36S102023	Date Analyzed:	11/09/23 00:27
Lab Samp ID:	J091-01	Dilution Factor:	1
Lab File ID:	RK08026	Matrix:	WATER
Ext Btch ID:	23CPJ016W	% Moisture:	NA
Calib. Ref.:	RK08016	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.098	0.020	0.039
gamma-BHC (Lindane)	(ND) | ND	0.098	0.020	0.039
beta-BHC	(ND) | ND	0.098	0.020	0.039
Heptachlor	(ND) | ND	0.098	0.020	0.039
delta-BHC	(ND) | ND	0.098	0.020	0.039
Aldrin	(ND) | ND	0.098	0.020	0.039
Heptachlor Epoxide	(ND) | ND	0.098	0.020	0.039
gamma-Chlordane	(ND) | ND	0.098	0.020	0.039
alpha-Chlordane	(ND) | ND	0.098	0.020	0.039
Endosulfan I	(ND) | ND	0.098	0.020	0.039
4,4'-DDE	(ND) | ND	0.098	0.020	0.039
Dieldrin	(ND) | ND	0.098	0.020	0.039
Endrin	(ND) | ND	0.098	0.020	0.039
4,4'-DDD	(ND) | ND	0.098	0.020	0.039
Endosulfan II	(ND) | ND	0.098	0.020	0.039
4,4'-DDT	(ND) | ND	0.098	0.020	0.039
Endrin Aldehyde	(ND) | ND	0.098	0.020	0.039
Endosulfan Sulfate	(ND) | ND	0.098	0.020	0.039
Methoxychlor	(ND) | ND	0.98	0.098	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.49
Endrin Ketone	(ND) | ND	0.098	0.020	0.039

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.190 | (0.232)	0.392	59	44-124
Decachlorobiphenyl	(0.251) | 0.251	0.392	64	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1020ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column | Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK08017		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J091
Sample ID : MW36D102023
Lab Samp ID: J091-02
Lab File ID: RK08027
Ext Btch ID: 23CPJ016W
Calib. Ref.: RK08016

Date Collected: 10/05/23 08:35
Date Received: 10/07/23
Date Extracted: 10/12/23 11:00
Date Analyzed: 11/09/23 00:48
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.284 | (0.327)	0.444	74	44-124
Decachlorobiphenyl	0.325 | (0.326)	0.444	73	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK08017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23 08:45
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/12/23 11:00
Sample ID : TMW08102023	Date Analyzed: 11/09/23 02:32
Lab Samp ID: J091-03	Dilution Factor: 1
Lab File ID: RK08032	Matrix: WATER
Ext Btch ID: 23CPJ016W	% Moisture: NA
Calib. Ref.: RK08030	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.099	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.099	0.020	0.040
beta-BHC	(ND) | ND	0.099	0.020	0.040
Heptachlor	(ND) | ND	0.099	0.020	0.040
delta-BHC	(ND) | ND	0.099	0.020	0.040
Aldrin	(ND) | ND	0.099	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.099	0.020	0.040
gamma-Chlordane	(ND) | ND	0.099	0.020	0.040
alpha-Chlordane	(ND) | ND	0.099	0.020	0.040
Endosulfan I	(ND) | ND	0.099	0.020	0.040
4,4'-DDE	(ND) | ND	0.099	0.020	0.040
Dieldrin	(ND) | ND	0.099	0.020	0.040
Endrin	(ND) | ND	0.099	0.020	0.040
4,4'-DDD	(ND) | ND	0.099	0.020	0.040
Endosulfan II	(ND) | ND	0.099	0.020	0.040
4,4'-DDT	(ND) | ND	0.099	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.099	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.099	0.020	0.040
Methoxychlor	(ND) | ND	0.99	0.099	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.099	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.234 | (0.260)	0.396	66	44-124
Decachlorobiphenyl	0.278 | (0.282)	0.396	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 1010ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RK08031	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 09:30
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/12/23 11:00
Sample ID	: TMW31S102023	Date Analyzed:	11/09/23 02:52
Lab Samp ID:	J091-04	Dilution Factor:	1
Lab File ID:	RK08033	Matrix:	WATER
Ext Btch ID:	23CPJ016W	% Moisture:	NA
Calib. Ref.:	RK08030	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.235 | (0.273)	0.440	62	44-124
Decachlorobiphenyl	(0.323) | 0.323	0.440	74	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK08031		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J091
Sample ID : QC05102023EB
Lab Samp ID: J091-07
Lab File ID: RK08034
Ext Btch ID: 23CPJ016W
Calib. Ref.: RK08030

Date Collected: 10/05/23 14:00
Date Received: 10/07/23
Date Extracted: 10/12/23 11:00
Date Analyzed: 11/09/23 03:13
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.212 | (0.250)	0.420	60	44-124
Decachlorobiphenyl	0.309 | (0.312)	0.420	74	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK08031

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW3520C/8082A
PCBS

A total of three(3) water samples were received on 10/07/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ016WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 60J016WL/60J016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PCBs

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : 71

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ016WB	1	NA	10/13/2321:07	10/12/2311:00	KJ13034A	KJ13028A	CPJ016W	Method Blank
LCS1W	60J016WL	1	NA	10/13/2321:27	10/12/2311:00	KJ13035A	KJ13028A	CPJ016W	Lab Control Sample (LCS)
LCD1W	60J016WC	1	NA	10/13/2321:47	10/12/2311:00	KJ13036A	KJ13028A	CPJ016W	LCS Duplicate
MW36S102023	J091-01	0.98	NA	10/14/2301:46	10/12/2311:00	KJ13048A	KJ13041A	CPJ016W	Field Sample
MW36D102023	J091-02	1.11	NA	10/14/2302:06	10/12/2311:00	KJ13049A	KJ13041A	CPJ016W	Field Sample
QC05102023EB	J091-07	1.05	NA	10/14/2302:26	10/12/2311:00	KJ13050A	KJ13041A	CPJ016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/12/23 11:00
Sample ID: MW36S102023	Date Analyzed: 10/14/23 01:46
Lab Samp ID: J091-01	Dilution Factor: 0.98
Lab File ID: KJ13048A	Matrix : WATER
Ext Btch ID: CPJ016W	% Moisture : NA
Calib. Ref.: KJ13041A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	0.98	0.25	0.49
PCB-1221	(ND)|ND	0.98	0.25	0.49
PCB-1232	(ND)|ND	0.98	0.25	0.49
PCB-1242	(ND)|ND	0.98	0.25	0.49
PCB-1248	(ND)|ND	0.98	0.25	0.49
PCB-1254	(ND)|ND	0.98	0.25	0.49
PCB-1260	(ND)|ND	0.98	0.25	0.49

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.3664|(0.3679)	0.3920	93.5|(93.8)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/12/23 11:00
Sample ID: MW36D102023	Date Analyzed: 10/14/23 02:06
Lab Samp ID: J091-02	Dilution Factor: 1.11
Lab File ID: KJ13049A	Matrix : WATER
Ext Btch ID: CPJ016W	% Moisture : NA
Calib. Ref.: KJ13041A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.56
PCB-1221	(ND)|ND	1.1	0.28	0.56
PCB-1232	(ND)|ND	1.1	0.28	0.56
PCB-1242	(ND)|ND	1.1	0.28	0.56
PCB-1248	(ND)|ND	1.1	0.28	0.56
PCB-1254	(ND)|ND	1.1	0.28	0.56
PCB-1260	(ND)|ND	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4237)|0.4187	0.4440	(95.4)|94.3	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/12/23 11:00
Sample ID: QC05102023EB	Date Analyzed: 10/14/23 02:26
Lab Samp ID: J091-07	Dilution Factor: 1.05
Lab File ID: KJ13050A	Matrix : WATER
Ext Btch ID: CPJ016W	% Moisture : NA
Calib. Ref.: KJ13041A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	0.4019|(0.4180)	0.4200	95.7|(99.5)	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD 8151A
HERBICIDES

A total of three(3) water samples were received on 10/07/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
Samples J091-01 and J091-02 were re-extracted 4 days out of holding time due to low surrogate recovery which was out of QC limits. All other samples were extracted and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. HEJ005WB and HEJ010WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. HEJ005WL/HEJ005WC and HEJ010WL/HEJ010WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J091
Project : USACE WINGATE Instrument ID : 16

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEJ005WB	1	NA	10/13/2320:46	10/10/2312:30	WJ13006A	WJ13002A	HEJ005W	Method Blank
LCS1W	HEJ005WL	1	NA	10/13/2321:15	10/10/2312:30	WJ13007A	WJ13002A	HEJ005W	Lab Control Sample (LCS)
LCD1W	HEJ005WC	1	NA	10/13/2321:44	10/10/2312:30	WJ13008A	WJ13002A	HEJ005W	LCS Duplicate
MBLK2W	HEJ010WB	1	NA	10/17/2321:39	10/16/2312:30	WJ17006A	WJ17002A	HEJ010W	Method Blank
LCS2W	HEJ010WL	1	NA	10/17/2322:08	10/16/2312:30	WJ17007A	WJ17002A	HEJ010W	Lab Control Sample (LCS)
LCD2W	HEJ010WC	1	NA	10/17/2322:36	10/16/2312:30	WJ17008A	WJ17002A	HEJ010W	LCS Duplicate
MW36S102023	J091-01R	1	NA	10/18/2308:06	10/16/2312:30	WJ17028A	WJ17024A	HEJ010W	Field Sample
MW36D102023	J091-02R	1	NA	10/18/2308:35	10/16/2312:30	WJ17029A	WJ17024A	HEJ010W	Field Sample
QC05102023EB	J091-07	1	NA	10/14/2306:44	10/10/2312:30	WJ13027A	WJ13024A	HEJ005W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/05/23
Project	: USACE WINGATE	Date Received	: 10/07/23
Batch No.	: 23J091	Date Extracted	: 10/16/23 12:30
Sample ID	: MW36S102023	Date Analyzed	: 10/18/23 08:06
Lab Samp ID	: J091-01R	Dilution Factor	: 1
Lab File ID	: WJ17028A	Matrix	: WATER
Ext Btch ID	: HEJ010W	% Moisture	: NA
Calib. Ref.	: WJ17024A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.11J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	39J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.581 | (8.825)	10.00	85.8 | (88.2)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/16/23 12:30
Sample ID: MW36D102023	Date Analyzed: 10/18/23 08:35
Lab Samp ID: J091-02R	Dilution Factor: 1
Lab File ID: WJ17029A	Matrix : WATER
Ext Btch ID: HEJ010W	% Moisture : NA
Calib. Ref.: WJ17024A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.16J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	48 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.248 | (8.505)	10.00	82.5 | (85.0)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:30
Sample ID: QC05102023EB	Date Analyzed: 10/14/23 06:44
Lab Samp ID: J091-07	Dilution Factor: 1
Lab File ID: WJ13027A	Matrix : WATER
Ext Btch ID: HEJ005W	% Moisture : NA
Calib. Ref.: WJ13024A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.12J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	16J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	7.795 | (8.165)	10.00	78.0 | (81.7)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW8330B
EXPLOSIVES

A total of seven(7) water samples were received on 10/07/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ008WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ008WL/EXJ008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW8330B
EXPLOSIVES

A total of seven(7) water samples were received on 10/07/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ008WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 35J008WL/35J008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ008WB	1	NA	10/12/2310:01	10/10/2312:15	XJ10055A	XJ10053A	EXJ008W	Method Blank
LCS1W	EXJ008WL	1	NA	10/12/2310:49	10/10/2312:15	XJ10056A	XJ10053A	EXJ008W	Lab Control Sample (LCS)
LCD1W	EXJ008WC	1	NA	10/12/2311:46	10/10/2312:15	XJ10057A	XJ10053A	EXJ008W	LCS Duplicate
MW36S102023	J091-01	1	NA	10/12/2320:30	10/10/2312:15	XJ10067A	XJ10065A	EXJ008W	Field Sample
MW36D102023	J091-02	1	NA	10/12/2321:18	10/10/2312:15	XJ10068A	XJ10065A	EXJ008W	Field Sample
TMW31S102023	J091-04	1	NA	10/12/2322:15	10/10/2312:15	XJ10069A	XJ10065A	EXJ008W	Field Sample
TMW10102023	J091-05	1	NA	10/12/2323:03	10/10/2312:15	XJ10070A	XJ10065A	EXJ008W	Field Sample
FDUP04-102023	J091-06	1	NA	10/12/2323:59	10/10/2312:15	XJ10071A	XJ10065A	EXJ008W	Field Sample
QC05102023EB	J091-07	1	NA	10/13/2300:48	10/10/2312:15	XJ10072A	XJ10065A	EXJ008W	Field Sample
MW03102023	J091-08	1	NA	10/13/2301:44	10/10/2312:15	XJ10073A	XJ10065A	EXJ008W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ008WB	1	NA	10/12/2310:01	10/10/2312:15	XJ10055A	XJ10054A	EXJ008W	Method Blank
LCS1W	35J008WL	1	NA	10/12/2312:34	10/10/2312:15	XJ10058A	XJ10054A	EXJ008W	Lab Control Sample (LCS)
LCD1W	35J008WC	1	NA	10/12/2313:31	10/10/2312:15	XJ10059A	XJ10054A	EXJ008W	LCS Duplicate
MW36S102023	J091-01	1	NA	10/12/2320:30	10/10/2312:15	XJ10067A	XJ10066A	EXJ008W	Field Sample
MW36D102023	J091-02	1	NA	10/12/2321:18	10/10/2312:15	XJ10068A	XJ10066A	EXJ008W	Field Sample
TMW31S102023	J091-04	1	NA	10/12/2322:15	10/10/2312:15	XJ10069A	XJ10066A	EXJ008W	Field Sample
TMW10102023	J091-05	1	NA	10/12/2323:03	10/10/2312:15	XJ10070A	XJ10066A	EXJ008W	Field Sample
FDUP04-102023	J091-06	1	NA	10/12/2323:59	10/10/2312:15	XJ10071A	XJ10066A	EXJ008W	Field Sample
QC05102023EB	J091-07	1	NA	10/13/2300:48	10/10/2312:15	XJ10072A	XJ10066A	EXJ008W	Field Sample
MW03102023	J091-08	1	NA	10/13/2301:44	10/10/2312:15	XJ10073A	XJ10066A	EXJ008W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: MW36S102023	Date Analyzed: 10/12/23 20:30
Lab Samp ID: J091-01	Dilution Factor: 1
Lab File ID: XJ10067A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10065A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.79	4.000	94.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: MW36S102023	Date Analyzed: 10/12/23 20:30
Lab Samp ID: J091-01	Dilution Factor: 1
Lab File ID: XJ10067A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10066A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.79	4.000	94.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: MW36D102023	Date Analyzed: 10/12/23 21:18
Lab Samp ID: J091-02	Dilution Factor: 1
Lab File ID: XJ10068A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10065A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.68	4.000	91.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: MW36D102023	Date Analyzed: 10/12/23 21:18
Lab Samp ID: J091-02	Dilution Factor: 1
Lab File ID: XJ10068A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10066A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.68	4.000	91.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: TMW31S102023	Date Analyzed: 10/12/23 22:15
Lab Samp ID: J091-04	Dilution Factor: 1
Lab File ID: XJ10069A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10065A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.97	4.000	99.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: TMW31S102023	Date Analyzed: 10/12/23 22:15
Lab Samp ID: J091-04	Dilution Factor: 1
Lab File ID: XJ10069A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10066A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.97	4.000	99.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: TMW10102023	Date Analyzed: 10/12/23 23:03
Lab Samp ID: J091-05	Dilution Factor: 1
Lab File ID: XJ10070A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10065A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.66	4.000	91.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: TMW10102023	Date Analyzed: 10/12/23 23:03
Lab Samp ID: J091-05	Dilution Factor: 1
Lab File ID: XJ10070A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10066A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.66	4.000	91.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: FDUP04-102023	Date Analyzed: 10/12/23 23:59
Lab Samp ID: J091-06	Dilution Factor: 1
Lab File ID: XJ10071A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10065A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.85	4.000	96.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/10/23 12:15
Sample ID:	FDUP04-102023	Date Analyzed:	10/12/23 23:59
Lab Samp ID:	J091-06	Dilution Factor:	1
Lab File ID:	XJ10071A	Matrix :	WATER
Ext Btch ID:	EXJ008W	% Moisture :	NA
Calib. Ref.:	XJ10066A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.85	4.000	96.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: QC05102023EB	Date Analyzed: 10/13/23 00:48
Lab Samp ID: J091-07	Dilution Factor: 1
Lab File ID: XJ10072A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10065A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.85	4.000	96.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/10/23 12:15
Sample ID:	QC05102023EB	Date Analyzed:	10/13/23 00:48
Lab Samp ID:	J091-07	Dilution Factor:	1
Lab File ID:	XJ10072A	Matrix :	WATER
Ext Btch ID:	EXJ008W	% Moisture :	NA
Calib. Ref.:	XJ10066A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.85	4.000	96.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 12:15
Sample ID: MW03102023	Date Analyzed: 10/13/23 01:44
Lab Samp ID: J091-08	Dilution Factor: 1
Lab File ID: XJ10073A	Matrix : WATER
Ext Btch ID: EXJ008W	% Moisture : NA
Calib. Ref.: XJ10065A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.91	4.000	97.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/10/23 12:15
Sample ID:	MW03102023	Date Analyzed:	10/13/23 01:44
Lab Samp ID:	J091-08	Dilution Factor:	1
Lab File ID:	XJ10073A	Matrix :	WATER
Ext Btch ID:	EXJ008W	% Moisture :	NA
Calib. Ref.:	XJ10066A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.91	4.000	97.8	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW8332
NITROGLYCERIN AND PETN

A total of seven(7) water samples were received on 10/07/23 to be analyzed for Nitroglycerin And Petn in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ007WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ007WL/EXJ007WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ007WB	1	NA	10/11/2313:46	10/10/2311:45	NJ11003A	NJ11002A	EXJ007W	Method Blank
LCS1W	EXJ007WL	1	NA	10/11/2313:55	10/10/2311:45	NJ11004A	NJ11002A	EXJ007W	Lab Control Sample (LCS)
LCD1W	EXJ007WC	1	NA	10/11/2314:05	10/10/2311:45	NJ11005A	NJ11002A	EXJ007W	LCS Duplicate
MW36S102023	J091-01	1	NA	10/11/2315:08	10/10/2311:45	NJ11012A	NJ11011A	EXJ007W	Field Sample
MW36D102023	J091-02	1	NA	10/11/2315:17	10/10/2311:45	NJ11013A	NJ11011A	EXJ007W	Field Sample
TMW31S102023	J091-04	1	NA	10/11/2315:26	10/10/2311:45	NJ11014A	NJ11011A	EXJ007W	Field Sample
TMW10102023	J091-05	1	NA	10/11/2315:35	10/10/2311:45	NJ11015A	NJ11011A	EXJ007W	Field Sample
FDUP04-102023	J091-06	1	NA	10/11/2315:44	10/10/2311:45	NJ11016A	NJ11011A	EXJ007W	Field Sample
QC05102023EB	J091-07	1	NA	10/11/2315:53	10/10/2311:45	NJ11017A	NJ11011A	EXJ007W	Field Sample
MW03102023	J091-08	1	NA	10/11/2316:02	10/10/2311:45	NJ11018A	NJ11011A	EXJ007W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23
Project	: USACE WINGATE	Date Received:	10/07/23
Batch No.	: 23J091	Date Extracted:	10/10/23 11:45
Sample ID:	MW36S102023	Date Analyzed:	10/11/23 15:08
Lab Samp ID:	J091-01	Dilution Factor:	1
Lab File ID:	NJ11012A	Matrix :	WATER
Ext Btch ID:	EXJ007W	% Moisture :	NA
Calib. Ref.:	NJ11011A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	537	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 11:45
Sample ID: MW36D102023	Date Analyzed: 10/11/23 15:17
Lab Samp ID: J091-02	Dilution Factor: 1
Lab File ID: NJ11013A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11011A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	544	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 11:45
Sample ID: TMW31S102023	Date Analyzed: 10/11/23 15:26
Lab Samp ID: J091-04	Dilution Factor: 1
Lab File ID: NJ11014A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11011A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	543	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 11:45
Sample ID: TMW10102023	Date Analyzed: 10/11/23 15:35
Lab Samp ID: J091-05	Dilution Factor: 1
Lab File ID: NJ11015A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11011A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	543	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 11:45
Sample ID: FDUP04-102023	Date Analyzed: 10/11/23 15:44
Lab Samp ID: J091-06	Dilution Factor: 1
Lab File ID: NJ11016A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11011A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	537	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 11:45
Sample ID: QC05102023EB	Date Analyzed: 10/11/23 15:53
Lab Samp ID: J091-07	Dilution Factor: 1
Lab File ID: NJ11017A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11011A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	553	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23
Project : USACE WINGATE	Date Received: 10/07/23
Batch No. : 23J091	Date Extracted: 10/10/23 11:45
Sample ID: MW03102023	Date Analyzed: 10/11/23 16:02
Lab Samp ID: J091-08	Dilution Factor: 1
Lab File ID: NJ11018A	Matrix : WATER
Ext Btch ID: EXJ007W	% Moisture : NA
Calib. Ref.: NJ11011A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	552	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW6020A
METALS BY ICP-MS

A total of eight(8) water samples were received on 10/07/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Vanadium(0.37J <1/2 LOQ) was detected at trace level in IMJ027WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ027WL/IMJ027WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J091-02M/J091-02S - Percent recovery for Sodium(185X) was not within MS/MSD QC limits. Percent recoveries for Barium(8X) and Zinc was not within MS QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ027WB	1	NA	10/25/2317:50	10/23/2310:27	H6J19069	H6J19067	IMJ027W	Method Blank
LCS1W	IMJ027WL	1	NA	10/25/2317:53	10/23/2310:27	H6J19070	H6J19067	IMJ027W	Lab Control Sample (LCS)
LCD1W	IMJ027WC	1	NA	10/25/2317:56	10/23/2310:27	H6J19071	H6J19067	IMJ027W	LCS Duplicate
MW36S102023	J091-01I	10	NA	10/25/2317:59	10/23/2310:27	H6J19072	H6J19067	IMJ027W	Diluted Sample
MW36D102023	J091-02A	5	NA	10/25/2318:02	10/23/2310:27	H6J19073	H6J19067	IMJ027W	Analytical Spike Sample
MW36D102023	J091-02G	5	NA	10/25/2318:05	10/23/2310:27	H6J19074	H6J19067	IMJ027W	Diluted Sample
MW36D102023	J091-02J	25	NA	10/25/2318:08	10/23/2310:27	H6J19075	H6J19067	IMJ027W	Diluted Sample
MW36D102023MS	J091-02M	5	NA	10/25/2318:11	10/23/2310:27	H6J19076	H6J19067	IMJ027W	Matrix Spike Sample (MS)
MW36D102023MSD	J091-02S	5	NA	10/25/2318:17	10/23/2310:27	H6J19077	H6J19067	IMJ027W	MS Duplicate (MSD)
TMW08102023	J091-03K	20	NA	10/25/2318:19	10/23/2310:27	H6J19078	H6J19067	IMJ027W	Diluted Sample
TMW31S102023	J091-04G	5	NA	10/25/2318:28	10/23/2310:27	H6J19081	H6J19079	IMJ027W	Diluted Sample
TMW10102023	J091-05I	10	NA	10/25/2318:31	10/23/2310:27	H6J19082	H6J19079	IMJ027W	Diluted Sample
FDUP04-102023	J091-06I	10	NA	10/25/2318:34	10/23/2310:27	H6J19083	H6J19079	IMJ027W	Diluted Sample
QC05102023EB	J091-07	1	NA	10/25/2318:37	10/23/2310:27	H6J19084	H6J19079	IMJ027W	Field Sample
MW03102023	J091-08G	5	NA	10/25/2318:40	10/23/2310:27	H6J19085	H6J19079	IMJ027W	Diluted Sample
MW36D102023	J091-02A	50	NA	10/25/2318:43	10/23/2310:27	H6J19086	H6J19079	IMJ027W	Analytical Spike Sample
MW36D102023	J091-02T	50	NA	10/25/2318:46	10/23/2310:27	H6J19087	H6J19079	IMJ027W	Diluted Sample
MW36D102023	J091-02J	250	NA	10/25/2318:49	10/23/2310:27	H6J19088	H6J19079	IMJ027W	Diluted Sample
MW36D102023MS	J091-02M	50	NA	10/25/2318:51	10/23/2310:27	H6J19089	H6J19079	IMJ027W	Matrix Spike Sample (MS)
MW36D102023MSD	J091-02S	50	NA	10/25/2318:54	10/23/2310:27	H6J19090	H6J19079	IMJ027W	MS Duplicate (MSD)
MW36S102023	J091-01T	100	NA	10/25/2319:03	10/23/2310:27	H6J19093	H6J19091	IMJ027W	Diluted Sample
TMW08102023	J091-03T	200	NA	10/25/2319:06	10/23/2310:27	H6J19094	H6J19091	IMJ027W	Diluted Sample
TMW31S102023	J091-04T	50	NA	10/25/2319:09	10/23/2310:27	H6J19095	H6J19091	IMJ027W	Diluted Sample
TMW10102023	J091-05T	100	NA	10/25/2319:12	10/23/2310:27	H6J19096	H6J19091	IMJ027W	Diluted Sample
FDUP04-102023	J091-06T	100	NA	10/25/2319:15	10/23/2310:27	H6J19097	H6J19091	IMJ027W	Diluted Sample
MW03102023	J091-08T	50	NA	10/25/2319:18	10/23/2310:27	H6J19098	H6J19091	IMJ027W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW36S102023	Date Analyzed:	10/25/23 17:59
Lab Samp ID:	J091-01I	Dilution Factor:	10
Lab File ID:	H6J19072	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1900	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.6J	10	1.2	2.5
Barium	38	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	310000	2000	500	1000
Chromium	2.9J	10	1.0	2.0
Cobalt	3.2J	7.5	1.0	2.0
Copper	5.5J	20	5.0	10
Iron	1500J	2000	250	500
Lead	1.4J	10	0.50	1.0
Magnesium	130000	1000	200	500
Manganese	1600	10	2.5	5.0
Nickel	2.8J	10	2.5	5.0
Potassium	1700J	2000	500	1000
Selenium	2.0J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	5.8J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	MW36S102023	Date Analyzed:	10/25/23 19:03
Lab Samp ID:	J091-01T	Dilution Factor:	100
Lab File ID:	H6J19093	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19091	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2000000	20000	5000	10000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW36S102023	Date Analyzed:	10/25/23 17:59
Lab Samp ID:	J091-01I	Dilution Factor:	10
Lab File ID:	H6J19072	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1900	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.6J	10	1.2	2.5
Barium	38	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	310000	2000	500	1000
Chromium	2.9J	10	1.0	2.0
Cobalt	3.2J	7.5	1.0	2.0
Copper	5.5J	20	5.0	10
Iron	1500J	2000	250	500
Lead	1.4J	10	0.50	1.0
Magnesium	130000	1000	200	500
Manganese	1600	10	2.5	5.0
Nickel	2.8J	10	2.5	5.0
Potassium	1700J	2000	500	1000
Selenium	2.0J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	2000000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	5.8J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23 08:10
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J091	Date Extracted: 10/23/23 10:27
Sample ID: MW36S102023	Date Analyzed: 10/25/23 19:03
Lab Samp ID: J091-01T	Dilution Factor: 100
Lab File ID: H6J19093	Matrix: WATER
Ext Btch ID: IMJ027W	% Moisture: NA
Calib. Ref.: H6J19091	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	2000J	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	ND	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	310000	20000	5000	10000
Chromium	14J	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	140000	10000	2000	5000
Manganese	1600	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	2000000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW36D102023	Date Analyzed:	10/25/23 18:05
Lab Samp ID:	J091-02G	Dilution Factor:	5
Lab File ID:	H6J19074	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	240J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.69J	5.0	0.62	1.2
Barium	230	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	38000	1000	250	500
Chromium	0.61J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	1100	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	310	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	910J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	MW36D102023	Date Analyzed:	10/25/23 18:46
Lab Samp ID:	J091-02T	Dilution Factor:	50
Lab File ID:	H6J19087	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	560000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW36D102023	Date Analyzed:	10/25/23 18:05
Lab Samp ID:	J091-02G	Dilution Factor:	5
Lab File ID:	H6J19074	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	240J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.69J	5.0	0.62	1.2
Barium	230	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	38000	1000	250	500
Chromium	0.61J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	1100	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	310	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	910J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	560000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW36D102023	Date Analyzed:	10/25/23 18:46
Lab Samp ID:	J091-02T	Dilution Factor:	50
Lab File ID:	H6J19087	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	220	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	38000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	14000	5000	1000	2500
Manganese	310	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	560000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23 08:45
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J091	Date Extracted: 10/23/23 10:27
Sample ID: TMW08102023	Date Analyzed: 10/25/23 18:19
Lab Samp ID: J091-03K	Dilution Factor: 20
Lab File ID: H6J19078	Matrix: WATER
Ext Btch ID: IMJ027W	% Moisture: NA
Calib. Ref.: H6J19067	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	ND	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	300000	4000	1000	2000
Chromium	ND	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	1800J	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	92000	2000	400	1000
Manganese	630	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	1100J	4000	1000	2000
Selenium	46	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	5.9J	20	5.0	10
Zinc	ND	400	100	200

Sample ID: TMW08102023	Date Analyzed: 10/25/23 19:06
Lab Samp ID: J091-03T	Dilution Factor: 200
Lab File ID: H6J19094	Matrix: WATER
Ext Btch ID: IMJ027W	% Moisture: NA
Calib. Ref.: H6J19091	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	4200000	40000	10000	20000

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW08102023	Date Analyzed:	10/25/23 18:19
Lab Samp ID:	J091-03K	Dilution Factor:	20
Lab File ID:	H6J19078	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	ND	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	300000	4000	1000	2000
Chromium	ND	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	1800J	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	92000	2000	400	1000
Manganese	630	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	1100J	4000	1000	2000
Selenium	46	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	4200000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	5.9J	20	5.0	10
Zinc	ND	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW08102023	Date Analyzed:	10/25/23 19:06
Lab Samp ID:	J091-03T	Dilution Factor:	200
Lab File ID:	H6J19094	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19091	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	20000	4000	10000
Antimony	ND	200	50	100
Arsenic	ND	200	25	50
Barium	ND	200	50	100
Beryllium	ND	100	20	40
Cadmium	ND	200	20	40
Calcium	290000	40000	10000	20000
Chromium	ND	200	20	40
Cobalt	ND	150	20	40
Copper	ND	400	100	200
Iron	ND	40000	5000	10000
Lead	ND	200	10	20
Magnesium	93000	20000	4000	10000
Manganese	610	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	56J	200	30	60
Silver	ND	200	20	40
Sodium	4200000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	ND	200	50	100
Zinc	ND	4000	1000	2000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: TMW31S102023
Lab Samp ID: J091-04G
Lab File ID: H6J19081
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19079

Date Collected: 10/05/23 09:30
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 18:28
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1200	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.76J	5.0	0.62	1.2
Barium	28	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	120000	1000	250	500
Chromium	3.8J	5.0	0.50	1.0
Cobalt	0.57J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	580J	1000	120	250
Lead	0.57J	5.0	0.25	0.50
Magnesium	22000	500	100	250
Manganese	55	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	6.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW31S102023
Lab Samp ID: J091-04T
Lab File ID: H6J19095
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19091

Date Analyzed: 10/25/23 19:09
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	540000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 09:30
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW31S102023	Date Analyzed:	10/25/23 18:28
Lab Samp ID:	J091-04G	Dilution Factor:	5
Lab File ID:	H6J19081	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1200	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.76J	5.0	0.62	1.2
Barium	28	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	120000	1000	250	500
Chromium	3.8J	5.0	0.50	1.0
Cobalt	0.57J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	580J	1000	120	250
Lead	0.57J	5.0	0.25	0.50
Magnesium	22000	500	100	250
Manganese	55	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	6.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	540000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 09:30
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW31S102023	Date Analyzed:	10/25/23 19:09
Lab Samp ID:	J091-04T	Dilution Factor:	50
Lab File ID:	H6J19095	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19091	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1200J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	21J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	110000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	22000	5000	1000	2500
Manganese	51	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	540000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: TMW10102023
Lab Samp ID: J091-05I
Lab File ID: H6J19082
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19079

Date Collected: 10/05/23 11:05
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 18:31
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.3J	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	47000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	11000	1000	200	500
Manganese	23	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	4.0J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW10102023
Lab Samp ID: J091-05T
Lab File ID: H6J19096
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19091

Date Analyzed: 10/25/23 19:12
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1500000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW10102023	Date Analyzed:	10/25/23 18:31
Lab Samp ID:	J091-05I	Dilution Factor:	10
Lab File ID:	H6J19082	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.3J	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	47000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	11000	1000	200	500
Manganese	23	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1500000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	4.0J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: TMW10102023
Lab Samp ID: J091-05T
Lab File ID: H6J19096
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19091

Date Collected: 10/05/23 11:05
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 19:12
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	ND	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	46000	20000	5000	10000
Chromium	ND	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	11000	10000	2000	5000
Manganese	ND	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	1500000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: FDUP04-102023
Lab Samp ID: J091-06I
Lab File ID: H6J19083
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19079

Date Collected: 10/05/23 11:10
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 18:34
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.4J	10	1.2	2.5
Barium	14	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	48000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	12000	1000	200	500
Manganese	23	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	3.8J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: FDUP04-102023
Lab Samp ID: J091-06T
Lab File ID: H6J19097
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19091

Date Analyzed: 10/25/23 19:15
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1500000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	FDUP04-102023	Date Analyzed:	10/25/23 18:34
Lab Samp ID:	J091-06I	Dilution Factor:	10
Lab File ID:	H6J19083	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.4J	10	1.2	2.5
Barium	14	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	48000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	12000	1000	200	500
Manganese	23	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1500000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	3.8J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	FDUP04-102023	Date Analyzed:	10/25/23 19:15
Lab Samp ID:	J091-06T	Dilution Factor:	100
Lab File ID:	H6J19097	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19091	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	ND	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	46000	20000	5000	10000
Chromium	ND	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	12000	10000	2000	5000
Manganese	ND	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	1500000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	QC05102023EB	Date Analyzed:	10/25/23 18:37
Lab Samp ID:	J091-07	Dilution Factor:	1
Lab File ID:	H6J19084	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	0.16J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW03102023	Date Analyzed:	10/25/23 18:40
Lab Samp ID:	J091-08G	Dilution Factor:	5
Lab File ID:	H6J19085	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	99000	1000	250	500
Chromium	0.63J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	190J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	290J	1000	250	500
Selenium	27	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	MW03102023	Date Analyzed:	10/25/23 19:18
Lab Samp ID:	J091-08T	Dilution Factor:	50
Lab File ID:	H6J19098	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19091	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW03102023	Date Analyzed:	10/25/23 18:40
Lab Samp ID:	J091-08G	Dilution Factor:	5
Lab File ID:	H6J19085	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	99000	1000	250	500
Chromium	0.63J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	190J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	290J	1000	250	500
Selenium	27	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW03102023	Date Analyzed:	10/25/23 19:18
Lab Samp ID:	J091-08T	Dilution Factor:	50
Lab File ID:	H6J19098	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19091	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	95000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	18000	5000	1000	2500
Manganese	120	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	32J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MBLK1W	Date Analyzed:	10/25/23 17:50
Lab Samp ID:	IMJ027WB	Dilution Factor:	1
Lab File ID:	H6J19069	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.37J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of eight(8) water samples were received on 10/07/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Vanadium(0.37J <1/2 LOQ) was detected at trace level in IMJ027WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ027WL/IMJ027WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J091-02M/J091-02S - Percent recoveries for Manganese(9X) and Sodium(188X) were not within MS/MSD QC limits. Percent recovery for Calcium(12X) was not within MS. Percent recovery for Barium(6X) was not within MSD QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ027WB	1	NA	10/25/2317:50	10/23/2310:27	H6J19069	H6J19067	IMJ027W	Method Blank
LCS1W	IMJ027WL	1	NA	10/25/2317:53	10/23/2310:27	H6J19070	H6J19067	IMJ027W	Lab Control Sample (LCS)
LCD1W	IMJ027WC	1	NA	10/25/2317:56	10/23/2310:27	H6J19071	H6J19067	IMJ027W	LCS Duplicate
MW36S102023	J091-01I	10	NA	10/25/2319:26	10/23/2310:27	H6J19101	H6J19099	IMJ027W	Diluted Sample
MW36D102023	J091-02A	5	NA	10/25/2319:29	10/23/2310:27	H6J19102	H6J19099	IMJ027W	Analytical Spike Sample
MW36D102023	J091-02G	5	NA	10/25/2319:32	10/23/2310:27	H6J19103	H6J19099	IMJ027W	Diluted Sample
MW36D102023	J091-02J	25	NA	10/25/2319:35	10/23/2310:27	H6J19104	H6J19099	IMJ027W	Diluted Sample
MW36D102023MS	J091-02M	5	NA	10/25/2319:38	10/23/2310:27	H6J19105	H6J19099	IMJ027W	Matrix Spike Sample (MS)
MW36D102023MSD	J091-02S	5	NA	10/25/2319:41	10/23/2310:27	H6J19106	H6J19099	IMJ027W	MS Duplicate (MSD)
TMW08102023	J091-03K	20	NA	10/25/2319:44	10/23/2310:27	H6J19107	H6J19099	IMJ027W	Diluted Sample
TMW31S102023	J091-04G	5	NA	10/25/2319:47	10/23/2310:27	H6J19108	H6J19099	IMJ027W	Diluted Sample
TMW10102023	J091-05I	10	NA	10/25/2319:50	10/23/2310:27	H6J19109	H6J19099	IMJ027W	Diluted Sample
FDUP04-102023	J091-06I	10	NA	10/25/2319:53	10/23/2310:27	H6J19110	H6J19099	IMJ027W	Diluted Sample
QC05102023EB	J091-07	1	NA	10/25/2320:01	10/23/2310:27	H6J19113	H6J19111	IMJ027W	Field Sample
MW03102023	J091-08G	5	NA	10/25/2320:04	10/23/2310:27	H6J19114	H6J19111	IMJ027W	Diluted Sample
MW36S102023	J091-01T	100	NA	10/25/2320:07	10/23/2310:27	H6J19115	H6J19111	IMJ027W	Diluted Sample
MW36D102023	J091-02A	50	NA	10/25/2320:10	10/23/2310:27	H6J19116	H6J19111	IMJ027W	Analytical Spike Sample
MW36D102023	J091-02T	50	NA	10/25/2320:13	10/23/2310:27	H6J19117	H6J19111	IMJ027W	Diluted Sample
MW36D102023	J091-02J	250	NA	10/25/2320:16	10/23/2310:27	H6J19118	H6J19111	IMJ027W	Diluted Sample
MW36D102023MS	J091-02M	50	NA	10/25/2320:19	10/23/2310:27	H6J19119	H6J19111	IMJ027W	Matrix Spike Sample (MS)
MW36D102023MSD	J091-02S	50	NA	10/25/2320:22	10/23/2310:27	H6J19120	H6J19111	IMJ027W	MS Duplicate (MSD)
TMW08102023	J091-03T	200	NA	10/25/2320:25	10/23/2310:27	H6J19121	H6J19111	IMJ027W	Diluted Sample
TMW31S102023	J091-04T	50	NA	10/25/2320:28	10/23/2310:27	H6J19122	H6J19111	IMJ027W	Diluted Sample
TMW10102023	J091-05T	100	NA	10/25/2320:36	10/23/2310:27	H6J19125	H6J19123	IMJ027W	Diluted Sample
FDUP04-102023	J091-06T	100	NA	10/25/2320:39	10/23/2310:27	H6J19126	H6J19123	IMJ027W	Diluted Sample
MW03102023	J091-08T	50	NA	10/25/2320:42	10/23/2310:27	H6J19127	H6J19123	IMJ027W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: MW36S102023
Lab Samp ID: J091-01I
Lab File ID: H6J19101
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19099

Date Collected: 10/05/23 08:10
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 19:26
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	6.1J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	310000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	1.1J	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	140000	1000	200	500
Manganese	990	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1500J	2000	500	1000
Selenium	2.1J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW36S102023
Lab Samp ID: J091-01T
Lab File ID: H6J19115
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19111

Date Analyzed: 10/25/23 20:07
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2000000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW36S102023	Date Analyzed:	10/25/23 19:26
Lab Samp ID:	J091-01I	Dilution Factor:	10
Lab File ID:	H6J19101	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	6.1J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	310000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	1.1J	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	140000	1000	200	500
Manganese	990	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1500J	2000	500	1000
Selenium	2.1J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	2000000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW36S102023	Date Analyzed:	10/25/23 20:07
Lab Samp ID:	J091-01T	Dilution Factor:	100
Lab File ID:	H6J19115	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19111	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	ND	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	310000	20000	5000	10000
Chromium	ND	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	140000	10000	2000	5000
Manganese	1000	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	2000000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: MW36D102023
Lab Samp ID: J091-02G
Lab File ID: H6J19103
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19099

Date Collected: 10/05/23 08:35
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 19:32
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	190	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	37000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	160J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	260	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	880J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW36D102023
Lab Samp ID: J091-02T
Lab File ID: H6J19117
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19111

Date Analyzed: 10/25/23 20:13
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	560000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23 08:35
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J091	Date Extracted: 10/23/23 10:27
Sample ID: MW36D102023	Date Analyzed: 10/25/23 19:32
Lab Samp ID: J091-02G	Dilution Factor: 5
Lab File ID: H6J19103	Matrix: WATER
Ext Btch ID: IMJ027W	% Moisture: NA
Calib. Ref.: H6J19099	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	190	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	37000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	160J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	260	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	880J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	550000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:35
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW36D102023	Date Analyzed:	10/25/23 20:13
Lab Samp ID:	J091-02T	Dilution Factor:	50
Lab File ID:	H6J19117	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19111	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	170	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	37000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	14000	5000	1000	2500
Manganese	260	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	560000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: TMW08102023
Lab Samp ID: J091-03K
Lab File ID: H6J19107
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19099

Date Collected: 10/05/23 08:45
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 19:44
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	5.3J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	320000	4000	1000	2000
Chromium	ND	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	98000	2000	400	1000
Manganese	660	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	1400J	4000	1000	2000
Selenium	44	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	ND	400	100	200

Sample ID: TMW08102023
Lab Samp ID: J091-03T
Lab File ID: H6J19121
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19111

Date Analyzed: 10/25/23 20:25
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	4500000	40000	10000	20000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23 08:45
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J091	Date Extracted: 10/23/23 10:27
Sample ID: TMW08102023	Date Analyzed: 10/25/23 19:44
Lab Samp ID: J091-03K	Dilution Factor: 20
Lab File ID: H6J19107	Matrix: WATER
Ext Btch ID: IMJ027W	% Moisture: NA
Calib. Ref.: H6J19099	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	20	2.5	5.0
Barium	5.3J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	320000	4000	1000	2000
Chromium	ND	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	98000	2000	400	1000
Manganese	660	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	1400J	4000	1000	2000
Selenium	44	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	4600000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	ND	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 08:45
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW08102023	Date Analyzed:	10/25/23 20:25
Lab Samp ID:	J091-03T	Dilution Factor:	200
Lab File ID:	H6J19121	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19111	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	20000	4000	10000
Antimony	ND	200	50	100
Arsenic	ND	200	25	50
Barium	ND	200	50	100
Beryllium	ND	100	20	40
Cadmium	ND	200	20	40
Calcium	310000	40000	10000	20000
Chromium	ND	200	20	40
Cobalt	ND	150	20	40
Copper	ND	400	100	200
Iron	ND	40000	5000	10000
Lead	ND	200	10	20
Magnesium	97000	20000	4000	10000
Manganese	630	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	54J	200	30	60
Silver	ND	200	20	40
Sodium	4500000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	ND	200	50	100
Zinc	ND	4000	1000	2000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: TMW31S102023
Lab Samp ID: J091-04G
Lab File ID: H6J19108
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19099

Date Collected: 10/05/23 09:30
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 19:47
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	120000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	22000	500	100	250
Manganese	7.6	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	1000	250	500
Selenium	6.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW31S102023
Lab Samp ID: J091-04T
Lab File ID: H6J19122
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19111

Date Analyzed: 10/25/23 20:28
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 09:30
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW31S102023	Date Analyzed:	10/25/23 19:47
Lab Samp ID:	J091-04G	Dilution Factor:	5
Lab File ID:	H6J19108	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	120000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	22000	500	100	250
Manganese	7.6	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	1000	250	500
Selenium	6.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	560000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 09:30
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW31S102023	Date Analyzed:	10/25/23 20:28
Lab Samp ID:	J091-04T	Dilution Factor:	50
Lab File ID:	H6J19122	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19111	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	120000	10000	2500	5000
Chromium	5.5J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	23000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	580000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: TMW10102023
Lab Samp ID: J091-05I
Lab File ID: H6J19109
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19099

Date Collected: 10/05/23 11:05
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 19:50
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.4J	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	48000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	11000	1000	200	500
Manganese	22	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	5.0J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW10102023
Lab Samp ID: J091-05T
Lab File ID: H6J19125
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19123

Date Analyzed: 10/25/23 20:36
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1500000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:05
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	TMW10102023	Date Analyzed:	10/25/23 19:50
Lab Samp ID:	J091-05I	Dilution Factor:	10
Lab File ID:	H6J19109	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.4J	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	48000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	11000	1000	200	500
Manganese	22	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1500000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	5.0J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/05/23 11:05
Project : USACE WINGATE	Date Received: 10/07/23
SDG NO. : 23J091	Date Extracted: 10/23/23 10:27
Sample ID: TMW10102023	Date Analyzed: 10/25/23 20:36
Lab Samp ID: J091-05T	Dilution Factor: 100
Lab File ID: H6J19125	Matrix: WATER
Ext Btch ID: IMJ027W	% Moisture: NA
Calib. Ref.: H6J19123	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	ND	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	46000	20000	5000	10000
Chromium	11J	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	11000	10000	2000	5000
Manganese	ND	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	1500000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: FDUP04-102023
Lab Samp ID: J091-06I
Lab File ID: H6J19110
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19099

Date Collected: 10/05/23 11:10
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 19:53
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.4J	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	47000	2000	500	1000
Chromium	1.0J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	12000	1000	200	500
Manganese	19	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	4.5J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: FDUP04-102023
Lab Samp ID: J091-06T
Lab File ID: H6J19126
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19123

Date Analyzed: 10/25/23 20:39
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1500000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	FDUP04-102023	Date Analyzed:	10/25/23 19:53
Lab Samp ID:	J091-06I	Dilution Factor:	10
Lab File ID:	H6J19110	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.4J	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	47000	2000	500	1000
Chromium	1.0J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	12000	1000	200	500
Manganese	19	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1500000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	4.5J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 11:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	FDUP04-102023	Date Analyzed:	10/25/23 20:39
Lab Samp ID:	J091-06T	Dilution Factor:	100
Lab File ID:	H6J19126	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	ND	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	45000	20000	5000	10000
Chromium	ND	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	12000	10000	2000	5000
Manganese	ND	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	1500000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:00
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	QC05102023EB	Date Analyzed:	10/25/23 20:01
Lab Samp ID:	J091-07	Dilution Factor:	1
Lab File ID:	H6J19113	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19111	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	0.14J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	1.5J	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J091
Sample ID: MW03102023
Lab Samp ID: J091-08G
Lab File ID: H6J19114
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19111

Date Collected: 10/05/23 14:10
Date Received: 10/07/23
Date Extracted: 10/23/23 10:27
Date Analyzed: 10/25/23 20:04
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	98000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.8J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	320J	1000	250	500
Selenium	28	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW03102023
Lab Samp ID: J091-08T
Lab File ID: H6J19127
Ext Btch ID: IMJ027W
Calib. Ref.: H6J19123

Date Analyzed: 10/25/23 20:42
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1200000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW03102023	Date Analyzed:	10/25/23 20:04
Lab Samp ID:	J091-08G	Dilution Factor:	5
Lab File ID:	H6J19114	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19111	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	98000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.8J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	320J	1000	250	500
Selenium	28	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/05/23 14:10
Project	: USACE WINGATE	Date Received:	10/07/23
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MW03102023	Date Analyzed:	10/25/23 20:42
Lab Samp ID:	J091-08T	Dilution Factor:	50
Lab File ID:	H6J19127	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	99000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	19000	5000	1000	2500
Manganese	110	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	29J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1200000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J091	Date Extracted:	10/23/23 10:27
Sample ID:	MBLK1W	Date Analyzed:	10/25/23 17:50
Lab Samp ID:	IMJ027WB	Dilution Factor:	1
Lab File ID:	H6J19069	Matrix:	WATER
Ext Btch ID:	IMJ027W	% Moisture:	NA
Calib. Ref.:	H6J19067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.37J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of eight(8) water samples were received on 10/07/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ019WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ019WL/HGJ019WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ019WB	1	NA	10/23/2314:27	10/23/2310:37	M47J010012	M47J010	23HGJ019W	Method Blank
LCS1W	HGJ019WL	1	NA	10/23/2314:29	10/23/2310:37	M47J010013	M47J010	23HGJ019W	Lab Control Sample (LCS)
LCD1W	HGJ019WC	1	NA	10/23/2314:31	10/23/2310:37	M47J010014	M47J010	23HGJ019W	LCS Duplicate
MW36S102023	J091-01	1	NA	10/23/2315:21	10/23/2310:37	M47J010041	M47J010	23HGJ019W	Field Sample
MW36D102023	J091-02	1	NA	10/23/2315:22	10/23/2310:37	M47J010042	M47J010	23HGJ019W	Field Sample
TMW08102023	J091-03	1	NA	10/23/2315:24	10/23/2310:37	M47J010043	M47J010	23HGJ019W	Field Sample
TMW31S102023	J091-04	1	NA	10/23/2315:27	10/23/2310:37	M47J010044	M47J010	23HGJ019W	Field Sample
TMW10102023	J091-05	1	NA	10/23/2315:29	10/23/2310:37	M47J010045	M47J010	23HGJ019W	Field Sample
FDUP04-102023	J091-06	1	NA	10/23/2315:35	10/23/2310:37	M47J010048	M47J010	23HGJ019W	Field Sample
QC05102023EB	J091-07	1	NA	10/23/2315:37	10/23/2310:37	M47J010049	M47J010	23HGJ019W	Field Sample
MW03102023	J091-08	1	NA	10/23/2315:38	10/23/2310:37	M47J010050	M47J010	23HGJ019W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J091
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ019WB	ND	1	NA	0.50	0.10	0.20	10/23/2314:27	10/23/2310:37	M47J010012	M47J010	23HGJ019W	NA	NA
LCS1W	HGJ019WL	2.5	1	NA	0.50	0.10	0.20	10/23/2314:29	10/23/2310:37	M47J010013	M47J010	23HGJ019W	NA	NA
LCD1W	HGJ019WC	2.7	1	NA	0.50	0.10	0.20	10/23/2314:31	10/23/2310:37	M47J010014	M47J010	23HGJ019W	NA	NA
MW36S102023	J091-01	ND	1	NA	0.50	0.10	0.20	10/23/2315:21	10/23/2310:37	M47J010041	M47J010	23HGJ019W	10/05/2308:10	10/07/23
MW36D102023	J091-02	ND	1	NA	0.50	0.10	0.20	10/23/2315:22	10/23/2310:37	M47J010042	M47J010	23HGJ019W	10/05/2308:35	10/07/23
TMW08102023	J091-03	ND	1	NA	0.50	0.10	0.20	10/23/2315:24	10/23/2310:37	M47J010043	M47J010	23HGJ019W	10/05/2308:45	10/07/23
TMW31S102023	J091-04	ND	1	NA	0.50	0.10	0.20	10/23/2315:27	10/23/2310:37	M47J010044	M47J010	23HGJ019W	10/05/2309:30	10/07/23
TMW10102023	J091-05	ND	1	NA	0.50	0.10	0.20	10/23/2315:29	10/23/2310:37	M47J010045	M47J010	23HGJ019W	10/05/2311:05	10/07/23
FDUP04-102023	J091-06	ND	1	NA	0.50	0.10	0.20	10/23/2315:35	10/23/2310:37	M47J010048	M47J010	23HGJ019W	10/05/2311:10	10/07/23
QC05102023EB	J091-07	ND	1	NA	0.50	0.10	0.20	10/23/2315:37	10/23/2310:37	M47J010049	M47J010	23HGJ019W	10/05/2314:00	10/07/23
MW03102023	J091-08	ND	1	NA	0.50	0.10	0.20	10/23/2315:38	10/23/2310:37	M47J010050	M47J010	23HGJ019W	10/05/2314:10	10/07/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of eight(8) water samples were received on 10/07/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ020WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ020WL/HGJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J091
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ020WB	1	NA	10/23/2315:40	10/23/2311:20	M47J010051	M47J010	23HGJ020W	Method Blank
LCS1W	HGJ020WL	1	NA	10/23/2315:42	10/23/2311:20	M47J010052	M47J010	23HGJ020W	Lab Control Sample (LCS)
LCD1W	HGJ020WC	1	NA	10/23/2315:45	10/23/2311:20	M47J010053	M47J010	23HGJ020W	LCS Duplicate
MW36S102023	J091-01	1	NA	10/23/2316:24	10/23/2311:20	M47J010073	M47J010	23HGJ020W	Field Sample
MW36D102023	J091-02	1	NA	10/23/2316:26	10/23/2311:20	M47J010074	M47J010	23HGJ020W	Field Sample
TMW08102023	J091-03	1	NA	10/23/2316:28	10/23/2311:20	M47J010075	M47J010	23HGJ020W	Field Sample
TMW31S102023	J091-04	1	NA	10/23/2316:30	10/23/2311:20	M47J010076	M47J010	23HGJ020W	Field Sample
TMW10102023	J091-05	1	NA	10/23/2316:32	10/23/2311:20	M47J010077	M47J010	23HGJ020W	Field Sample
FDUP04-102023	J091-06	1	NA	10/23/2316:34	10/23/2311:20	M47J010078	M47J010	23HGJ020W	Field Sample
QC05102023EB	J091-07	1	NA	10/23/2316:36	10/23/2311:20	M47J010079	M47J010	23HGJ020W	Field Sample
MW03102023	J091-08	1	NA	10/23/2316:37	10/23/2311:20	M47J010080	M47J010	23HGJ020W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J091

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ020WB	ND	1	NA	0.50	0.10	0.20	10/23/2315:40	10/23/2311:20	M47J010051	M47J010	23HGJ020W	NA	NA
LCS1W	HGJ020WL	2.7	1	NA	0.50	0.10	0.20	10/23/2315:42	10/23/2311:20	M47J010052	M47J010	23HGJ020W	NA	NA
LCD1W	HGJ020WC	2.7	1	NA	0.50	0.10	0.20	10/23/2315:45	10/23/2311:20	M47J010053	M47J010	23HGJ020W	NA	NA
MW36S102023	J091-01	ND	1	NA	0.50	0.10	0.20	10/23/2316:24	10/23/2311:20	M47J010073	M47J010	23HGJ020W	10/05/2308:10	10/07/23
MW36D102023	J091-02	ND	1	NA	0.50	0.10	0.20	10/23/2316:26	10/23/2311:20	M47J010074	M47J010	23HGJ020W	10/05/2308:35	10/07/23
TMW08102023	J091-03	ND	1	NA	0.50	0.10	0.20	10/23/2316:28	10/23/2311:20	M47J010075	M47J010	23HGJ020W	10/05/2308:45	10/07/23
TMW31S102023	J091-04	ND	1	NA	0.50	0.10	0.20	10/23/2316:30	10/23/2311:20	M47J010076	M47J010	23HGJ020W	10/05/2309:30	10/07/23
TMW10102023	J091-05	ND	1	NA	0.50	0.10	0.20	10/23/2316:32	10/23/2311:20	M47J010077	M47J010	23HGJ020W	10/05/2311:05	10/07/23
FDUP04-102023	J091-06	ND	1	NA	0.50	0.10	0.20	10/23/2316:34	10/23/2311:20	M47J010078	M47J010	23HGJ020W	10/05/2311:10	10/07/23
QC05102023EB	J091-07	ND	1	NA	0.50	0.10	0.20	10/23/2316:36	10/23/2311:20	M47J010079	M47J010	23HGJ020W	10/05/2314:00	10/07/23
MW03102023	J091-08	ND	1	NA	0.50	0.10	0.20	10/23/2316:37	10/23/2311:20	M47J010080	M47J010	23HGJ020W	10/05/2314:10	10/07/23

Note: Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW6850
PERCHLORATE BY HPLC/MS

SDG#: 23J091

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J091

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of eight(8) water samples were received on 10/07/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. PLJ008WB and PLJ009WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- PLJ008WL/PLJ008WC were within LCS limits.
- PLJ009WL/PLJ009WC were within LCS limits.
Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J091-01I, -02I, -03I, -05I, -06I, and -08I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J091

Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ008WB	ND	1	NA	0.20	0.050	0.10	10/12/2310:49	NA	23MJ12007	MJ12004	PLJ008W	NA	NA
LCS1W	PLJ008WL	0.22	1	NA	0.20	0.050	0.10	10/12/2311:04	NA	23MJ12008	MJ12004	PLJ008W	NA	NA
LCD1W	PLJ008WC	0.22	1	NA	0.20	0.050	0.10	10/12/2311:38	NA	23MJ12009	MJ12004	PLJ008W	NA	NA
QC05102023EB	J091-07	ND	1	NA	0.20	0.050	0.10	10/12/2314:45	NA	23MJ12018	MJ12017	PLJ008W	10/05/2314:00	10/07/23
MBLK2W	PLJ009WB	ND	1	NA	0.20	0.050	0.10	10/13/2310:48	NA	23MJ13007	MJ13004	PLJ009W	NA	NA
LCS2W	PLJ009WL	0.22	1	NA	0.20	0.050	0.10	10/13/2311:03	NA	23MJ13008	MJ13004	PLJ009W	NA	NA
LCD2W	PLJ009WC	0.22	1	NA	0.20	0.050	0.10	10/13/2311:18	NA	23MJ13009	MJ13004	PLJ009W	NA	NA
MW36S102023	J091-01I	ND	5	NA	1.0	0.25	0.50	10/13/2311:41	NA	23MJ13010	MJ13004	PLJ009W	10/05/2308:10	10/07/23
MW36D102023	J091-02I	ND	5	NA	1.0	0.25	0.50	10/13/2311:57	NA	23MJ13011	MJ13004	PLJ009W	10/05/2308:35	10/07/23
TMW08102023	J091-03I	ND	5	NA	1.0	0.25	0.50	10/13/2312:12	NA	23MJ13012	MJ13004	PLJ009W	10/05/2308:45	10/07/23
TMW31S102023	J091-04I	570	200	NA	40	10	20	10/13/2312:26	NA	23MJ13013	MJ13004	PLJ009W	10/05/2309:30	10/07/23
TMW10102023	J091-05I	ND	5	NA	1.0	0.25	0.50	10/13/2312:41	NA	23MJ13014	MJ13004	PLJ009W	10/05/2311:05	10/07/23
FDUP04-102023	J091-06I	ND	5	NA	1.0	0.25	0.50	10/13/2312:56	NA	23MJ13015	MJ13004	PLJ009W	10/05/2311:10	10/07/23
MW03102023	J091-08I	ND	5	NA	1.0	0.25	0.50	10/13/2313:10	NA	23MJ13016	MJ13004	PLJ009W	10/05/2314:10	10/07/23

Note: Detection limits are reported relative to sample result significant figures.

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-17-2023
EMAX Batch No.: 23J093

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/10/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW30102023	J093-01	10/09/23	WATER	ANIONS BY IC
MW26102023	J093-02	10/09/23	WATER	ANIONS BY IC
MW34102023	J093-03	10/09/23	WATER	ANIONS BY IC
TMW17102023	J093-04	10/09/23	WATER	ANIONS BY IC
TMW53102023	J093-05	10/09/23	WATER	ANIONS BY IC
MW33102023	J093-06	10/09/23	WATER	ANIONS BY IC
TMW57102023	J093-07	10/09/23	WATER	ANIONS BY IC
MW31102023	J093-0B	10/09/23	WATER	ANIONS BY IC
MW27102023	J093-09	10/09/23	WATER	ANIONS BY IC
MW39102023	J093-10	10/09/23	WATER	ANIONS BY IC
TMW61102023	J093-11	10/09/23	WATER	ANIONS BY IC
MW38102023	J093-12	10/09/23	WATER	ANIONS BY IC
TMW24102023	J093-13	10/09/23	WATER	ANIONS BY IC
FW31102023	J093-14	10/09/23	WATER	ANIONS BY IC
TMW59102023	J093-15	10/09/23	WATER	ANIONS BY IC
TMW39D102023	J093-16	10/09/23	WATER	ANIONS BY IC
TMW49102023	J093-17	10/09/23	WATER	ANIONS BY IC
MW35102023	J093-18	10/09/23	WATER	ANIONS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW9056A
ANIONS BY IC

SDG#: 23J093

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J093

METHOD 9056A
BROMIDE

A total of eighteen(18) water samples were received on 10/10/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ020WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ020WL/ICJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J093-01I and -02I were reported at a 2X dilution factor due to yellow color. Sample J093-06I was reported at a 5X dilution factor due to yellow color. Sample J093-10I was reported at a 10X dilution factor due to brown color. Samples J093-03I, -09I, -12I, -13I, -15I, -16I, -17I, and -18I were reported at a 2X dilution factor due to high conductivity. Samples J093-08I and -11I were reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J093

METHOD 9056A
CHLORIDE-CL

A total of eighteen(18) water samples were received on 10/10/23 to be analyzed for Chloride-Cl in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Chloride-Cl was not detected in ICK008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICK008WL/ICK008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J093

METHOD 9056A
FLUORIDE

A total of eighteen(18) water samples were received on 10/10/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Fluoride-F was not detected in ICJ020WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ020WL/ICJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J093-01I and -02I were reported at a 2X dilution factor due to yellow color. Sample J093-06I was reported at a 5X dilution factor due to yellow color. Sample J093-10I was reported at a 10X dilution factor due to brown color. Samples J093-03I, -09I, -12I, -13I, -15I, -16I, -17I, and -18I were reported at a 2X dilution factor due to high conductivity. Samples J093-08I and -11I were reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J093

METHOD SW9056A
NITRATE-N

A total of eighteen(18) water samples were received on 10/10/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrate was not detected in ICJ020WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ020WL/ICJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J093-01I and -02I were reported at a 2X dilution factor due to yellow color. Sample J093-06I was reported at a 5X dilution factor due to yellow color. Sample J093-10I was reported at a 10X dilution factor due to brown color. Samples J093-12I, -13I, -16I, -17I, and -18I were reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J093

METHOD SW9056A
NITRITE-N

A total of eighteen(18) water samples were received on 10/10/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrite was not detected in ICJ020WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ020WL/ICJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J093-01I and -02I were reported at a 2X dilution factor due to yellow color. Sample J093-06I was reported at a 5X dilution factor due to yellow color. Sample J093-10I was reported at a 10X dilution factor due to brown color. Samples J093-03I, -09I, -12I, -13I, -15I, -16I, -17I, and -18I were reported at a 2X dilution factor due to high conductivity. Samples J093-08I and -11I were reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J093

METHOD 9056A
ORTHOPHOSPHATE-P

A total of eighteen(18) water samples were received on 10/10/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ020WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ020WL/ICJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J093-01I and -02I were reported at a 2X dilution factor due to yellow color. Sample J093-06I was reported at a 5X dilution factor due to yellow color. Sample J093-10I was reported at a 10X dilution factor due to brown color. Samples J093-03I, -09I, -12I, -13I, -15I, -16I, -17I, and -18I were reported at a 2X dilution factor due to high conductivity. Samples J093-08I and -11I were reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CCV202 was not within project quality control limits. All samples associated with failing CCV are non-detect for orthophosphate.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J093

METHOD 9056A
SULFATE

A total of eighteen(18) water samples were received on 10/10/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Sulfate was not detected in ICK008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICK008WL/ICK008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J093

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ020WB	ND	1	NA	0.5	0.13	0.25	10/10/2313:39	NA	AJ12-03	AJ12-01	ICJ020W	NA	NA
LCS1W	ICJ020WL	1.0	1	NA	0.5	0.13	0.25	10/10/2313:59	NA	AJ12-04	AJ12-01	ICJ020W	NA	NA
LCD1W	ICJ020WC	1.0	1	NA	0.5	0.13	0.25	10/10/2314:19	NA	AJ12-05	AJ12-01	ICJ020W	NA	NA
MW30102023	J093-01I	1.2	2	NA	1	0.26	0.5	10/10/2314:40	NA	AJ12-06	AJ12-01	ICJ020W	10/09/2307:35	10/10/23
MW26102023	J093-02I	1.4	2	NA	1	0.26	0.5	10/10/2315:00	NA	AJ12-07	AJ12-01	ICJ020W	10/09/2307:40	10/10/23
MW34102023	J093-03I	2.0	2	NA	1	0.26	0.5	10/10/2315:20	NA	AJ12-08	AJ12-01	ICJ020W	10/09/2308:15	10/10/23
TMW17102023	J093-04	0.57	1	NA	0.5	0.13	0.25	10/10/2315:41	NA	AJ12-09	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
TMW53102023	J093-05	0.42J	1	NA	0.5	0.13	0.25	10/10/2316:01	NA	AJ12-10	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
MW33102023	J093-06I	2.2J	5	NA	2.5	0.65	1.2	10/10/2316:21	NA	AJ12-11	AJ12-01	ICJ020W	10/09/2308:40	10/10/23
TMW57102023	J093-07	0.74	1	NA	0.5	0.13	0.25	10/10/2316:41	NA	AJ12-12	AJ12-01	ICJ020W	10/09/2309:10	10/10/23
MW31102023	J093-08I	2.7	5	NA	2.5	0.65	1.2	10/10/2317:43	NA	AJ12-15	AJ12-13	ICJ020W	10/09/2309:10	10/10/23
MW27102023	J093-09I	1.0	2	NA	1	0.26	0.5	10/10/2318:03	NA	AJ12-16	AJ12-13	ICJ020W	10/09/2309:40	10/10/23
MW39102023	J093-10I	3.5J	10	NA	5	1.3	2.5	10/10/2318:23	NA	AJ12-17	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
TMW61102023	J093-11I	2.3J	5	NA	2.5	0.65	1.2	10/10/2318:43	NA	AJ12-18	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
MW38102023	J093-12I	1.2	2	NA	1	0.26	0.5	10/10/2319:04	NA	AJ12-19	AJ12-13	ICJ020W	10/09/2310:45	10/10/23
TMW24102023	J093-13I	1.8	2	NA	1	0.26	0.5	10/10/2319:24	NA	AJ12-20	AJ12-13	ICJ020W	10/09/2310:55	10/10/23
FW31102023	J093-14	ND	1	NA	0.5	0.13	0.25	10/10/2319:44	NA	AJ12-21	AJ12-13	ICJ020W	10/09/2311:15	10/10/23
TMW59102023	J093-15I	0.94J	2	NA	1	0.26	0.5	10/10/2320:05	NA	AJ12-22	AJ12-13	ICJ020W	10/09/2311:30	10/10/23
TMW39D102023	J093-16I	1.0	2	NA	1	0.26	0.5	10/10/2320:32	NA	AJ12-23	AJ12-13	ICJ020W	10/09/2313:30	10/10/23
TMW49102023	J093-17I	1.2	2	NA	1	0.26	0.5	10/10/2320:52	NA	AJ12-24	AJ12-13	ICJ020W	10/09/2313:55	10/10/23
MW35102023	J093-18I	0.99J	2	NA	1	0.26	0.5	10/10/2321:53	NA	AJ12-27	AJ12-25	ICJ020W	10/09/2313:55	10/10/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J093

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICK008WB	ND	1	NA	0.2	0.05	0.1	11/06/2312:28	NA	AK08-03	AK08-01	ICK008W	NA	NA
LCS1W	ICK008WL	2.0	1	NA	0.2	0.05	0.1	11/06/2312:48	NA	AK08-04	AK08-01	ICK008W	NA	NA
LCD1W	ICK008WC	2.0	1	NA	0.2	0.05	0.1	11/06/2313:08	NA	AK08-05	AK08-01	ICK008W	NA	NA
MW30102023	J093-01J	270	100	NA	20	5	10	11/06/2313:29	NA	AK08-06	AK08-01	ICK008W	10/09/2307:35	10/10/23
MW26102023	J093-02J	330	100	NA	20	5	10	11/06/2313:49	NA	AK08-07	AK08-01	ICK008W	10/09/2307:40	10/10/23
MW34102023	J093-03K	410	100	NA	20	5	10	11/06/2314:09	NA	AK08-08	AK08-01	ICK008W	10/09/2308:15	10/10/23
TMW17102023	J093-04I	120	50	NA	10	2.5	5	11/06/2314:30	NA	AK08-09	AK08-01	ICK008W	10/09/2308:20	10/10/23
TMW53102023	J093-05I	81	40	NA	8	2	4	11/06/2314:50	NA	AK08-10	AK08-01	ICK008W	10/09/2308:20	10/10/23
MW33102023	J093-06J	220	100	NA	20	5	10	11/06/2315:10	NA	AK08-11	AK08-01	ICK008W	10/09/2308:40	10/10/23
TMW57102023	J093-07I	63	20	NA	4	1	2	11/06/2315:31	NA	AK08-12	AK08-01	ICK008W	10/09/2309:10	10/10/23
MW31102023	J093-08K	710	200	NA	40	10	20	11/06/2316:31	NA	AK08-15	AK08-13	ICK008W	10/09/2309:10	10/10/23
MW27102023	J093-09K	110	50	NA	10	2.5	5	11/06/2316:52	NA	AK08-16	AK08-13	ICK008W	10/09/2309:40	10/10/23
MW39102023	J093-10J	610	200	NA	40	10	20	11/06/2317:12	NA	AK08-17	AK08-13	ICK008W	10/09/2310:15	10/10/23
TMW61102023	J093-11K	530	200	NA	40	10	20	11/06/2317:33	NA	AK08-18	AK08-13	ICK008W	10/09/2310:15	10/10/23
MW38102023	J093-12J	250	100	NA	20	5	10	11/06/2317:53	NA	AK08-19	AK08-13	ICK008W	10/09/2310:45	10/10/23
TMW24102023	J093-13J	440	100	NA	20	5	10	11/06/2318:13	NA	AK08-20	AK08-13	ICK008W	10/09/2310:55	10/10/23
FW31102023	J093-14J	6.5	2	NA	0.4	0.1	0.2	11/06/2318:33	NA	AK08-21	AK08-13	ICK008W	10/09/2311:15	10/10/23
TMW59102023	J093-15K	83	50	NA	10	2.5	5	11/06/2319:14	NA	AK08-23	AK08-13	ICK008W	10/09/2311:30	10/10/23
TMW39D102023	J093-16J	300	100	NA	20	5	10	11/06/2319:34	NA	AK08-24	AK08-13	ICK008W	10/09/2313:30	10/10/23
TMW49102023	J093-17J	360	100	NA	20	5	10	11/06/2320:35	NA	AK08-27	AK08-25	ICK008W	10/09/2313:55	10/10/23
MW35102023	J093-18J	300	100	NA	20	5	10	11/06/2320:55	NA	AK08-28	AK08-25	ICK008W	10/09/2313:55	10/10/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J093

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ020WB	ND	1	NA	0.1	0.025	0.05	10/10/2313:39	NA	AJ12-03	AJ12-01	ICJ020W	NA	NA
LCS1W	ICJ020WL	0.99	1	NA	0.1	0.025	0.05	10/10/2313:59	NA	AJ12-04	AJ12-01	ICJ020W	NA	NA
LCD1W	ICJ020WC	1.0	1	NA	0.1	0.025	0.05	10/10/2314:19	NA	AJ12-05	AJ12-01	ICJ020W	NA	NA
MW30102023	J093-01I	0.90	2	NA	0.2	0.05	0.1	10/10/2314:40	NA	AJ12-06	AJ12-01	ICJ020W	10/09/2307:35	10/10/23
MW26102023	J093-02I	0.62	2	NA	0.2	0.05	0.1	10/10/2315:00	NA	AJ12-07	AJ12-01	ICJ020W	10/09/2307:40	10/10/23
MW34102023	J093-03I	0.71	2	NA	0.2	0.05	0.1	10/10/2315:20	NA	AJ12-08	AJ12-01	ICJ020W	10/09/2308:15	10/10/23
TMW17102023	J093-04	0.79	1	NA	0.1	0.025	0.05	10/10/2315:41	NA	AJ12-09	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
TMW53102023	J093-05	3.0	1	NA	0.1	0.025	0.05	10/10/2316:01	NA	AJ12-10	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
MW33102023	J093-06I	1.2	5	NA	0.5	0.12	0.25	10/10/2316:21	NA	AJ12-11	AJ12-01	ICJ020W	10/09/2308:40	10/10/23
TMW57102023	J093-07	2.2	1	NA	0.1	0.025	0.05	10/10/2316:41	NA	AJ12-12	AJ12-01	ICJ020W	10/09/2309:10	10/10/23
MW31102023	J093-08I	0.57	5	NA	0.5	0.12	0.25	10/10/2317:43	NA	AJ12-15	AJ12-13	ICJ020W	10/09/2309:10	10/10/23
MW27102023	J093-09I	0.60	2	NA	0.2	0.05	0.1	10/10/2318:03	NA	AJ12-16	AJ12-13	ICJ020W	10/09/2309:40	10/10/23
MW39102023	J093-10I	1.8	10	NA	1	0.25	0.5	10/10/2318:23	NA	AJ12-17	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
TMW61102023	J093-11I	0.85	5	NA	0.5	0.12	0.25	10/10/2318:43	NA	AJ12-18	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
MW38102023	J093-12I	0.77	2	NA	0.2	0.05	0.1	10/10/2319:04	NA	AJ12-19	AJ12-13	ICJ020W	10/09/2310:45	10/10/23
TMW24102023	J093-13I	0.88	2	NA	0.2	0.05	0.1	10/10/2319:24	NA	AJ12-20	AJ12-13	ICJ020W	10/09/2310:55	10/10/23
FW31102023	J093-14	3.2	1	NA	0.1	0.025	0.05	10/10/2319:44	NA	AJ12-21	AJ12-13	ICJ020W	10/09/2311:15	10/10/23
TMW59102023	J093-15I	1.0	2	NA	0.2	0.05	0.1	10/10/2320:05	NA	AJ12-22	AJ12-13	ICJ020W	10/09/2311:30	10/10/23
TMW39D102023	J093-16I	0.69	2	NA	0.2	0.05	0.1	10/10/2320:32	NA	AJ12-23	AJ12-13	ICJ020W	10/09/2313:30	10/10/23
TMW49102023	J093-17I	0.57	2	NA	0.2	0.05	0.1	10/10/2320:52	NA	AJ12-24	AJ12-13	ICJ020W	10/09/2313:55	10/10/23
MW35102023	J093-18I	0.26	2	NA	0.2	0.05	0.1	10/10/2321:53	NA	AJ12-27	AJ12-25	ICJ020W	10/09/2313:55	10/10/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J093

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ020WB	ND	1	NA	0.1	0.03	0.06	10/10/2313:39	NA	AJ12-03	AJ12-01	ICJ020W	NA	NA
LCS1W	ICJ020WL	1.1	1	NA	0.1	0.03	0.06	10/10/2313:59	NA	AJ12-04	AJ12-01	ICJ020W	NA	NA
LCD1W	ICJ020WC	1.1	1	NA	0.1	0.03	0.06	10/10/2314:19	NA	AJ12-05	AJ12-01	ICJ020W	NA	NA
MW30102023	J093-01I	0.12J	2	NA	0.2	0.06	0.12	10/10/2314:40	NA	AJ12-06	AJ12-01	ICJ020W	10/09/2307:35	10/10/23
MW26102023	J093-02I	2.0	2	NA	0.2	0.06	0.12	10/10/2315:00	NA	AJ12-07	AJ12-01	ICJ020W	10/09/2307:40	10/10/23
TMW17102023	J093-04	ND	1	NA	0.1	0.03	0.06	10/10/2315:41	NA	AJ12-09	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
TMW53102023	J093-05	0.098J	1	NA	0.1	0.03	0.06	10/10/2316:01	NA	AJ12-10	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
MW33102023	J093-06I	ND	5	NA	0.5	0.15	0.3	10/10/2316:21	NA	AJ12-11	AJ12-01	ICJ020W	10/09/2308:40	10/10/23
TMW57102023	J093-07	1.2	1	NA	0.1	0.03	0.06	10/10/2316:41	NA	AJ12-12	AJ12-01	ICJ020W	10/09/2309:10	10/10/23
MW39102023	J093-10I	ND	10	NA	1	0.3	0.6	10/10/2318:23	NA	AJ12-17	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
MW38102023	J093-12I	ND	2	NA	0.2	0.06	0.12	10/10/2319:04	NA	AJ12-19	AJ12-13	ICJ020W	10/09/2310:45	10/10/23
TMW24102023	J093-13I	ND	2	NA	0.2	0.06	0.12	10/10/2319:24	NA	AJ12-20	AJ12-13	ICJ020W	10/09/2310:55	10/10/23
FW31102023	J093-14	ND	1	NA	0.1	0.03	0.06	10/10/2319:44	NA	AJ12-21	AJ12-13	ICJ020W	10/09/2311:15	10/10/23
TMW39D102023	J093-16I	1.0	2	NA	0.2	0.06	0.12	10/10/2320:32	NA	AJ12-23	AJ12-13	ICJ020W	10/09/2313:30	10/10/23
TMW49102023	J093-17I	1.5	2	NA	0.2	0.06	0.12	10/10/2320:52	NA	AJ12-24	AJ12-13	ICJ020W	10/09/2313:55	10/10/23
MW35102023	J093-18I	0.13J	2	NA	0.2	0.06	0.12	10/10/2321:53	NA	AJ12-27	AJ12-25	ICJ020W	10/09/2313:55	10/10/23
MW34102023	J093-03J	10	10	NA	1	0.3	0.6	10/10/2322:13	NA	AJ12-28	AJ12-25	ICJ020W	10/09/2308:15	10/10/23
MW31102023	J093-08J	16	10	NA	1	0.3	0.6	10/10/2322:33	NA	AJ12-29	AJ12-25	ICJ020W	10/09/2309:10	10/10/23
MW27102023	J093-09J	37	40	NA	4	1.2	2.4	10/10/2322:54	NA	AJ12-30	AJ12-25	ICJ020W	10/09/2309:40	10/10/23
TMW61102023	J093-11J	22	20	NA	2	0.6	1.2	10/10/2323:14	NA	AJ12-31	AJ12-25	ICJ020W	10/09/2310:15	10/10/23
TMW59102023	J093-15J	43	40	NA	4	1.2	2.4	10/10/2323:34	NA	AJ12-32	AJ12-25	ICJ020W	10/09/2311:30	10/10/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J093
Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ020WB	ND	1	NA	0.1	0.03	0.06	10/10/2313:39	NA	AJ12-03	AJ12-01	ICJ020W	NA	NA
LCS1W	ICJ020WL	2.1	1	NA	0.1	0.03	0.06	10/10/2313:59	NA	AJ12-04	AJ12-01	ICJ020W	NA	NA
LCD1W	ICJ020WC	2.1	1	NA	0.1	0.03	0.06	10/10/2314:19	NA	AJ12-05	AJ12-01	ICJ020W	NA	NA
MW30102023	J093-01I	ND	2	NA	0.2	0.06	0.12	10/10/2314:40	NA	AJ12-06	AJ12-01	ICJ020W	10/09/2307:35	10/10/23
MW26102023	J093-02I	ND	2	NA	0.2	0.06	0.12	10/10/2315:00	NA	AJ12-07	AJ12-01	ICJ020W	10/09/2307:40	10/10/23
MW34102023	J093-03I	ND	2	NA	0.2	0.06	0.12	10/10/2315:20	NA	AJ12-08	AJ12-01	ICJ020W	10/09/2308:15	10/10/23
TMW17102023	J093-04	ND	1	NA	0.1	0.03	0.06	10/10/2315:41	NA	AJ12-09	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
TMW53102023	J093-05	ND	1	NA	0.1	0.03	0.06	10/10/2316:01	NA	AJ12-10	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
MW33102023	J093-06I	ND	5	NA	0.5	0.15	0.3	10/10/2316:21	NA	AJ12-11	AJ12-01	ICJ020W	10/09/2308:40	10/10/23
TMW57102023	J093-07	ND	1	NA	0.1	0.03	0.06	10/10/2316:41	NA	AJ12-12	AJ12-01	ICJ020W	10/09/2309:10	10/10/23
MW31102023	J093-08I	ND	5	NA	0.5	0.15	0.3	10/10/2317:43	NA	AJ12-15	AJ12-13	ICJ020W	10/09/2309:10	10/10/23
MW27102023	J093-09I	ND	2	NA	0.2	0.06	0.12	10/10/2318:03	NA	AJ12-16	AJ12-13	ICJ020W	10/09/2309:40	10/10/23
MW39102023	J093-10I	ND	10	NA	1	0.3	0.6	10/10/2318:23	NA	AJ12-17	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
TMW61102023	J093-11I	ND	5	NA	0.5	0.15	0.3	10/10/2318:43	NA	AJ12-18	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
MW38102023	J093-12I	ND	2	NA	0.2	0.06	0.12	10/10/2319:04	NA	AJ12-19	AJ12-13	ICJ020W	10/09/2310:45	10/10/23
TMW24102023	J093-13I	ND	2	NA	0.2	0.06	0.12	10/10/2319:24	NA	AJ12-20	AJ12-13	ICJ020W	10/09/2310:55	10/10/23
FW31102023	J093-14	ND	1	NA	0.1	0.03	0.06	10/10/2319:44	NA	AJ12-21	AJ12-13	ICJ020W	10/09/2311:15	10/10/23
TMW59102023	J093-15I	ND	2	NA	0.2	0.06	0.12	10/10/2320:05	NA	AJ12-22	AJ12-13	ICJ020W	10/09/2311:30	10/10/23
TMW39D102023	J093-16I	ND	2	NA	0.2	0.06	0.12	10/10/2320:32	NA	AJ12-23	AJ12-13	ICJ020W	10/09/2313:30	10/10/23
TMW49102023	J093-17I	ND	2	NA	0.2	0.06	0.12	10/10/2320:52	NA	AJ12-24	AJ12-13	ICJ020W	10/09/2313:55	10/10/23
MW35102023	J093-18I	ND	2	NA	0.2	0.06	0.12	10/10/2321:53	NA	AJ12-27	AJ12-25	ICJ020W	10/09/2313:55	10/10/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J093
Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ020WB	ND	1	NA	0.5	0.12	0.25	10/10/2313:39	NA	AJ12-03	AJ12-01	ICJ020W	NA	NA
LCS1W	ICJ020WL	1.9	1	NA	0.5	0.12	0.25	10/10/2313:59	NA	AJ12-04	AJ12-01	ICJ020W	NA	NA
LCD1W	ICJ020WC	2.0	1	NA	0.5	0.12	0.25	10/10/2314:19	NA	AJ12-05	AJ12-01	ICJ020W	NA	NA
MW30102023	J093-01I	0.42J	2	NA	1	0.25	0.5	10/10/2314:40	NA	AJ12-06	AJ12-01	ICJ020W	10/09/2307:35	10/10/23
MW26102023	J093-02I	ND	2	NA	1	0.25	0.5	10/10/2315:00	NA	AJ12-07	AJ12-01	ICJ020W	10/09/2307:40	10/10/23
MW34102023	J093-03I	ND	2	NA	1	0.25	0.5	10/10/2315:20	NA	AJ12-08	AJ12-01	ICJ020W	10/09/2308:15	10/10/23
TMW17102023	J093-04	ND	1	NA	0.5	0.12	0.25	10/10/2315:41	NA	AJ12-09	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
TMW53102023	J093-05	0.20J	1	NA	0.5	0.12	0.25	10/10/2316:01	NA	AJ12-10	AJ12-01	ICJ020W	10/09/2308:20	10/10/23
MW33102023	J093-06I	ND	5	NA	2.5	0.62	1.2	10/10/2316:21	NA	AJ12-11	AJ12-01	ICJ020W	10/09/2308:40	10/10/23
TMW57102023	J093-07	ND	1	NA	0.5	0.12	0.25	10/10/2316:41	NA	AJ12-12	AJ12-01	ICJ020W	10/09/2309:10	10/10/23
MW31102023	J093-08I	ND	5	NA	2.5	0.62	1.2	10/10/2317:43	NA	AJ12-15	AJ12-13	ICJ020W	10/09/2309:10	10/10/23
MW27102023	J093-09I	ND	2	NA	1	0.25	0.5	10/10/2318:03	NA	AJ12-16	AJ12-13	ICJ020W	10/09/2309:40	10/10/23
MW39102023	J093-10I	ND	10	NA	5	1.2	2.5	10/10/2318:23	NA	AJ12-17	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
TMW61102023	J093-11I	ND	5	NA	2.5	0.62	1.2	10/10/2318:43	NA	AJ12-18	AJ12-13	ICJ020W	10/09/2310:15	10/10/23
MW38102023	J093-12I	ND	2	NA	1	0.25	0.5	10/10/2319:04	NA	AJ12-19	AJ12-13	ICJ020W	10/09/2310:45	10/10/23
TMW24102023	J093-13I	ND	2	NA	1	0.25	0.5	10/10/2319:24	NA	AJ12-20	AJ12-13	ICJ020W	10/09/2310:55	10/10/23
FW31102023	J093-14	ND	1	NA	0.5	0.12	0.25	10/10/2319:44	NA	AJ12-21	AJ12-13	ICJ020W	10/09/2311:15	10/10/23
TMW59102023	J093-15I	ND	2	NA	1	0.25	0.5	10/10/2320:05	NA	AJ12-22	AJ12-13	ICJ020W	10/09/2311:30	10/10/23
TMW39D102023	J093-16I	ND	2	NA	1	0.25	0.5	10/10/2320:32	NA	AJ12-23	AJ12-13	ICJ020W	10/09/2313:30	10/10/23
TMW49102023	J093-17I	ND	2	NA	1	0.25	0.5	10/10/2320:52	NA	AJ12-24	AJ12-13	ICJ020W	10/09/2313:55	10/10/23
MW35102023	J093-18I	ND	2	NA	1	0.25	0.5	10/10/2321:53	NA	AJ12-27	AJ12-25	ICJ020W	10/09/2313:55	10/10/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J093

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICK008WB	ND	1	NA	0.5	0.13	0.25	11/06/2312:28	NA	AK08-03	AK08-01	ICK008W	NA	NA
LCS1W	ICK008WL	4.9	1	NA	0.5	0.13	0.25	11/06/2312:48	NA	AK08-04	AK08-01	ICK008W	NA	NA
LCD1W	ICK008WC	4.9	1	NA	0.5	0.13	0.25	11/06/2313:08	NA	AK08-05	AK08-01	ICK008W	NA	NA
MW30102023	J093-01J	420	100	NA	50	13	25	11/06/2313:29	NA	AK08-06	AK08-01	ICK008W	10/09/2307:35	10/10/23
MW26102023	J093-02J	1100	100	NA	50	13	25	11/06/2313:49	NA	AK08-07	AK08-01	ICK008W	10/09/2307:40	10/10/23
MW34102023	J093-03K	2000	100	NA	50	13	25	11/06/2314:09	NA	AK08-08	AK08-01	ICK008W	10/09/2308:15	10/10/23
TMW17102023	J093-04I	450	50	NA	25	6.5	12	11/06/2314:30	NA	AK08-09	AK08-01	ICK008W	10/09/2308:20	10/10/23
TMW53102023	J093-05I	230	40	NA	20	5.2	10	11/06/2314:50	NA	AK08-10	AK08-01	ICK008W	10/09/2308:20	10/10/23
MW33102023	J093-06J	640	100	NA	50	13	25	11/06/2315:10	NA	AK08-11	AK08-01	ICK008W	10/09/2308:40	10/10/23
TMW57102023	J093-07I	210	20	NA	10	2.6	5	11/06/2315:31	NA	AK08-12	AK08-01	ICK008W	10/09/2309:10	10/10/23
MW31102023	J093-08K	2400	200	NA	100	26	50	11/06/2316:31	NA	AK08-15	AK08-13	ICK008W	10/09/2309:10	10/10/23
MW27102023	J093-09K	980	50	NA	25	6.5	12	11/06/2316:52	NA	AK08-16	AK08-13	ICK008W	10/09/2309:40	10/10/23
MW39102023	J093-10J	1800	200	NA	100	26	50	11/06/2317:12	NA	AK08-17	AK08-13	ICK008W	10/09/2310:15	10/10/23
TMW61102023	J093-11K	1600	200	NA	100	26	50	11/06/2317:33	NA	AK08-18	AK08-13	ICK008W	10/09/2310:15	10/10/23
MW38102023	J093-12J	550	100	NA	50	13	25	11/06/2317:53	NA	AK08-19	AK08-13	ICK008W	10/09/2310:45	10/10/23
TMW24102023	J093-13J	530	100	NA	50	13	25	11/06/2318:13	NA	AK08-20	AK08-13	ICK008W	10/09/2310:55	10/10/23
FW31102023	J093-14K	630	50	NA	25	6.5	12	11/06/2318:54	NA	AK08-22	AK08-13	ICK008W	10/09/2311:15	10/10/23
TMW59102023	J093-15K	740	50	NA	25	6.5	12	11/06/2319:14	NA	AK08-23	AK08-13	ICK008W	10/09/2311:30	10/10/23
TMW39D102023	J093-16J	950	100	NA	50	13	25	11/06/2319:34	NA	AK08-24	AK08-13	ICK008W	10/09/2313:30	10/10/23
TMW49102023	J093-17J	1300	100	NA	50	13	25	11/06/2320:35	NA	AK08-27	AK08-25	ICK008W	10/09/2313:55	10/10/23
MW35102023	J093-18J	960	100	NA	50	13	25	11/06/2320:55	NA	AK08-28	AK08-25	ICK008W	10/09/2313:55	10/10/23

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-27-2023
EMAX Batch No.: 23J114

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/11/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW28102023	J114-01	10/10/23	WATER	VOCS BY 8260C DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS ANIONS BY IC
BGMW13D102023	J114-02	10/10/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
FDUP08-102023	J114-03	10/10/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
TMW31D102023	J114-04	10/10/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW03102023	J114-05	10/10/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 ANIONS BY IC
FDUP06-102023	J114-06	10/10/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 ANIONS BY IC
BGMW13S102023	J114-07	10/10/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
TMW34102023	J114-08	10/10/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 TPH-DRO ANIONS BY IC
FDUP07-102023	J114-09	10/10/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 TPH-DRO ANIONS BY IC

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
QC10102023EB	J114-10	10/10/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
TMW43102023	J114-11	10/10/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC
QC10102023TB	J114-12	10/10/23	WATER	VOCS BY 8260C TPH GASOLINE
TMW28102023MS	J114-01M	10/10/23	WATER	VOCS BY 8260C DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS
TMW28102023MSD	J114-01S	10/10/23	WATER	VOCS BY 8260C DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kleeyn For cp

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of twelve(12) water samples were received on 10/11/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied except for Methyl Acetate and 4-Methyl-2-Pentanone were detected biased high in CCV(data file ID RJG287). However, note that the analytes in question were not detected in any of the associated field samples. Note that" Minimum Response Factor" for all analytes were within method recommended response factors with the exception of 2-Butanone. However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VOE2J13B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: VOE2J13L/VOE2J13C - Percent recovery for 4-Methyl-2-Pentanone in LCD. RPD for 2-Hexanone(RPD=21*) was not within LCD QC limits. The rest of the analytes were in control.. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD (23J114-01M/23J114-01S) was analyzed. All analytes were in control, except for percent recovery for 1,3-Dichlorobenzene was not within MS/MSD QC limits. No reanalysis was performed because same result was observed in MS/MSD, which is indicative that sample reanalysis will provide similar results. All RPD'S were within limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : E2

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOE2J13L	1	NA	10/20/2312:21	10/20/2312:21	RJG288	RJG046	VOE2J13	Lab Control Sample (LCS)
LCD1W	VOE2J13C	1	NA	10/20/2312:45	10/20/2312:45	RJG289	RJG046	VOE2J13	LCS Duplicate
MBLK1W	VOE2J13B	1	NA	10/20/2313:34	10/20/2313:34	RJG291	RJG046	VOE2J13	Method Blank
TMW28102023	23J114-01	1	NA	10/20/2313:58	10/20/2313:58	RJG292	RJG046	VOE2J13	Field Sample
TMW28102023MS	23J114-01M	1	NA	10/20/2314:23	10/20/2314:23	RJG293	RJG046	VOE2J13	Matrix Spike Sample (MS)
TMW28102023MSD	23J114-01S	1	NA	10/20/2314:47	10/20/2314:47	RJG294	RJG046	VOE2J13	MS Duplicate (MSD)
BGMW13D102023	23J114-02	1	NA	10/20/2315:36	10/20/2315:36	RJG296	RJG046	VOE2J13	Field Sample
FDUP08-102023	23J114-03	1	NA	10/20/2316:01	10/20/2316:01	RJG297	RJG046	VOE2J13	Field Sample
TMW31D102023	23J114-04	1	NA	10/20/2316:25	10/20/2316:25	RJG298	RJG046	VOE2J13	Field Sample
TMW03102023	23J114-05	1	NA	10/20/2316:50	10/20/2316:50	RJG299	RJG046	VOE2J13	Field Sample
FDUP06-102023	23J114-06	1	NA	10/20/2317:14	10/20/2317:14	RJG300	RJG046	VOE2J13	Field Sample
BGMW13S102023	23J114-07	1	NA	10/20/2317:39	10/20/2317:39	RJG301	RJG046	VOE2J13	Field Sample
TMW34102023	23J114-08	1	NA	10/20/2318:03	10/20/2318:03	RJG302	RJG046	VOE2J13	Field Sample
FDUP07-102023	23J114-09	1	NA	10/20/2318:28	10/20/2318:28	RJG303	RJG046	VOE2J13	Field Sample
QC10102023EB	23J114-10	1	NA	10/20/2318:52	10/20/2318:52	RJG304	RJG046	VOE2J13	Field Sample
TMW43102023	23J114-11	1	NA	10/20/2319:17	10/20/2319:17	RJG305	RJG046	VOE2J13	Field Sample
QC10102023TB	23J114-12	1	NA	10/20/2319:41	10/20/2319:41	RJG306	RJG046	VOE2J13	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 09:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 13:58
Sample ID	: TMW28102023	Date Analyzed:	10/20/23 13:58
Lab Samp ID:	23J114-01	Dilution Factor:	1
Lab File ID:	RJG292	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.7	10.0	107	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	9.50	10.0	95	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 15:36
Sample ID	: BGMW13D102023	Date Analyzed:	10/20/23 15:36
Lab Samp ID:	23J114-02	Dilution Factor:	1
Lab File ID:	RJG296	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.6	10.0	106	81-118
4-Bromofluorobenzene	10.3	10.0	103	85-114
Toluene-d8	9.40	10.0	94	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 16:01
Sample ID	: FDUP08-102023	Date Analyzed:	10/20/23 16:01
Lab Samp ID:	23J114-03	Dilution Factor:	1
Lab File ID:	RJG297	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.2	10.0	112	81-118
4-Bromofluorobenzene	9.90	10.0	99	85-114
Toluene-d8	9.35	10.0	93	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 16:25
Sample ID	: TMW31D102023	Date Analyzed:	10/20/23 16:25
Lab Samp ID:	23J114-04	Dilution Factor:	1
Lab File ID:	RJG298	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.0	10.0	110	81-118
4-Bromofluorobenzene	9.75	10.0	97	85-114
Toluene-d8	9.46	10.0	95	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNquye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 16:50
Sample ID	: TMW03102023	Date Analyzed:	10/20/23 16:50
Lab Samp ID:	23J114-05	Dilution Factor:	1
Lab File ID:	RJG299	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.4	10.0	114	81-118
4-Bromofluorobenzene	9.71	10.0	97	85-114
Toluene-d8	9.28	10.0	93	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 17:14
Sample ID	: FDUP06-102023	Date Analyzed:	10/20/23 17:14
Lab Samp ID:	23J114-06	Dilution Factor:	1
Lab File ID:	RJG300	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.4	10.0	114	81-118
4-Bromofluorobenzene	9.83	10.0	98	85-114
Toluene-d8	9.34	10.0	93	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 17:39
Sample ID	: BGMW13S102023	Date Analyzed:	10/20/23 17:39
Lab Samp ID:	23J114-07	Dilution Factor:	1
Lab File ID:	RJG301	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.1	10.0	111	81-118
4-Bromofluorobenzene	9.74	10.0	97	85-114
Toluene-d8	9.33	10.0	93	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 12:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 18:03
Sample ID	: TMW34102023	Date Analyzed:	10/20/23 18:03
Lab Samp ID:	23J114-08	Dilution Factor:	1
Lab File ID:	RJG302	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.5	10.0	115	81-118
4-Bromofluorobenzene	9.85	10.0	99	85-114
Toluene-d8	9.35	10.0	93	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 18:28
Sample ID	: FDUP07-102023	Date Analyzed:	10/20/23 18:28
Lab Samp ID:	23J114-09	Dilution Factor:	1
Lab File ID:	RJG303	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.7	10.0	117	81-118
4-Bromofluorobenzene	9.96	10.0	100	85-114
Toluene-d8	9.40	10.0	94	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 18:52
Sample ID	: QC10102023EB	Date Analyzed:	10/20/23 18:52
Lab Samp ID:	23J114-10	Dilution Factor:	1
Lab File ID:	RJG304	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	1.6	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	2.3	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	0.67J	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.5	10.0	115	81-118
4-Bromofluorobenzene	9.95	10.0	100	85-114
Toluene-d8	9.41	10.0	94	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 19:17
Sample ID	: TMW43102023	Date Analyzed:	10/20/23 19:17
Lab Samp ID:	23J114-11	Dilution Factor:	1
Lab File ID:	RJG305	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.4	10.0	114	81-118
4-Bromofluorobenzene	9.67	10.0	97	85-114
Toluene-d8	9.43	10.0	94	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 08:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/20/23 19:41
Sample ID	: QC10102023TB	Date Analyzed:	10/20/23 19:41
Lab Samp ID:	23J114-12	Dilution Factor:	1
Lab File ID:	RJG306	Matrix:	WATER
Ext Btch ID:	VOE2J13	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.4	10.0	114	81-118
4-Bromofluorobenzene	9.81	10.0	98	85-114
Toluene-d8	9.33	10.0	93	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS + APPENDIX 9

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of ten(10) water samples were received on 10/11/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. For this SDG, the following were noted: 2,4-Dinitrophenol was detected biased high(%D=20.8) in CCV(Data File ID: RJJ451). However, 2,4-Dinitrophenol was not detected in the associated field samples. Target analytes in CCVs(Data File IDs: RJJ452, RJJ486 and RJJ487) were within calibration acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ034WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: SVJ034WL/SVJ034WC - Percent recoveries for 2,4,5-Trichlorophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2-Nitrophenol, 4,6-Dinitro-2-Methylphenol, Chrysene and Di-N-Butyl Phthalate in LCS were biased high. However, all analytes were not detected in the associated samples. RPDs for 2,4-Dinitrophenol(RPD=49*), 2-Chlorophenol(RPD=24*), 2-Methylphenol(RPD=24*), 3-Nitroaniline(RPD=21*), 4-Nitroaniline(RPD=33*), 4-Nitrophenol(RPD=25*), Benzoic Acid(RPD=50*), and 2,3,4,6-Tetrachlorophenol(RPD=25*) were greater than RPD QC limit. The rest of the analytes were in control. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. For this SDG, all surrogate recoveries were within QC limits except for Phenol-D5 in J114-03; most likely due to matrix interference. 2-Fluorobiphenyl in SVJ034WL was biased high (120%). Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J114-06 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of ten(10) water samples were received on 10/11/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data File IDs: RJJ454 and RJJ485) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ034WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. The target analyte was within LCS limits except for: CLJ034WL/CLJ034WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=27*) was greater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J114-06 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of ten(10) water samples were received on 10/11/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method 3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data File IDs: RJJ452 and RJJ486) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ034WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: CLJ034WL/CLJ034WC - RPD for Benzaldehyde(RPD=25*) was reater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J114-06 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ034WB	1	NA	10/19/2311:50	10/16/2314:30	RJJ455	RGJ087	23SVJ034W	Method Blank
LCS1W	SVJ034WL	1	NA	10/19/2312:09	10/16/2314:30	RJJ456	RGJ087	23SVJ034W	Lab Control Sample (LCS)
LCD1W	SVJ034WC	1	NA	10/19/2312:27	10/16/2314:30	RJJ457	RGJ087	23SVJ034W	LCS Duplicate
BGMW13D102023	23J114-02	1	NA	10/19/2313:24	10/16/2314:30	RJJ460	RGJ087	23SVJ034W	Field Sample
FDUP08-102023	23J114-03	1	NA	10/19/2313:42	10/16/2314:30	RJJ461	RGJ087	23SVJ034W	Field Sample
TMW31D102023	23J114-04	1	NA	10/19/2314:01	10/16/2314:30	RJJ462	RGJ087	23SVJ034W	Field Sample
TMW03102023	23J114-05	1	NA	10/19/2314:20	10/16/2314:30	RJJ463	RGJ087	23SVJ034W	Field Sample
FDUP06-102023	23J114-06	2	NA	10/19/2314:38	10/16/2314:30	RJJ464	RGJ087	23SVJ034W	Field Sample
BGMW13S102023	23J114-07	1	NA	10/19/2314:57	10/16/2314:30	RJJ465	RGJ087	23SVJ034W	Field Sample
TMW34102023	23J114-08	1	NA	10/19/2315:16	10/16/2314:30	RJJ466	RGJ087	23SVJ034W	Field Sample
FDUP07-102023	23J114-09	1	NA	10/19/2315:35	10/16/2314:30	RJJ467	RGJ087	23SVJ034W	Field Sample
QC10102023EB	23J114-10	1	NA	10/19/2315:54	10/16/2314:30	RJJ468	RGJ087	23SVJ034W	Field Sample
TMW43102023	23J114-11	1	NA	10/19/2316:12	10/16/2314:30	RJJ469	RGJ087	23SVJ034W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ034WB	1	NA	10/19/2311:50	10/16/2314:30	RJJ455	RGJ100	23SVJ034W	Method Blank
LCS1W	CLJ034WL	1	NA	10/19/2312:46	10/16/2314:30	RJJ458	RGJ100	23SVJ034W	Lab Control Sample (LCS)
LCD1W	CLJ034WC	1	NA	10/19/2313:05	10/16/2314:30	RJJ459	RGJ100	23SVJ034W	LCS Duplicate
BGMW13D102023	23J114-02	1	NA	10/19/2313:24	10/16/2314:30	RJJ460	RGJ100	23SVJ034W	Field Sample
FDUP08-102023	23J114-03	1	NA	10/19/2313:42	10/16/2314:30	RJJ461	RGJ100	23SVJ034W	Field Sample
TMW31D102023	23J114-04	1	NA	10/19/2314:01	10/16/2314:30	RJJ462	RGJ100	23SVJ034W	Field Sample
TMW03102023	23J114-05	1	NA	10/19/2314:20	10/16/2314:30	RJJ463	RGJ100	23SVJ034W	Field Sample
FDUP06-102023	23J114-06	2	NA	10/19/2314:38	10/16/2314:30	RJJ464	RGJ100	23SVJ034W	Field Sample
BGMW13S102023	23J114-07	1	NA	10/19/2314:57	10/16/2314:30	RJJ465	RGJ100	23SVJ034W	Field Sample
TMW34102023	23J114-08	1	NA	10/19/2315:16	10/16/2314:30	RJJ466	RGJ100	23SVJ034W	Field Sample
FDUP07-102023	23J114-09	1	NA	10/19/2315:35	10/16/2314:30	RJJ467	RGJ100	23SVJ034W	Field Sample
QC10102023EB	23J114-10	1	NA	10/19/2315:54	10/16/2314:30	RJJ468	RGJ100	23SVJ034W	Field Sample
TMW43102023	23J114-11	1	NA	10/19/2316:12	10/16/2314:30	RJJ469	RGJ100	23SVJ034W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ034WB	1	NA	10/19/2311:50	10/16/2314:30	RJJ455	RGJ079	23SVJ034W	Method Blank
LCS1W	CLJ034WL	1	NA	10/19/2312:46	10/16/2314:30	RJJ45B	RGJ079	23SVJ034W	Lab Control Sample (LCS)
LCD1W	CLJ034WC	1	NA	10/19/2313:05	10/16/2314:30	RJJ459	RGJ079	23SVJ034W	LCS Duplicate
BGMW13D102023	23J114-02	1	NA	10/19/2313:24	10/16/2314:30	RJJ460	RGJ079	23SVJ034W	Field Sample
FDUP08-102023	23J114-03	1	NA	10/19/2313:42	10/16/2314:30	RJJ461	RGJ079	23SVJ034W	Field Sample
TMW31D102023	23J114-04	1	NA	10/19/2314:01	10/16/2314:30	RJJ462	RGJ079	23SVJ034W	Field Sample
TMW03102023	23J114-05	1	NA	10/19/2314:20	10/16/2314:30	RJJ463	RGJ079	23SVJ034W	Field Sample
FDUP06-102023	23J114-06	2	NA	10/19/2314:38	10/16/2314:30	RJJ464	RGJ079	23SVJ034W	Field Sample
BGMW13S102023	23J114-07	1	NA	10/19/2314:57	10/16/2314:30	RJJ465	RGJ079	23SVJ034W	Field Sample
TMW34102023	23J114-08	1	NA	10/19/2315:16	10/16/2314:30	RJJ466	RGJ079	23SVJ034W	Field Sample
FDUP07-102023	23J114-09	1	NA	10/19/2315:35	10/16/2314:30	RJJ467	RGJ079	23SVJ034W	Field Sample
QC10102023EB	23J114-10	1	NA	10/19/2315:54	10/16/2314:30	RJJ468	RGJ079	23SVJ034W	Field Sample
TMW43102023	23J114-11	1	NA	10/19/2316:12	10/16/2314:30	RJJ469	RGJ079	23SVJ034W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: BGMW13D102023	Date Analyzed:	10/19/23 13:24
Lab Samp ID:	23J114-02	Dilution Factor:	1
Lab File ID:	RJJ460	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	25	6.2	12
1,2-Dichlorobenzene	ND	12	3.1	6.2
1,2-Diphenylhydrazine	ND	12	3.1	6.2
1,3-Dichlorobenzene	ND	12	3.1	6.2
1,4-Dichlorobenzene	ND	12	3.1	6.2
2,4,5-Trichlorophenol	ND	12	3.1	6.2
2,4,6-Trichlorophenol	ND	12	3.1	6.2
2,4-Dichlorophenol	ND	12	3.1	6.2
2,4-Dimethylphenol	ND	12	3.1	6.2
2,4-Dinitrophenol	ND	25	3.1	6.2
2,4-Dinitrotoluene	ND	12	3.1	6.2
2,6-Dinitrotoluene	ND	12	3.1	6.2
2-Chloronaphthalene	ND	12	3.1	6.2
2-Chlorophenol	ND	12	3.1	6.2
2-Methylnaphthalene	ND	12	3.1	6.2
2-Methylphenol	ND	12	3.1	6.2
2-Nitroaniline	ND	12	3.1	6.2
2-Nitrophenol	ND	12	3.1	6.2
3,3'-Dichlorobenzidine	ND	12	3.1	6.2
3/4-Methylphenol	ND	12	3.1	6.2
3-Nitroaniline	ND	12	3.1	6.2
4,6-Dinitro-2-methylphenol	ND	25	3.1	6.2
4-Bromophenyl phenyl ether	ND	12	3.1	6.2
4-Chloro-3-methylphenol	ND	12	3.1	6.2
4-Chloroaniline	ND	25	6.2	12
4-Chlorophenyl-phenyl ether	ND	12	3.1	6.2
4-Nitroaniline	ND	12	3.1	6.2
4-Nitrophenol	ND	25	3.1	6.2
Acenaphthene	ND	12	3.1	6.2
Acenaphthylene	ND	12	3.1	6.2
Anthracene	ND	12	3.1	6.2
Benzo(a)anthracene	ND	12	3.1	6.2
Benzo(a)pyrene	ND	12	3.1	6.2
Benzo(b)fluoranthene	ND	12	3.1	6.2
Benzo(g,h,i)perylene	ND	12	3.1	6.2
Benzo(k)fluoranthene	ND	12	3.1	6.2
Benzoic Acid	ND	120	25	49
Benzyl Alcohol	ND	12	3.1	6.2
bis(2-Chloroisopropyl) ether	ND	12	3.1	6.2
bis(2-Chloroethoxy)methane	ND	12	3.1	6.2
bis(2-Chloroethyl) ether	ND	12	3.1	6.2
bis(2-Ethylhexyl) phthalate	ND	25	6.2	12
Butylbenzylphthalate	ND	12	3.1	6.2
Carbazole	ND	12	3.1	6.2
Chrysene	ND	12	3.1	6.2
Dibenzo(a,h)anthracene	ND	12	3.1	6.2
Dibenzofuran	ND	12	3.1	6.2
Diethylphthalate	ND	12	3.1	6.2
Dimethylphthalate	ND	12	3.1	6.2
Di-n-butyl phthalate	ND	12	3.1	6.2
Di-n-octyl phthalate	ND	12	3.1	6.2
Fluoranthene	ND	12	3.1	6.2
Fluorene	ND	12	3.1	6.2
Hexachlorobenzene	ND	12	3.1	6.2
Hexachlorobutadiene	ND	12	3.1	6.2
Hexachloroethane	ND	12	3.1	6.2
Indeno(1,2,3-cd)pyrene	ND	12	3.1	6.2
Isophorone	ND	12	3.1	6.2
Naphthalene	ND	12	3.1	6.2
Nitrobenzene	ND	12	3.1	6.2
N-Nitrosodimethylamine	ND	12	3.1	6.2
n-Nitroso-di-n-propylamine	ND	12	3.1	6.2
n-Nitrosodiphenylamine	ND	12	3.1	6.2
Pentachlorophenol	ND	25	3.1	6.2
Phenanthrene	ND	12	3.1	6.2
Phenol	ND	12	3.1	6.2
Pyrene	ND	12	3.1	6.2
Hexachlorocyclopentadiene	ND	12	3.1	6.2
Benzidine	ND	49	12	25
2,3,4,6-Tetrachlorophenol	ND	12	3.1	6.2
2,6-Dichlorophenol	ND	12	3.1	6.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	49.0	73.8	66	43-140
2-Fluorobiphenyl	17.6	24.6	72	44-119
2-Fluorophenol	37.5	73.8	51	19-119
Nitrobenzene-d5	16.7	24.6	68	44-120
Phenol-d5	40.8	73.8	55	40-130
Terphenyl-d14	27.2	24.6	111	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: BGMW13D102023	Date Analyzed:	10/19/23 13:24
Lab Samp ID:	23J114-02	Dilution Factor:	1
Lab File ID:	RJJ460	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.1	6.2

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: BGMW13D102023	Date Analyzed:	10/19/23 13:24
Lab Samp ID:	23J114-02	Dilution Factor:	1
Lab File ID:	RJJ460	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	25	6.2	12
Benzaldehyde	ND	25	6.2	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP08-102023	Date Analyzed:	10/19/23 13:42
Lab Samp ID:	23J114-03	Dilution Factor:	1
Lab File ID:	RJJ461	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.5	11
1,2-Dichlorobenzene	ND	11	2.8	5.5
1,2-Diphenylhydrazine	ND	11	2.8	5.5
1,3-Dichlorobenzene	ND	11	2.8	5.5
1,4-Dichlorobenzene	ND	11	2.8	5.5
2,4,5-Trichlorophenol	ND	11	2.8	5.5
2,4,6-Trichlorophenol	ND	11	2.8	5.5
2,4-Dichlorophenol	ND	11	2.8	5.5
2,4-Dimethylphenol	ND	11	2.8	5.5
2,4-Dinitrophenol	ND	22	2.8	5.5
2,4-Dinitrotoluene	ND	11	2.8	5.5
2,6-Dinitrotoluene	ND	11	2.8	5.5
2-Chloronaphthalene	ND	11	2.8	5.5
2-Chlorophenol	ND	11	2.8	5.5
2-Methylnaphthalene	ND	11	2.8	5.5
2-Methylphenol	ND	11	2.8	5.5
2-Nitroaniline	ND	11	2.8	5.5
2-Nitrophenol	ND	11	2.8	5.5
3,3'-Dichlorobenzidine	ND	11	2.8	5.5
3/4-Methylphenol	ND	11	2.8	5.5
3-Nitroaniline	ND	11	2.8	5.5
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.5
4-Bromophenyl phenyl ether	ND	11	2.8	5.5
4-Chloro-3-methylphenol	ND	11	2.8	5.5
4-Chloroaniline	ND	22	5.5	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.5
4-Nitroaniline	ND	11	2.8	5.5
4-Nitrophenol	ND	22	2.8	5.5
Acenaphthene	ND	11	2.8	5.5
Acenaphthylene	ND	11	2.8	5.5
Anthracene	ND	11	2.8	5.5
Benzo(a)anthracene	ND	11	2.8	5.5
Benzo(a)pyrene	ND	11	2.8	5.5
Benzo(b)fluoranthene	ND	11	2.8	5.5
Benzo(g,h,i)perylene	ND	11	2.8	5.5
Benzo(k)fluoranthene	ND	11	2.8	5.5
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.5
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.5
bis(2-Chloroethoxy)methane	ND	11	2.8	5.5
bis(2-Chloroethyl) ether	ND	11	2.8	5.5
bis(2-Ethylhexyl) phthalate	ND	22	5.5	11
Butylbenzylphthalate	ND	11	2.8	5.5
Carbazole	ND	11	2.8	5.5
Chrysene	ND	11	2.8	5.5
Dibenzo(a,h)anthracene	ND	11	2.8	5.5
Dibenzofuran	ND	11	2.8	5.5
Diethylphthalate	ND	11	2.8	5.5
Dimethylphthalate	ND	11	2.8	5.5
Di-n-butyl phthalate	ND	11	2.8	5.5
Di-n-octyl phthalate	ND	11	2.8	5.5
Fluoranthene	ND	11	2.8	5.5
Fluorene	ND	11	2.8	5.5
Hexachlorobenzene	ND	11	2.8	5.5
Hexachlorobutadiene	ND	11	2.8	5.5
Hexachloroethane	ND	11	2.8	5.5
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.5
Isophorone	ND	11	2.8	5.5
Naphthalene	ND	11	2.8	5.5
Nitrobenzene	ND	11	2.8	5.5
N-Nitrosodimethylamine	ND	11	2.8	5.5
n-Nitroso-di-n-propylamine	ND	11	2.8	5.5
n-Nitrosodiphenylamine	ND	11	2.8	5.5
Pentachlorophenol	ND	22	2.8	5.5
Phenanthrene	ND	11	2.8	5.5
Phenol	ND	11	2.8	5.5
Pyrene	ND	11	2.8	5.5
Hexachlorocyclopentadiene	ND	11	2.8	5.5
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.5
2,6-Dichlorophenol	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	35.3	66.0	53	43-140
2-Fluorobiphenyl	11.4	22.0	52	44-119
2-Fluorophenol	21.7	66.0	33	19-119
Nitrobenzene-d5	10.5	22.0	48	44-120
Phenol-d5	24.6	66.0	37*	40-130
Terphenyl-d14	20.6	22.0	94	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP08-102023	Date Analyzed:	10/19/23 13:42
Lab Samp ID:	23J114-03	Dilution Factor:	1
Lab File ID:	RJJ461	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.5

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume :	2ml
Prepared by	: JMuert	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP08-102023	Date Analyzed:	10/19/23 13:42
Lab Samp ID:	23J114-03	Dilution Factor:	1
Lab File ID:	RJJ461	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.5	11
Benzaldehyde	ND	22	5.5	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW31D102023	Date Analyzed:	10/19/23 14:01
Lab Samp ID:	23J114-04	Dilution Factor:	1
Lab File ID:	RJJ462	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.8	5.7
1,2-Diphenylhydrazine	ND	11	2.8	5.7
1,3-Dichlorobenzene	ND	11	2.8	5.7
1,4-Dichlorobenzene	ND	11	2.8	5.7
2,4,5-Trichlorophenol	ND	11	2.8	5.7
2,4,6-Trichlorophenol	ND	11	2.8	5.7
2,4-Dichlorophenol	ND	11	2.8	5.7
2,4-Dimethylphenol	ND	11	2.8	5.7
2,4-Dinitrophenol	ND	23	2.8	5.7
2,4-Dinitrotoluene	ND	11	2.8	5.7
2,6-Dinitrotoluene	ND	11	2.8	5.7
2-Chloronaphthalene	ND	11	2.8	5.7
2-Chlorophenol	ND	11	2.8	5.7
2-Methylnaphthalene	ND	11	2.8	5.7
2-Methylphenol	ND	11	2.8	5.7
2-Nitroaniline	ND	11	2.8	5.7
2-Nitrophenol	ND	11	2.8	5.7
3,3'-Dichlorobenzidine	ND	11	2.8	5.7
3/4-Methylphenol	ND	11	2.8	5.7
3-Nitroaniline	ND	11	2.8	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.8	5.7
4-Bromophenyl phenyl ether	ND	11	2.8	5.7
4-Chloro-3-methylphenol	ND	11	2.8	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.7
4-Nitroaniline	ND	11	2.8	5.7
4-Nitrophenol	ND	23	2.8	5.7
Acenaphthene	ND	11	2.8	5.7
Acenaphthylene	ND	11	2.8	5.7
Anthracene	ND	11	2.8	5.7
Benzo(a)anthracene	ND	11	2.8	5.7
Benzo(a)pyrene	ND	11	2.8	5.7
Benzo(b)fluoranthene	ND	11	2.8	5.7
Benzo(g,h,i)perylene	ND	11	2.8	5.7
Benzo(k)fluoranthene	ND	11	2.8	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.8	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.7
bis(2-Chloroethoxy)methane	ND	11	2.8	5.7
bis(2-Chloroethyl) ether	ND	11	2.8	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.8	5.7
Carbazole	ND	11	2.8	5.7
Chrysene	ND	11	2.8	5.7
Dibenzo(a,h)anthracene	ND	11	2.8	5.7
Dibenzofuran	ND	11	2.8	5.7
Diethylphthalate	ND	11	2.8	5.7
Dimethylphthalate	ND	11	2.8	5.7
Di-n-butyl phthalate	ND	11	2.8	5.7
Di-n-octyl phthalate	ND	11	2.8	5.7
Fluoranthene	ND	11	2.8	5.7
Fluorene	ND	11	2.8	5.7
Hexachlorobenzene	ND	11	2.8	5.7
Hexachlorobutadiene	ND	11	2.8	5.7
Hexachloroethane	ND	11	2.8	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.7
Isophorone	ND	11	2.8	5.7
Naphthalene	ND	11	2.8	5.7
Nitrobenzene	ND	11	2.8	5.7
N-Nitrosodimethylamine	ND	11	2.8	5.7
n-Nitroso-di-n-propylamine	ND	11	2.8	5.7
n-Nitrosodiphenylamine	ND	11	2.8	5.7
Pentachlorophenol	ND	23	2.8	5.7
Phenanthrene	ND	11	2.8	5.7
Phenol	ND	11	2.8	5.7
Pyrene	ND	11	2.8	5.7
Hexachlorocyclopentadiene	ND	11	2.8	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.7
2,6-Dichlorophenol	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	55.9	68.4	82	43-140
2-Fluorobiphenyl	22.4	22.8	98	44-119
2-Fluorophenol	45.6	68.4	67	19-119
Nitrobenzene-d5	21.2	22.8	93	44-120
Phenol-d5	50.0	68.4	73	40-130
Terphenyl-d14	24.5	22.8	108	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW31D102023	Date Analyzed:	10/19/23 14:01
Lab Samp ID:	23J114-04	Dilution Factor:	1
Lab File ID:	RJJ462	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.7

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 880ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW31D102023	Date Analyzed:	10/19/23 14:01
Lab Samp ID:	23J114-04	Dilution Factor:	1
Lab File ID:	RJJ462	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW03102023	Date Analyzed:	10/19/23 14:20
Lab Samp ID:	23J114-05	Dilution Factor:	1
Lab File ID:	RJJ463	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.8	5.7
1,2-Diphenylhydrazine	ND	11	2.8	5.7
1,3-Dichlorobenzene	ND	11	2.8	5.7
1,4-Dichlorobenzene	ND	11	2.8	5.7
2,4,5-Trichlorophenol	ND	11	2.8	5.7
2,4,6-Trichlorophenol	ND	11	2.8	5.7
2,4-Dichlorophenol	ND	11	2.8	5.7
2,4-Dimethylphenol	ND	11	2.8	5.7
2,4-Dinitrophenol	ND	23	2.8	5.7
2,4-Dinitrotoluene	ND	11	2.8	5.7
2,6-Dinitrotoluene	ND	11	2.8	5.7
2-Chloronaphthalene	ND	11	2.8	5.7
2-Chlorophenol	ND	11	2.8	5.7
2-Methylnaphthalene	ND	11	2.8	5.7
2-Methylphenol	ND	11	2.8	5.7
2-Nitroaniline	ND	11	2.8	5.7
2-Nitrophenol	ND	11	2.8	5.7
3,3'-Dichlorobenzidine	ND	11	2.8	5.7
3/4-Methylphenol	ND	11	2.8	5.7
3-Nitroaniline	ND	11	2.8	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.8	5.7
4-Bromophenyl phenyl ether	ND	11	2.8	5.7
4-Chloro-3-methylphenol	ND	11	2.8	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.7
4-Nitroaniline	ND	11	2.8	5.7
4-Nitrophenol	ND	23	2.8	5.7
Acenaphthene	ND	11	2.8	5.7
Acenaphthylene	ND	11	2.8	5.7
Anthracene	ND	11	2.8	5.7
Benzo(a)anthracene	ND	11	2.8	5.7
Benzo(a)pyrene	ND	11	2.8	5.7
Benzo(b)fluoranthene	ND	11	2.8	5.7
Benzo(g,h,i)perylene	ND	11	2.8	5.7
Benzo(k)fluoranthene	ND	11	2.8	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.8	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.7
bis(2-Chloroethoxy)methane	ND	11	2.8	5.7
bis(2-Chloroethyl) ether	ND	11	2.8	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.8	5.7
Carbazole	ND	11	2.8	5.7
Chrysene	ND	11	2.8	5.7
Dibenzo(a,h)anthracene	ND	11	2.8	5.7
Dibenzofuran	ND	11	2.8	5.7
Diethylphthalate	ND	11	2.8	5.7
Dimethylphthalate	ND	11	2.8	5.7
Di-n-butyl phthalate	ND	11	2.8	5.7
Di-n-octyl phthalate	ND	11	2.8	5.7
Fluoranthene	ND	11	2.8	5.7
Fluorene	ND	11	2.8	5.7
Hexachlorobenzene	ND	11	2.8	5.7
Hexachlorobutadiene	ND	11	2.8	5.7
Hexachloroethane	ND	11	2.8	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.7
Isophorone	ND	11	2.8	5.7
Naphthalene	ND	11	2.8	5.7
Nitrobenzene	ND	11	2.8	5.7
N-Nitrosodimethylamine	ND	11	2.8	5.7
n-Nitroso-di-n-propylamine	ND	11	2.8	5.7
n-Nitrosodiphenylamine	ND	11	2.8	5.7
Pentachlorophenol	ND	23	2.8	5.7
Phenanthrene	ND	11	2.8	5.7
Phenol	ND	11	2.8	5.7
Pyrene	ND	11	2.8	5.7
Hexachlorocyclopentadiene	ND	11	2.8	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.7
2,6-Dichlorophenol	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	58.2	68.4	85	43-140
2-Fluorobiphenyl	20.3	22.8	89	44-119
2-Fluorophenol	21.9	68.4	32	19-119
Nitrobenzene-d5	17.1	22.8	75	44-120
Phenol-d5	29.8	68.4	44	40-130
Terphenyl-d14	26.0	22.8	114	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW03102023	Date Analyzed:	10/19/23 14:20
Lab Samp ID:	23J114-05	Dilution Factor:	1
Lab File ID:	RJJ463	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.7

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW03102023	Date Analyzed:	10/19/23 14:20
Lab Samp ID:	23J114-05	Dilution Factor:	1
Lab File ID:	RJJ463	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 880ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP06-102023	Date Analyzed:	10/19/23 14:38
Lab Samp ID:	23J114-06	Dilution Factor:	2
Lab File ID:	RJJ464	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	49	12	25
1,2-Dichlorobenzene	ND	25	6.2	12
1,2-Diphenylhydrazine	ND	25	6.2	12
1,3-Dichlorobenzene	ND	25	6.2	12
1,4-Dichlorobenzene	ND	25	6.2	12
2,4,5-Trichlorophenol	ND	25	6.2	12
2,4,6-Trichlorophenol	ND	25	6.2	12
2,4-Dichlorophenol	ND	25	6.2	12
2,4-Dimethylphenol	ND	25	6.2	12
2,4-Dinitrophenol	ND	49	6.2	12
2,4-Dinitrotoluene	ND	25	6.2	12
2,6-Dinitrotoluene	ND	25	6.2	12
2-Chloronaphthalene	ND	25	6.2	12
2-Chlorophenol	ND	25	6.2	12
2-Methylnaphthalene	ND	25	6.2	12
2-Methylphenol	ND	25	6.2	12
2-Nitroaniline	ND	25	6.2	12
2-Nitrophenol	ND	25	6.2	12
3,3'-Dichlorobenzidine	ND	25	6.2	12
3/4-Methylphenol	ND	25	6.2	12
3-Nitroaniline	ND	25	6.2	12
4,6-Dinitro-2-methylphenol	ND	49	6.2	12
4-Bromophenyl phenyl ether	ND	25	6.2	12
4-Chloro-3-methylphenol	ND	25	6.2	12
4-Chloroaniline	ND	49	12	25
4-Chlorophenyl-phenyl ether	ND	25	6.2	12
4-Nitroaniline	ND	25	6.2	12
4-Nitrophenol	ND	49	6.2	12
Acenaphthene	ND	25	6.2	12
Acenaphthylene	ND	25	6.2	12
Anthracene	ND	25	6.2	12
Benzo(a)anthracene	ND	25	6.2	12
Benzo(a)pyrene	ND	25	6.2	12
Benzo(b)fluoranthene	ND	25	6.2	12
Benzo(g,h,i)perylene	ND	25	6.2	12
Benzo(k)fluoranthene	ND	25	6.2	12
Benzoic Acid	ND	250	49	98
Benzyl Alcohol	ND	25	6.2	12
bis(2-Chloroisopropyl) ether	ND	25	6.2	12
bis(2-Chloroethoxy)methane	ND	25	6.2	12
bis(2-Chloroethyl) ether	ND	25	6.2	12
bis(2-Ethylhexyl) phthalate	ND	49	12	25
Butylbenzylphthalate	ND	25	6.2	12
Carbazole	ND	25	6.2	12
Chrysene	ND	25	6.2	12
Dibenzo(a,h)anthracene	ND	25	6.2	12
Dibenzofuran	ND	25	6.2	12
Diethylphthalate	ND	25	6.2	12
Dimethylphthalate	ND	25	6.2	12
Di-n-butyl phthalate	ND	25	6.2	12
Di-n-octyl phthalate	ND	25	6.2	12
Fluoranthene	ND	25	6.2	12
Fluorene	ND	25	6.2	12
Hexachlorobenzene	ND	25	6.2	12
Hexachlorobutadiene	ND	25	6.2	12
Hexachloroethane	ND	25	6.2	12
Indeno(1,2,3-cd)pyrene	ND	25	6.2	12
Isophorone	ND	25	6.2	12
Naphthalene	ND	25	6.2	12
Nitrobenzene	ND	25	6.2	12
N-Nitrosodimethylamine	ND	25	6.2	12
n-Nitroso-di-n-propylamine	ND	25	6.2	12
n-Nitrosodiphenylamine	ND	25	6.2	12
Pentachlorophenol	ND	49	6.2	12
Phenanthrene	ND	25	6.2	12
Phenol	ND	25	6.2	12
Pyrene	ND	25	6.2	12
Hexachlorocyclopentadiene	ND	25	6.2	12
Benzidine	ND	98	25	49
2,3,4,6-Tetrachlorophenol	ND	25	6.2	12
2,6-Dichlorophenol	ND	25	6.2	12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	62.9	73.8	85	43-140
2-Fluorobiphenyl	23.2	24.6	94	44-119
2-Fluorophenol	42.5	73.8	58	19-119
Nitrobenzene-d5	22.4	24.6	91	44-120
Phenol-d5	52.9	73.8	72	40-130
Terphenyl-d14	29.7	24.6	121	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP06-102023	Date Analyzed:	10/19/23 14:38
Lab Samp ID:	23J114-06	Dilution Factor:	2
Lab File ID:	RJJ464	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	25	6.2	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP06-102023	Date Analyzed:	10/19/23 14:38
Lab Samp ID:	23J114-06	Dilution Factor:	2
Lab File ID:	RJJ464	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	49	12	25
Benzaldehyde	ND	49	12	25

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: BGMW13S102023	Date Analyzed:	10/19/23 14:57
Lab Samp ID:	23J114-07	Dilution Factor:	1
Lab File ID:	RJJ465	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	45
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	45	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	45.3	67.2	67	43-140
2-Fluorobiphenyl	13.3	22.4	59	44-119
2-Fluorophenol	29.2	67.2	43	19-119
Nitrobenzene-d5	14.3	22.4	64	44-120
Phenol-d5	31.8	67.2	47	40-130
Terphenyl-d14	22.0	22.4	98	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: BGMW13S102023	Date Analyzed:	10/19/23 14:57
Lab Samp ID:	23J114-07	Dilution Factor:	1
Lab File ID:	RJJ465	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: BGMW13S102023	Date Analyzed:	10/19/23 14:57
Lab Samp ID:	23J114-07	Dilution Factor:	1
Lab File ID:	RJJ465	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 12:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW34102023	Date Analyzed:	10/19/23 15:16
Lab Samp ID:	23J114-08	Dilution Factor:	1
Lab File ID:	RJJ466	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.8	12
1,2-Dichlorobenzene	ND	12	2.9	5.8
1,2-Diphenylhydrazine	ND	12	2.9	5.8
1,3-Dichlorobenzene	ND	12	2.9	5.8
1,4-Dichlorobenzene	ND	12	2.9	5.8
2,4,5-Trichlorophenol	ND	12	2.9	5.8
2,4,6-Trichlorophenol	ND	12	2.9	5.8
2,4-Dichlorophenol	ND	12	2.9	5.8
2,4-Dimethylphenol	ND	12	2.9	5.8
2,4-Dinitrophenol	ND	23	2.9	5.8
2,4-Dinitrotoluene	ND	12	2.9	5.8
2,6-Dinitrotoluene	ND	12	2.9	5.8
2-Chloronaphthalene	ND	12	2.9	5.8
2-Chlorophenol	ND	12	2.9	5.8
2-Methylnaphthalene	ND	12	2.9	5.8
2-Methylphenol	ND	12	2.9	5.8
2-Nitroaniline	ND	12	2.9	5.8
2-Nitrophenol	ND	12	2.9	5.8
3,3'-Dichlorobenzidine	ND	12	2.9	5.8
3/4-Methylphenol	ND	12	2.9	5.8
3-Nitroaniline	ND	12	2.9	5.8
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.8
4-Bromophenyl phenyl ether	ND	12	2.9	5.8
4-Chloro-3-methylphenol	ND	12	2.9	5.8
4-Chloroaniline	ND	23	5.8	12
4-Chlorophenyl-phenyl ether	ND	12	2.9	5.8
4-Nitroaniline	ND	12	2.9	5.8
4-Nitrophenol	ND	23	2.9	5.8
Acenaphthene	ND	12	2.9	5.8
Acenaphthylene	ND	12	2.9	5.8
Anthracene	ND	12	2.9	5.8
Benzo(a)anthracene	ND	12	2.9	5.8
Benzo(a)pyrene	ND	12	2.9	5.8
Benzo(b)fluoranthene	ND	12	2.9	5.8
Benzo(g,h,i)perylene	ND	12	2.9	5.8
Benzo(k)fluoranthene	ND	12	2.9	5.8
Benzoic Acid	ND	120	23	46
Benzyl Alcohol	ND	12	2.9	5.8
bis(2-Chloroisopropyl) ether	ND	12	2.9	5.8
bis(2-Chloroethoxy)methane	ND	12	2.9	5.8
bis(2-Chloroethyl) ether	ND	12	2.9	5.8
bis(2-Ethylhexyl) phthalate	ND	23	5.8	12
Butylbenzylphthalate	ND	12	2.9	5.8
Carbazole	ND	12	2.9	5.8
Chrysene	ND	12	2.9	5.8
Dibenzo(a,h)anthracene	ND	12	2.9	5.8
Dibenzofuran	ND	12	2.9	5.8
Diethylphthalate	ND	12	2.9	5.8
Dimethylphthalate	ND	12	2.9	5.8
Di-n-butyl phthalate	ND	12	2.9	5.8
Di-n-octyl phthalate	ND	12	2.9	5.8
Fluoranthene	ND	12	2.9	5.8
Fluorene	ND	12	2.9	5.8
Hexachlorobenzene	ND	12	2.9	5.8
Hexachlorobutadiene	ND	12	2.9	5.8
Hexachloroethane	ND	12	2.9	5.8
Indeno(1,2,3-cd)pyrene	ND	12	2.9	5.8
Isophorone	ND	12	2.9	5.8
Naphthalene	ND	12	2.9	5.8
Nitrobenzene	ND	12	2.9	5.8
N-Nitrosodimethylamine	ND	12	2.9	5.8
n-Nitroso-di-n-propylamine	ND	12	2.9	5.8
n-Nitrosodiphenylamine	ND	12	2.9	5.8
Pentachlorophenol	ND	23	2.9	5.8
Phenanthrene	ND	12	2.9	5.8
Phenol	ND	12	2.9	5.8
Pyrene	ND	12	2.9	5.8
Hexachlorocyclopentadiene	ND	12	2.9	5.8
Benzidine	ND	46	12	23
2,3,4,6-Tetrachlorophenol	ND	12	2.9	5.8
2,6-Dichlorophenol	ND	12	2.9	5.8

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	59.1	69.6	85	43-140
2-Fluorobiphenyl	22.7	23.2	98	44-119
2-Fluorophenol	42.4	69.6	61	19-119
Nitrobenzene-d5	21.0	23.2	90	44-120
Phenol-d5	50.6	69.6	73	40-130
Terphenyl-d14	27.1	23.2	117	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 860ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 12:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW34102023	Date Analyzed:	10/19/23 15:16
Lab Samp ID:	23J114-08	Dilution Factor:	1
Lab File ID:	RJJ466	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	2.9	5.8

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 860ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 12:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW34102023	Date Analyzed:	10/19/23 15:16
Lab Samp ID:	23J114-08	Dilution Factor:	1
Lab File ID:	RJJ466	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.8	12
Benzaldehyde	ND	23	5.8	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 860ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP07-102023	Date Analyzed:	10/19/23 15:35
Lab Samp ID:	23J114-09	Dilution Factor:	1
Lab File ID:	RJJ467	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	58.4	66.6	88	43-140
2-Fluorobiphenyl	23.2	22.2	104	44-119
2-Fluorophenol	36.6	66.6	55	19-119
Nitrobenzene-d5	22.4	22.2	101	44-120
Phenol-d5	45.8	66.6	69	40-130
Terphenyl-d14	25.1	22.2	113	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP07-102023	Date Analyzed:	10/19/23 15:35
Lab Samp ID:	23J114-09	Dilution Factor:	1
Lab File ID:	RJJ467	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: FDUP07-102023	Date Analyzed:	10/19/23 15:35
Lab Samp ID:	23J114-09	Dilution Factor:	1
Lab File ID:	RJJ467	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: QC10102023EB	Date Analyzed:	10/19/23 15:54
Lab Samp ID:	23J114-10	Dilution Factor:	1
Lab File ID:	RJJ468	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	49.5	72.0	69	43-140
2-Fluorobiphenyl	17.5	24.0	73	44-119
2-Fluorophenol	32.7	72.0	45	19-119
Nitrobenzene-d5	17.8	24.0	74	44-120
Phenol-d5	41.4	72.0	58	40-130
Terphenyl-d14	29.0	24.0	121	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: QC10102023EB	Date Analyzed:	10/19/23 15:54
Lab Samp ID:	23J114-10	Dilution Factor:	1
Lab File ID:	RJJ468	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: QC10102023EB	Date Analyzed:	10/19/23 15:54
Lab Samp ID:	23J114-10	Dilution Factor:	1
Lab File ID:	RJJ468	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW43102023	Date Analyzed:	10/19/23 16:12
Lab Samp ID:	23J114-11	Dilution Factor:	1
Lab File ID:	RJJ469	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.5	11
1,2-Dichlorobenzene	ND	11	2.8	5.5
1,2-Diphenylhydrazine	ND	11	2.8	5.5
1,3-Dichlorobenzene	ND	11	2.8	5.5
1,4-Dichlorobenzene	ND	11	2.8	5.5
2,4,5-Trichlorophenol	ND	11	2.8	5.5
2,4,6-Trichlorophenol	ND	11	2.8	5.5
2,4-Dichlorophenol	ND	11	2.8	5.5
2,4-Dimethylphenol	ND	11	2.8	5.5
2,4-Dinitrophenol	ND	22	2.8	5.5
2,4-Dinitrotoluene	ND	11	2.8	5.5
2,6-Dinitrotoluene	ND	11	2.8	5.5
2-Chloronaphthalene	ND	11	2.8	5.5
2-Chlorophenol	ND	11	2.8	5.5
2-Methylnaphthalene	ND	11	2.8	5.5
2-Methylphenol	ND	11	2.8	5.5
2-Nitroaniline	ND	11	2.8	5.5
2-Nitrophenol	ND	11	2.8	5.5
3,3'-Dichlorobenzidine	ND	11	2.8	5.5
3/4-Methylphenol	ND	11	2.8	5.5
3-Nitroaniline	ND	11	2.8	5.5
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.5
4-Bromophenyl phenyl ether	ND	11	2.8	5.5
4-Chloro-3-methylphenol	ND	11	2.8	5.5
4-Chloroaniline	ND	22	5.5	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.5
4-Nitroaniline	ND	11	2.8	5.5
4-Nitrophenol	ND	22	2.8	5.5
Acenaphthene	ND	11	2.8	5.5
Acenaphthylene	ND	11	2.8	5.5
Anthracene	ND	11	2.8	5.5
Benzo(a)anthracene	ND	11	2.8	5.5
Benzo(a)pyrene	ND	11	2.8	5.5
Benzo(b)fluoranthene	ND	11	2.8	5.5
Benzo(g,h,i)perylene	ND	11	2.8	5.5
Benzo(k)fluoranthene	ND	11	2.8	5.5
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.5
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.5
bis(2-Chloroethoxy)methane	ND	11	2.8	5.5
bis(2-Chloroethyl) ether	ND	11	2.8	5.5
bis(2-Ethylhexyl) phthalate	ND	22	5.5	11
Butylbenzylphthalate	ND	11	2.8	5.5
Carbazole	ND	11	2.8	5.5
Chrysene	ND	11	2.8	5.5
Dibenzo(a,h)anthracene	ND	11	2.8	5.5
Dibenzofuran	ND	11	2.8	5.5
Diethylphthalate	ND	11	2.8	5.5
Dimethylphthalate	ND	11	2.8	5.5
Di-n-butyl phthalate	ND	11	2.8	5.5
Di-n-octyl phthalate	ND	11	2.8	5.5
Fluoranthene	ND	11	2.8	5.5
Fluorene	ND	11	2.8	5.5
Hexachlorobenzene	ND	11	2.8	5.5
Hexachlorobutadiene	ND	11	2.8	5.5
Hexachloroethane	ND	11	2.8	5.5
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.5
Isophorone	ND	11	2.8	5.5
Naphthalene	ND	11	2.8	5.5
Nitrobenzene	ND	11	2.8	5.5
N-Nitrosodimethylamine	ND	11	2.8	5.5
n-Nitroso-di-n-propylamine	ND	11	2.8	5.5
n-Nitrosodiphenylamine	ND	11	2.8	5.5
Pentachlorophenol	ND	22	2.8	5.5
Phenanthrene	ND	11	2.8	5.5
Phenol	ND	11	2.8	5.5
Pyrene	ND	11	2.8	5.5
Hexachlorocyclopentadiene	ND	11	2.8	5.5
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.5
2,6-Dichlorophenol	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	44.4	66.0	67	43-140
2-Fluorobiphenyl	16.9	22.0	77	44-119
2-Fluorophenol	29.2	66.0	44	19-119
Nitrobenzene-d5	15.9	22.0	72	44-120
Phenol-d5	37.7	66.0	57	40-130
Terphenyl-d14	24.4	22.0	111	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ452

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW43102023	Date Analyzed:	10/19/23 16:12
Lab Samp ID:	23J114-11	Dilution Factor:	1
Lab File ID:	RJJ469	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.5

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/16/23 14:30
Sample ID	: TMW43102023	Date Analyzed:	10/19/23 16:12
Lab Samp ID:	23J114-11	Dilution Factor:	1
Lab File ID:	RJJ469	Matrix:	WATER
Ext Btch ID:	23SVJ034W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.5	11
Benzaldehyde	ND	22	5.5	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of seven(7) water samples were received on 10/11/23 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39J09B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VG39J09L/VG39J09C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. TPH-Gasoline was within MS QC limits in J114-02M/J114-02S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG39J09B	1	NA	10/13/2310:53	10/13/2310:53	EJ13004A	EJ13003A	23VG39J09	Method Blank
LCS1W	VG39J09L	1	NA	10/13/2311:32	10/13/2311:32	EJ13005A	EJ13003A	23VG39J09	Lab Control Sample (LCS)
LCD1W	VG39J09C	1	NA	10/13/2312:10	10/13/2312:10	EJ13006A	EJ13003A	23VG39J09	LCS Duplicate
BGMW13D102023	J114-02	1	NA	10/13/2317:19	10/13/2317:19	EJ13014A	EJ13013A	23VG39J09	Field Sample
BGMW13D102023MS	J114-02M	1	NA	10/13/2317:57	10/13/2317:57	EJ13015A	EJ13013A	23VG39J09	Matrix Spike Sample (MS)
BGMW13D102023MSD	J114-02S	1	NA	10/13/2318:35	10/13/2318:35	EJ13016A	EJ13013A	23VG39J09	MS Duplicate (MSD)
FDUP08-102023	J114-03	1	NA	10/13/2319:13	10/13/2319:13	EJ13017A	EJ13013A	23VG39J09	Field Sample
BGMW13S102023	J114-07	1	NA	10/13/2319:52	10/13/2319:52	EJ13018A	EJ13013A	23VG39J09	Field Sample
TMW34102023	J114-08	1	NA	10/13/2320:30	10/13/2320:30	EJ13019A	EJ13013A	23VG39J09	Field Sample
FDUP07-102023	J114-09	1	NA	10/13/2321:08	10/13/2321:08	EJ13020A	EJ13013A	23VG39J09	Field Sample
QC10102023EB	J114-10	1	NA	10/13/2321:46	10/13/2321:46	EJ13021A	EJ13013A	23VG39J09	Field Sample
QC10102023TB	J114-12	1	NA	10/13/2322:24	10/13/2322:24	EJ13022A	EJ13013A	23VG39J09	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 17:19
Sample ID	: BGMW13D102023	Date Analyzed:	10/13/23 17:19
Lab Samp ID:	J114-02	Dilution Factor:	1
Lab File ID:	EJ13014A	Matrix:	WATER
Ext Btch ID:	23VG39J09	% Moisture:	NA
Calib. Ref.:	EJ13013A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	34.2	40.0	86	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 19:13
Sample ID	: FDUP08-102023	Date Analyzed:	10/13/23 19:13
Lab Samp ID:	J114-03	Dilution Factor:	1
Lab File ID:	EJ13017A	Matrix:	WATER
Ext Btch ID:	23VG39J09	% Moisture:	NA
Calib. Ref.:	EJ13013A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.0	40.0	82	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 19:52
Sample ID	: BGMW13S102023	Date Analyzed:	10/13/23 19:52
Lab Samp ID:	J114-07	Dilution Factor:	1
Lab File ID:	EJ13018A	Matrix:	WATER
Ext Btch ID:	23VG39J09	% Moisture:	NA
Calib. Ref.:	EJ13013A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	11J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.5	40.0	84	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 12:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 20:30
Sample ID	: TMW34102023	Date Analyzed:	10/13/23 20:30
Lab Samp ID:	J114-08	Dilution Factor:	1
Lab File ID:	EJ13019A	Matrix:	WATER
Ext Btch ID:	23VG39J09	% Moisture:	NA
Calib. Ref.:	EJ13013A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.2	40.0	83	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 13:00
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 21:08
Sample ID : FDUP07-102023	Date Analyzed: 10/13/23 21:08
Lab Samp ID: J114-09	Dilution Factor: 1
Lab File ID: EJ13020A	Matrix: WATER
Ext Btch ID: 23VG39J09	% Moisture: NA
Calib. Ref.: EJ13013A	Instrument ID: 39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.3	40.0	83	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 21:46
Sample ID	: QC10102023EB	Date Analyzed:	10/13/23 21:46
Lab Samp ID:	J114-10	Dilution Factor:	1
Lab File ID:	EJ13021A	Matrix:	WATER
Ext Btch ID:	23VG39J09	% Moisture:	NA
Calib. Ref.:	EJ13013A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	14J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.2	40.0	83	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 08:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 22:24
Sample ID	: QC10102023TB	Date Analyzed:	10/13/23 22:24
Lab Samp ID:	J114-12	Dilution Factor:	1
Lab File ID:	EJ13022A	Matrix:	WATER
Ext Btch ID:	23VG39J09	% Moisture:	NA
Calib. Ref.:	EJ13013A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	32.7	40.0	82	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/13/23 10:53
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J114	Date Extracted:	10/13/23 10:53
Sample ID	: MBLK1W	Date Analyzed:	10/13/23 10:53
Lab Samp ID:	VG39J09B	Dilution Factor:	1
Lab File ID:	EJ13004A	Matrix:	WATER
Ext Btch ID:	23VG39J09	% Moisture:	NA
Calib. Ref.:	EJ13003A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	31.0	40.0	78	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume :	5ml
Prepared by	: SCerva	Analyzed by :	SCerva

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of six(6) water samples were received on 10/11/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ016WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSJ016WL/DSJ016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ016WB	1	NA	10/14/2317:21	10/13/2313:30	LJ13059A	LJ13055A	23DSJ016W	Method Blank
LCS1W	DSJ016WL	1	NA	10/14/2317:39	10/13/2313:30	LJ13060A	LJ13055A	23DSJ016W	Lab Control Sample (LCS)
LCD1W	DSJ016WC	1	NA	10/14/2317:58	10/13/2313:30	LJ13061A	LJ13055A	23DSJ016W	LCS Duplicate
BGMW13D102023	J114-02	1	NA	10/14/2318:17	10/13/2313:30	LJ13062A	LJ13055A	23DSJ016W	Field Sample
FDUP08-102023	J114-03	1	NA	10/14/2318:35	10/13/2313:30	LJ13063A	LJ13055A	23DSJ016W	Field Sample
BGMW13S102023	J114-07	1	NA	10/14/2318:54	10/13/2313:30	LJ13064A	LJ13055A	23DSJ016W	Field Sample
TMW34102023	J114-08	1	NA	10/14/2319:13	10/13/2313:30	LJ13065A	LJ13055A	23DSJ016W	Field Sample
FDUP07-102023	J114-09	1	NA	10/14/2319:31	10/13/2313:30	LJ13066A	LJ13055A	23DSJ016W	Field Sample
QC10102023EB	J114-10	1	NA	10/14/2319:50	10/13/2313:30	LJ13067A	LJ13055A	23DSJ016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 13:30
Sample ID	: BGMW13D102023	Date Analyzed:	10/14/23 18:17
Lab Samp ID:	23J114-02	Dilution Factor:	1
Lab File ID:	LJ13062A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.57	0.057	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.788	1.14	69	60-130
Hexacosane	0.259	0.285	91	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 13:30
Sample ID	: FDUP08-102023	Date Analyzed:	10/14/23 18:35
Lab Samp ID:	23J114-03	Dilution Factor:	1
Lab File ID:	LJ13063A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.52	0.052	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.705	1.05	67	60-130
Hexacosane	0.235	0.262	89	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 13:30
Sample ID	: BGMW13S102023	Date Analyzed:	10/14/23 18:54
Lab Samp ID:	23J114-07	Dilution Factor:	1
Lab File ID:	LJ13064A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.57	0.057	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.827	1.14	73	60-130
Hexacosane	0.281	0.285	99	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 12:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 13:30
Sample ID	: TMW34102023	Date Analyzed:	10/14/23 19:13
Lab Samp ID:	23J114-08	Dilution Factor:	1
Lab File ID:	LJ13065A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.766	1.09	70	60-130
Hexacosane	0.251	0.273	92	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 13:30
Sample ID	: FDUP07-102023	Date Analyzed:	10/14/23 19:31
Lab Samp ID:	23J114-09	Dilution Factor:	1
Lab File ID:	LJ13066A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.60	0.060	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.878	1.20	73	60-130
Hexacosane	0.302	0.300	101	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 13:30
Sample ID	: QC10102023EB	Date Analyzed:	10/14/23 19:50
Lab Samp ID:	23J114-10	Dilution Factor:	1
Lab File ID:	LJ13067A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.30J	0.53	0.053	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.771	1.06	73	60-130
Hexacosane	0.251	0.265	95	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW3520C/8081B
PESTICIDES

A total of six(6) water samples were received on 10/11/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ024WL/CPJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ024WB	1	NA	11/18/2306:07	10/17/2312:15	RK17040	RK17038	23CPJ024W	Method Blank
LCS1W	CPJ024WL	1	NA	11/18/2306:28	10/17/2312:15	RK17041	RK17038	23CPJ024W	Lab Control Sample (LCS)
LCD1W	CPJ024WC	1	NA	11/18/2306:48	10/17/2312:15	RK17042	RK17038	23CPJ024W	LCS Duplicate
BGMW13D102023	J114-02	1	NA	11/18/2307:50	10/17/2312:15	RK17045	RK17038	23CPJ024W	Field Sample
FDUP08-102023	J114-03	1	NA	11/18/2308:10	10/17/2312:15	RK17046	RK17038	23CPJ024W	Field Sample
TMW31D102023	J114-04	1	NA	11/18/2308:31	10/17/2312:15	RK17047	RK17038	23CPJ024W	Field Sample
BGMW13S102023	J114-07	1	NA	11/18/2308:51	10/17/2312:15	RK17048	RK17038	23CPJ024W	Field Sample
QC10102023EB	J114-10	1	NA	11/18/2309:12	10/17/2312:15	RK17049	RK17038	23CPJ024W	Field Sample
TMW43102023	J114-11	1	NA	11/18/2310:34	10/17/2312:15	RK17053	RK17051	23CPJ024W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 10:15
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/17/23 12:15
Sample ID : BGMW13D102023	Date Analyzed: 11/18/23 07:50
Lab Samp ID: J114-02	Dilution Factor: 1
Lab File ID: RK17045	Matrix: WATER
Ext Btch ID: 23CPJ024W	% Moisture: NA
Calib. Ref.: RK17038	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.045
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.045
beta-BHC	(ND) | ND	0.11	0.022	0.045
Heptachlor	(ND) | ND	0.11	0.022	0.045
delta-BHC	(ND) | ND	0.11	0.022	0.045
Aldrin	(ND) | ND	0.11	0.022	0.045
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.045
gamma-Chlordane	(ND) | ND	0.11	0.022	0.045
alpha-Chlordane	(ND) | ND	0.11	0.022	0.045
Endosulfan I	(ND) | ND	0.11	0.022	0.045
4,4'-DDE	(ND) | ND	0.11	0.022	0.045
Dieldrin	(ND) | ND	0.11	0.022	0.045
Endrin	(ND) | ND	0.11	0.022	0.045
4,4'-DDD	(ND) | ND	0.11	0.022	0.045
Endosulfan II	(ND) | ND	0.11	0.022	0.045
4,4'-DDT	(ND) | ND	0.11	0.022	0.045
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.045
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.045
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.045

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.208) | 0.208	0.449	46	44-124
Decachlorobiphenyl	(0.321) | 0.310	0.449	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK17039

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/17/23 12:15
Sample ID	: FDUP08-102023	Date Analyzed:	11/18/23 08:10
Lab Samp ID:	J114-03	Dilution Factor:	1
Lab File ID:	RK17046	Matrix:	WATER
Ext Btch ID:	23CPJ024W	% Moisture:	NA
Calib. Ref.:	RK17038	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.190 | (0.200)	0.440	45	44-124
Decachlorobiphenyl	(0.312) | 0.304	0.440	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK17039		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/17/23 12:15
Sample ID	: TMW31D102023	Date Analyzed:	11/18/23 08:31
Lab Samp ID:	J114-04	Dilution Factor:	1
Lab File ID:	RK17047	Matrix:	WATER
Ext Btch ID:	23CPJ024W	% Moisture:	NA
Calib. Ref.:	RK17038	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.207) | 0.203	0.440	47	44-124
Decachlorobiphenyl	(0.242) | 0.239	0.440	55	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column | Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK17039		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/17/23 12:15
Sample ID	: BGMW13S102023	Date Analyzed:	11/18/23 08:51
Lab Samp ID:	J114-07	Dilution Factor:	1
Lab File ID:	RK17048	Matrix:	WATER
Ext Btch ID:	23CPJ024W	% Moisture:	NA
Calib. Ref.:	RK17038	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.11	0.021	0.042
beta-BHC	(ND) | ND	0.11	0.021	0.042
Heptachlor	(ND) | ND	0.11	0.021	0.042
delta-BHC	(ND) | ND	0.11	0.021	0.042
Aldrin	(ND) | ND	0.11	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.11	0.021	0.042
gamma-Chlordane	(ND) | ND	0.11	0.021	0.042
alpha-Chlordane	(ND) | ND	0.11	0.021	0.042
Endosulfan I	(ND) | ND	0.11	0.021	0.042
4,4'-DDE	(ND) | ND	0.11	0.021	0.042
Dieldrin	(ND) | ND	0.11	0.021	0.042
Endrin	(ND) | ND	0.11	0.021	0.042
4,4'-DDD	(ND) | ND	0.11	0.021	0.042
Endosulfan II	(ND) | ND	0.11	0.021	0.042
4,4'-DDT	(ND) | ND	0.11	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.11	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.11	0.021	0.042
Methoxychlor	(ND) | ND	1.1	0.11	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.53
Endrin Ketone	(ND) | ND	0.11	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.210) | 0.208	0.426	49	44-124
Decachlorobiphenyl	(0.310) | 0.300	0.426	73	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 940ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column | Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK17039		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 14:00
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/17/23 12:15
Sample ID : QC10102023EB	Date Analyzed: 11/18/23 09:12
Lab Samp ID: J114-10	Dilution Factor: 1
Lab File ID: RK17049	Matrix: WATER
Ext Btch ID: 23CPJ024W	% Moisture: NA
Calib. Ref.: RK17038	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.025	0.049
gamma-BHC (Lindane)	(ND) | ND	0.12	0.025	0.049
beta-BHC	(ND) | ND	0.12	0.025	0.049
Heptachlor	(ND) | ND	0.12	0.025	0.049
delta-BHC	(ND) | ND	0.12	0.025	0.049
Aldrin	(ND) | ND	0.12	0.025	0.049
Heptachlor Epoxide	(ND) | ND	0.12	0.025	0.049
gamma-Chlordane	(ND) | ND	0.12	0.025	0.049
alpha-Chlordane	(ND) | ND	0.12	0.025	0.049
Endosulfan I	(ND) | ND	0.12	0.025	0.049
4,4'-DDE	(ND) | ND	0.12	0.025	0.049
Dieldrin	(ND) | ND	0.12	0.025	0.049
Endrin	(ND) | ND	0.12	0.025	0.049
4,4'-DDD	(ND) | ND	0.12	0.025	0.049
Endosulfan II	(ND) | ND	0.12	0.025	0.049
4,4'-DDT	(ND) | ND	0.12	0.025	0.049
Endrin Aldehyde	(ND) | ND	0.12	0.025	0.049
Endosulfan Sulfate	(ND) | ND	0.12	0.025	0.049
Methoxychlor	(ND) | ND	1.2	0.12	0.25
Toxaphene	(ND) | ND	2.5	0.31	0.62
Endrin Ketone	(ND) | ND	0.12	0.025	0.049

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.211 | (0.217)	0.494	44	44-124
Decachlorobiphenyl	(0.341) | 0.329	0.494	69	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 810ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim
Result Quantified : First column | Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RK17039	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/17/23 12:15
Sample ID	: TMW43102023	Date Analyzed:	11/18/23 10:34
Lab Samp ID:	J114-11	Dilution Factor:	1
Lab File ID:	RK17053	Matrix:	WATER
Ext Btch ID:	23CPJ024W	% Moisture:	NA
Calib. Ref.:	RK17051	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND)|ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND)|ND	0.10	0.020	0.040
beta-BHC	(ND)|ND	0.10	0.020	0.040
Heptachlor	(ND)|ND	0.10	0.020	0.040
delta-BHC	(ND)|ND	0.10	0.020	0.040
Aldrin	(ND)|ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND)|ND	0.10	0.020	0.040
gamma-Chlordane	(ND)|ND	0.10	0.020	0.040
alpha-Chlordane	(ND)|ND	0.10	0.020	0.040
Endosulfan I	(ND)|ND	0.10	0.020	0.040
4,4'-DDE	(ND)|ND	0.10	0.020	0.040
Dieldrin	(ND)|ND	0.10	0.020	0.040
Endrin	(ND)|ND	0.10	0.020	0.040
4,4'-DDD	(ND)|ND	0.10	0.020	0.040
Endosulfan II	(ND)|ND	0.10	0.020	0.040
4,4'-DDT	(ND)|ND	0.10	0.020	0.040
Endrin Aldehyde	(ND)|ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND)|ND	0.10	0.020	0.040
Methoxychlor	(ND)|ND	1.0	0.10	0.20
Toxaphene	(ND)|ND	2.0	0.25	0.51
Endrin Ketone	(ND)|ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.182)|0.153	0.404	45	44-124
Decachlorobiphenyl	(0.216)|0.208	0.404	53	30-135

Notes:
RL : Reporting limit
* Out of QC limits
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 990ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK17052		

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW3520C/8082A
PCBS

A total of four(4) water samples were received on 10/11/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 60J024WL/60J024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PCBs

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : 71

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ024WB	1	NA	10/18/2318:15	10/17/2312:15	KJ18025A	KJ18016A	CPJ024W	Method Blank
LCS1W	60J024WL	1	NA	10/18/2318:35	10/17/2312:15	KJ18026A	KJ18016A	CPJ024W	Lab Control Sample (LCS)
LCD1W	60J024WC	1	NA	10/18/2318:55	10/17/2312:15	KJ18027A	KJ18016A	CPJ024W	LCS Duplicate
BGMW13D102023	J114-02	1.12	NA	10/18/2320:14	10/17/2312:15	KJ18031A	KJ18029A	CPJ024W	Field Sample
FDUP08-102023	J114-03	1.10	NA	10/18/2320:34	10/17/2312:15	KJ18032A	KJ18029A	CPJ024W	Field Sample
BGMW13S102023	J114-07	1.06	NA	10/18/2320:54	10/17/2312:15	KJ18033A	KJ18029A	CPJ024W	Field Sample
QC10102023EB	J114-10	1.23	NA	10/18/2321:14	10/17/2312:15	KJ18034A	KJ18029A	CPJ024W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/17/23 12:15
Sample ID: BGMW13D102023	Date Analyzed: 10/18/23 20:14
Lab Samp ID: J114-02	Dilution Factor: 1.12
Lab File ID: KJ18031A	Matrix : WATER
Ext Btch ID: CPJ024W	% Moisture : NA
Calib. Ref.: KJ18029A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.56
PCB-1221	(ND)|ND	1.1	0.28	0.56
PCB-1232	(ND)|ND	1.1	0.28	0.56
PCB-1242	(ND)|ND	1.1	0.28	0.56
PCB-1248	(ND)|ND	1.1	0.28	0.56
PCB-1254	(ND)|ND	1.1	0.28	0.56
PCB-1260	(ND)|ND	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.5330)|0.4504	0.4480	(119)|101	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/17/23 12:15
Sample ID: FDUP08-102023	Date Analyzed: 10/18/23 20:34
Lab Samp ID: J114-03	Dilution Factor: 1.10
Lab File ID: KJ18032A	Matrix : WATER
Ext Btch ID: CPJ024W	% Moisture : NA
Calib. Ref.: KJ18029A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.55
PCB-1221	(ND)|ND	1.1	0.28	0.55
PCB-1232	(ND)|ND	1.1	0.28	0.55
PCB-1242	(ND)|ND	1.1	0.28	0.55
PCB-1248	(ND)|ND	1.1	0.28	0.55
PCB-1254	(ND)|ND	1.1	0.28	0.55
PCB-1260	(ND)|ND	1.1	0.28	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4987)|0.4266	0.4400	(113)|97.0	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/17/23 12:15
Sample ID: BGMW13S102023	Date Analyzed: 10/18/23 20:54
Lab Samp ID: J114-07	Dilution Factor: 1.06
Lab File ID: KJ18033A	Matrix : WATER
Ext Btch ID: CPJ024W	% Moisture : NA
Calib. Ref.: KJ18029A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.26	0.53
PCB-1221	(ND)|ND	1.1	0.26	0.53
PCB-1232	(ND)|ND	1.1	0.26	0.53
PCB-1242	(ND)|ND	1.1	0.26	0.53
PCB-1248	(ND)|ND	1.1	0.26	0.53
PCB-1254	(ND)|ND	1.1	0.26	0.53
PCB-1260	(ND)|ND	1.1	0.26	0.53

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4983)|0.4201	0.4240	(118)|99.1	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/17/23 12:15
Sample ID: QC10102023EB	Date Analyzed: 10/18/23 21:14
Lab Samp ID: J114-10	Dilution Factor: 1.23
Lab File ID: KJ18034A	Matrix : WATER
Ext Btch ID: CPJ024W	% Moisture : NA
Calib. Ref.: KJ18029A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.2	0.31	0.62
PCB-1221	(ND)|ND	1.2	0.31	0.62
PCB-1232	(ND)|ND	1.2	0.31	0.62
PCB-1242	(ND)|ND	1.2	0.31	0.62
PCB-1248	(ND)|ND	1.2	0.31	0.62
PCB-1254	(ND)|ND	1.2	0.31	0.62
PCB-1260	(ND)|ND	1.2	0.31	0.62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.5759)|0.4723	0.4920	(117)|96.0	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD 8151A
HERBICIDES

A total of four(4) water samples were received on 10/11/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. HEJ008WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HEJ008WL/HEJ008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J114
Project : USACE WINGATE Instrument ID : 16

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEJ008WB	1	NA	10/17/2320:13	10/13/2312:30	WJ17003A	WJ17002A	HEJ008W	Method Blank
LCS1W	HEJ008WL	1	NA	10/17/2320:42	10/13/2312:30	WJ17004A	WJ17002A	HEJ008W	Lab Control Sample (LCS)
LCD1W	HEJ008WC	1	NA	10/17/2321:10	10/13/2312:30	WJ17005A	WJ17002A	HEJ008W	LCS Duplicate
BGMW13D102023	J114-02	1	NA	10/18/2301:27	10/13/2312:30	WJ17014A	WJ17013A	HEJ008W	Field Sample
FDUP08-102023	J114-03	1	NA	10/18/2301:56	10/13/2312:30	WJ17015A	WJ17013A	HEJ008W	Field Sample
BGMW13S102023	J114-07	1	NA	10/18/2302:25	10/13/2312:30	WJ17016A	WJ17013A	HEJ008W	Field Sample
QC10102023EB	J114-10	1	NA	10/18/2302:53	10/13/2312:30	WJ17017A	WJ17013A	HEJ008W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 12:30
Sample ID: BGMW13D102023	Date Analyzed: 10/18/23 01:27
Lab Samp ID: J114-02	Dilution Factor: 1
Lab File ID: WJ17014A	Matrix : WATER
Ext Btch ID: HEJ008W	% Moisture : NA
Calib. Ref.: WJ17013A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.29J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	55 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	4.021 | (4.129)	10.00	40.2 | (41.3)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 12:30
Sample ID: FDUP08-102023	Date Analyzed: 10/18/23 01:56
Lab Samp ID: J114-03	Dilution Factor: 1
Lab File ID: WJ17015A	Matrix : WATER
Ext Btch ID: HEJ008W	% Moisture : NA
Calib. Ref.: WJ17013A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	1.0	0.10	0.20
2,4-DB	(ND)|0.21J	1.0	0.10	0.20
2,4,5-T	(ND)|ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND)|ND	1.0	0.10	0.20
DALAPON	(ND)|ND	1.0	0.10	0.20
DICAMBA	(ND)|ND	1.0	0.10	0.20
DICHLOROPROP	(ND)|ND	1.0	0.10	0.20
DINOSEB	(ND)|ND	1.0	0.10	0.20
MCPA	59|(ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(8.601)|8.446	10.00	(86.0)|84.5	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/10/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J114	Date Extracted	: 10/13/23 12:30
Sample ID	: BGMW13S102023	Date Analyzed	: 10/18/23 02:25
Lab Samp ID	: J114-07	Dilution Factor	: 1
Lab File ID	: WJ17016A	Matrix	: WATER
Ext Btch ID	: HEJ008W	% Moisture	: NA
Calib. Ref.	: WJ17013A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.18J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	66 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	3.223 | (3.566)	10.00	32.2 | (35.7)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 12:30
Sample ID: QC10102023EB	Date Analyzed: 10/18/23 02:53
Lab Samp ID: J114-10	Dilution Factor: 1
Lab File ID: WJ17017A	Matrix : WATER
Ext Btch ID: HEJ008W	% Moisture : NA
Calib. Ref.: WJ17013A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.24J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	64 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.614 | (9.003)	10.00	86.1 | (90.0)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW8330B
EXPLOSIVES

A total of eight(8) water samples were received on 10/11/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ014WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ014WL/EXJ014WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Dilution was necessary to bring result within calibration range which may result to undetermined surrogate percent recovery. In this SDG, the following were noted: J114-05I and -06I - both surrogates were diluted out.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW8330B
EXPLOSIVES

A total of eight(8) water samples were received on 10/11/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ014WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 35J014WL/35J014WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ014WB	1	NA	10/15/2301:45	10/13/2311:45	XJ10128A	XJ10126A	EXJ014W	Method Blank
LCS1W	EXJ014WL	1	NA	10/15/2302:42	10/13/2311:45	XJ10129A	XJ10126A	EXJ014W	Lab Control Sample (LCS)
LCD1W	EXJ014WC	1	NA	10/15/2303:30	10/13/2311:45	XJ10130A	XJ10126A	EXJ014W	LCS Duplicate
BGMW13D102023	J114-02	1	NA	10/15/2306:12	10/13/2311:45	XJ10133A	XJ10126A	EXJ014W	Field Sample
FDUP08-102023	J114-03	1	NA	10/15/2307:00	10/13/2311:45	XJ10134A	XJ10126A	EXJ014W	Field Sample
TMW31D102023	J114-04	1	NA	10/15/2307:57	10/13/2311:45	XJ10135A	XJ10126A	EXJ014W	Field Sample
TMW03102023	J114-05	1	NA	10/15/2308:45	10/13/2311:45	XJ10136A	XJ10126A	EXJ014W	Field Sample
TMW03102023DL	J114-05I	50	NA	10/17/2307:08	10/13/2311:45	XJ16017A	XJ16014A	EXJ014W	Diluted Sample
FDUP06-102023	J114-06	1	NA	10/15/2309:42	10/13/2311:45	XJ10137A	XJ10126A	EXJ014W	Field Sample
FDUP06-102023DL	J114-06I	50	NA	10/17/2307:56	10/13/2311:45	XJ16018A	XJ16014A	EXJ014W	Diluted Sample
BGMW13S102023	J114-07	1	NA	10/15/2312:15	10/13/2311:45	XJ10140A	XJ10138A	EXJ014W	Field Sample
QC10102023EB	J114-10	1	NA	10/15/2313:12	10/13/2311:45	XJ10141A	XJ10138A	EXJ014W	Field Sample
TMW43102023	J114-11	1	NA	10/15/2314:00	10/13/2311:45	XJ10142A	XJ10138A	EXJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ014WB	1	NA	10/15/2301:45	10/13/2311:45	XJ10128A	XJ10127A	EXJ014W	Method Blank
LCS1W	35J014WL	1	NA	10/15/2304:27	10/13/2311:45	XJ10131A	XJ10127A	EXJ014W	Lab Control Sample (LCS)
LCD1W	35J014WC	1	NA	10/15/2305:15	10/13/2311:45	XJ10132A	XJ10127A	EXJ014W	LCS Duplicate
BGMW13D102023	J114-02	1	NA	10/15/2306:12	10/13/2311:45	XJ10133A	XJ10127A	EXJ014W	Field Sample
FDUP08-102023	J114-03	1	NA	10/15/2307:00	10/13/2311:45	XJ10134A	XJ10127A	EXJ014W	Field Sample
TMW31D102023	J114-04	1	NA	10/15/2307:57	10/13/2311:45	XJ10135A	XJ10127A	EXJ014W	Field Sample
TMW03102023	J114-05	1	NA	10/15/2308:45	10/13/2311:45	XJ10136A	XJ10127A	EXJ014W	Field Sample
FDUP06-102023	J114-06	1	NA	10/15/2309:42	10/13/2311:45	XJ10137A	XJ10127A	EXJ014W	Field Sample
BGMW13S102023	J114-07	1	NA	10/15/2312:15	10/13/2311:45	XJ10140A	XJ10139A	EXJ014W	Field Sample
QC10102023EB	J114-10	1	NA	10/15/2313:12	10/13/2311:45	XJ10141A	XJ10139A	EXJ014W	Field Sample
TMW43102023	J114-11	1	NA	10/15/2314:00	10/13/2311:45	XJ10142A	XJ10139A	EXJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: BGMW13D102023	Date Analyzed: 10/15/23 06:12
Lab Samp ID: J114-02	Dilution Factor: 1
Lab File ID: XJ10133A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10126A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.66	4.000	91.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: BGMW13D102023	Date Analyzed: 10/15/23 06:12
Lab Samp ID: J114-02	Dilution Factor: 1
Lab File ID: XJ10133A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10127A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.66	4.000	91.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: FDUP08-102023	Date Analyzed: 10/15/23 07:00
Lab Samp ID: J114-03	Dilution Factor: 1
Lab File ID: XJ10134A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10126A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/10/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J114	Date Extracted	: 10/13/23 11:45
Sample ID	: FDUP08-102023	Date Analyzed	: 10/15/23 07:00
Lab Samp ID	: J114-03	Dilution Factor	: 1
Lab File ID	: XJ10134A	Matrix	: WATER
Ext Btch ID	: EXJ014W	% Moisture	: NA
Calib. Ref.	: XJ10127A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: TMW31D102023	Date Analyzed: 10/15/23 07:57
Lab Samp ID: J114-04	Dilution Factor: 1
Lab File ID: XJ10135A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10126A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.68	4.000	92.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: TMW31D102023	Date Analyzed: 10/15/23 07:57
Lab Samp ID: J114-04	Dilution Factor: 1
Lab File ID: XJ10135A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10127A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.68	4.000	92.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114
Sample ID: TMW03102023
Lab Samp ID: J114-05 #J114-05I
Lab File ID: XJ10136A #XJ16017A
Ext Btch ID: EXJ014W
Calib. Ref.: XJ10126A #XJ16014A

Date Collected: 10/10/23
Date Received: 10/11/23
Date Extracted: 10/13/23 11:45
Date Analyzed: 10/15/23 08:45 # 10/17/23 07:08
Dilution Factor: 1 # 50
Matrix : WATER
% Moisture : NA
Instrument ID : T-081

	PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
	HMX	5.1	1.0	0.10	0.20
#	RDX	290	50	5.0	10
	1,3,5-TRINITROBENZENE	0.34J	1.0	0.10	0.20
	1,3-DINITROBENZENE	ND	1.0	0.10	0.20
	TETRYL	ND	1.0	0.10	0.20
	NITROBENZENE	ND	1.0	0.10	0.20
	2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
	4-AMINO-2,6-DINITROTOLUENE	0.80J	1.0	0.10	0.20
	2-AMINO-4,6-DINITROTOLUENE	0.58J	1.0	0.10	0.20
	2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2,4-DINITROTOLUENE	0.31J	1.0	0.10	0.20
	2-NITROTOLUENE	ND	1.0	0.10	0.20
	3-NITROTOLUENE	ND	1.0	0.10	0.20
	4-NITROTOLUENE	ND	1.0	0.10	0.20

	SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
	3,4-DINITROTOLUENE	3.98	4.000	99.4	60-140
#	3,4-DINITROTOLUENE	ND	4.000	0.00*	60-140

Members of the Associated File

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: TMW03102023	Date Analyzed: 10/15/23 08:45
Lab Samp ID: J114-05	Dilution Factor: 1
Lab File ID: XJ10136A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10126A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	5.1	1.0	0.10	0.20
RDX	300E	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	0.34J	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	0.80J	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	0.58J	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	0.31J	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.98	4.000	99.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: TMW03102023	Date Analyzed: 10/15/23 08:45
Lab Samp ID: J114-05	Dilution Factor: 1
Lab File ID: XJ10136A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10127A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	5.1	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.98	4.000	99.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: TMW03102023DL	Date Analyzed: 10/17/23 07:08
Lab Samp ID: J114-05I	Dilution Factor: 50
Lab File ID: XJ16017A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ16014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	50	5.0	10
RDX	290	50	5.0	10
1,3,5-TRINITROBENZENE	ND	50	5.0	10
1,3-DINITROBENZENE	ND	50	5.0	10
TETRYL	ND	50	5.0	10
NITROBENZENE	ND	50	5.0	10
2,4,6-TRINITROTOLUENE	ND	50	5.0	10
4-AMINO-2,6-DINITROTOLUENE	ND	50	5.0	10
2-AMINO-4,6-DINITROTOLUENE	ND	50	5.0	10
2,6-DINITROTOLUENE	ND	50	5.0	10
2,4-DINITROTOLUENE	ND	50	5.0	10
2-NITROTOLUENE	ND	50	5.0	10
3-NITROTOLUENE	ND	50	5.0	10
4-NITROTOLUENE	ND	50	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	ND	4.000	0.00*	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 11:45
Sample ID:	FDUP06-102023	Date Analyzed:	10/15/23 09:42 # 10/17/23 07:56
Lab Samp ID:	J114-06 #J114-06I	Dilution Factor:	1 # 50
Lab File ID:	XJ10137A #XJ16018A	Matrix :	WATER
Ext Btch ID:	EXJ014W	% Moisture :	NA
Calib. Ref.:	XJ10126A #XJ16014A	Instrument ID :	T-081

	PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
	HMX	4.6	1.0	0.10	0.20
#	RDX	280	50	5.0	10
	1,3,5-TRINITROBENZENE	0.33J	1.0	0.10	0.20
	1,3-DINITROBENZENE	ND	1.0	0.10	0.20
	TETRYL	ND	1.0	0.10	0.20
	NITROBENZENE	ND	1.0	0.10	0.20
	2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
	4-AMINO-2,6-DINITROTOLUENE	0.75J	1.0	0.10	0.20
	2-AMINO-4,6-DINITROTOLUENE	0.50J	1.0	0.10	0.20
	2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2,4-DINITROTOLUENE	0.35J	1.0	0.10	0.20
	2-NITROTOLUENE	ND	1.0	0.10	0.20
	3-NITROTOLUENE	ND	1.0	0.10	0.20
	4-NITROTOLUENE	ND	1.0	0.10	0.20

	SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
	3,4-DINITROTOLUENE	3.78	4.000	94.5	60-140
#	3,4-DINITROTOLUENE	ND	4.000	0.00*	60-140

Members of the Associated File

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: FDUP06-102023	Date Analyzed: 10/15/23 09:42
Lab Samp ID: J114-06	Dilution Factor: 1
Lab File ID: XJ10137A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10126A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	4.6	1.0	0.10	0.20
RDX	300E	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	0.33J	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	0.75J	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	0.50J	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	0.35J	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.78	4.000	94.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/10/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J114	Date Extracted	: 10/13/23 11:45
Sample ID	: FDUP06-102023	Date Analyzed	: 10/15/23 09:42
Lab Samp ID	: J114-06	Dilution Factor	: 1
Lab File ID	: XJ10137A	Matrix	: WATER
Ext Btch ID	: EXJ014W	% Moisture	: NA
Calib. Ref.	: XJ10127A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	5.5	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.78	4.000	94.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: FDUP06-102023DL	Date Analyzed: 10/17/23 07:56
Lab Samp ID: J114-06I	Dilution Factor: 50
Lab File ID: XJ16018A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ16014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	50	5.0	10
RDX	280	50	5.0	10
1,3,5-TRINITROBENZENE	ND	50	5.0	10
1,3-DINITROBENZENE	ND	50	5.0	10
TETRYL	ND	50	5.0	10
NITROBENZENE	ND	50	5.0	10
2,4,6-TRINITROTOLUENE	ND	50	5.0	10
4-AMINO-2,6-DINITROTOLUENE	ND	50	5.0	10
2-AMINO-4,6-DINITROTOLUENE	ND	50	5.0	10
2,6-DINITROTOLUENE	ND	50	5.0	10
2,4-DINITROTOLUENE	ND	50	5.0	10
2-NITROTOLUENE	ND	50	5.0	10
3-NITROTOLUENE	ND	50	5.0	10
4-NITROTOLUENE	ND	50	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	ND	4.000	0.00*	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 11:45
Sample ID:	BGMW13S102023	Date Analyzed:	10/15/23 12:15
Lab Samp ID:	J114-07	Dilution Factor:	1
Lab File ID:	XJ10140A	Matrix :	WATER
Ext Btch ID:	EXJ014W	% Moisture :	NA
Calib. Ref.:	XJ10138A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.94	4.000	98.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 11:45
Sample ID:	BGMW13S102023	Date Analyzed:	10/15/23 12:15
Lab Samp ID:	J114-07	Dilution Factor:	1
Lab File ID:	XJ10140A	Matrix :	WATER
Ext Btch ID:	EXJ014W	% Moisture :	NA
Calib. Ref.:	XJ10139A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.94	4.000	98.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: QC10102023EB	Date Analyzed: 10/15/23 13:12
Lab Samp ID: J114-10	Dilution Factor: 1
Lab File ID: XJ10141A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10138A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.65	4.000	91.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 11:45
Sample ID: QC10102023EB	Date Analyzed: 10/15/23 13:12
Lab Samp ID: J114-10	Dilution Factor: 1
Lab File ID: XJ10141A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10139A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.65	4.000	91.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 11:45
Sample ID:	TMW43102023	Date Analyzed:	10/15/23 14:00
Lab Samp ID:	J114-11	Dilution Factor:	1
Lab File ID:	XJ10142A	Matrix :	WATER
Ext Btch ID:	EXJ014W	% Moisture :	NA
Calib. Ref.:	XJ10138A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	0.33J	1.0	0.10	0.20
RDX	1.6	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 11:45
Sample ID:	TMW43102023	Date Analyzed:	10/15/23 14:00
Lab Samp ID:	J114-11	Dilution Factor:	1
Lab File ID:	XJ10142A	Matrix :	WATER
Ext Btch ID:	EXJ014W	% Moisture :	NA
Calib. Ref.:	XJ10139A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	94.1	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW8332
NITROGLYCERIN AND PETN

A total of eight(8) water samples were received on 10/11/23 to be analyzed for Nitroglycerin and PETN in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ013WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ013WL/EXJ013WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ013WB	1	NA	10/17/2308:54	10/13/2316:30	NJ17003A	NJ17002A	EXJ013W	Method Blank
LCS1W	EXJ013WL	1	NA	10/17/2309:03	10/13/2316:30	NJ17004A	NJ17002A	EXJ013W	Lab Control Sample (LCS)
LCD1W	EXJ013WC	1	NA	10/17/2309:12	10/13/2316:30	NJ17005A	NJ17002A	EXJ013W	LCS Duplicate
BGMW13D102023	J114-02	1	NA	10/17/2309:21	10/13/2316:30	NJ17006A	NJ17002A	EXJ013W	Field Sample
FDUP08-102023	J114-03	1	NA	10/17/2309:30	10/13/2316:30	NJ17007A	NJ17002A	EXJ013W	Field Sample
TMW31D102023	J114-04	1	NA	10/17/2309:39	10/13/2316:30	NJ17008A	NJ17002A	EXJ013W	Field Sample
TMW03102023	J114-05	1	NA	10/17/2309:48	10/13/2316:30	NJ17009A	NJ17002A	EXJ013W	Field Sample
FDUP06-102023	J114-06	1	NA	10/17/2309:57	10/13/2316:30	NJ17010A	NJ17002A	EXJ013W	Field Sample
BGMW13S102023	J114-07	1	NA	10/17/2310:06	10/13/2316:30	NJ17011A	NJ17002A	EXJ013W	Field Sample
QC10102023EB	J114-10	1	NA	10/17/2310:15	10/13/2316:30	NJ17012A	NJ17002A	EXJ013W	Field Sample
TMW43102023	J114-11	1	NA	10/17/2310:34	10/13/2316:30	NJ17014A	NJ17013A	EXJ013W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 16:30
Sample ID: BGMW13D102023	Date Analyzed: 10/17/23 09:21
Lab Samp ID: J114-02	Dilution Factor: 1
Lab File ID: NJ17006A	Matrix : WATER
Ext Btch ID: EXJ013W	% Moisture : NA
Calib. Ref.: NJ17002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	555	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 16:30
Sample ID: FDUP08-102023	Date Analyzed: 10/17/23 09:30
Lab Samp ID: J114-03	Dilution Factor: 1
Lab File ID: NJ17007A	Matrix : WATER
Ext Btch ID: EXJ013W	% Moisture : NA
Calib. Ref.: NJ17002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	557	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 16:30
Sample ID: TMW31D102023	Date Analyzed: 10/17/23 09:39
Lab Samp ID: J114-04	Dilution Factor: 1
Lab File ID: NJ17008A	Matrix : WATER
Ext Btch ID: EXJ013W	% Moisture : NA
Calib. Ref.: NJ17002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	553	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 16:30
Sample ID: TMW03102023	Date Analyzed: 10/17/23 09:48
Lab Samp ID: J114-05	Dilution Factor: 1
Lab File ID: NJ17009A	Matrix : WATER
Ext Btch ID: EXJ013W	% Moisture : NA
Calib. Ref.: NJ17002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	544	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 16:30
Sample ID: FDUP06-102023	Date Analyzed: 10/17/23 09:57
Lab Samp ID: J114-06	Dilution Factor: 1
Lab File ID: NJ17010A	Matrix : WATER
Ext Btch ID: EXJ013W	% Moisture : NA
Calib. Ref.: NJ17002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	555	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 16:30
Sample ID: BGMW13S102023	Date Analyzed: 10/17/23 10:06
Lab Samp ID: J114-07	Dilution Factor: 1
Lab File ID: NJ17011A	Matrix : WATER
Ext Btch ID: EXJ013W	% Moisture : NA
Calib. Ref.: NJ17002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	547	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J114	Date Extracted:	10/13/23 16:30
Sample ID	: QC10102023EB	Date Analyzed:	10/17/23 10:15
Lab Samp ID	: J114-10	Dilution Factor:	1
Lab File ID	: NJ17012A	Matrix :	WATER
Ext Btch ID	: EXJ013W	% Moisture :	NA
Calib. Ref.	: NJ17002A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	553	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J114	Date Extracted: 10/13/23 16:30
Sample ID: TMW43102023	Date Analyzed: 10/17/23 10:34
Lab Samp ID: J114-11	Dilution Factor: 1
Lab File ID: NJ17014A	Matrix : WATER
Ext Btch ID: EXJ013W	% Moisture : NA
Calib. Ref.: NJ17013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	546	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW6020A
METALS BY ICP-MS

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ035WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ035WL/IMJ035WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J114-01M/J114-01S - Percent recoveries for Calcium(31X), Magnesium(10X), Manganese(14X) and Sodium(141X) were not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	IMJ035WL	1	NA	10/31/2313:56	10/26/2309:53	H6J22020	H6J22017	IMJ035W	Lab Control Sample (LCS)
LCD1W	IMJ035WC	1	NA	10/31/2313:59	10/26/2309:53	H6J22021	H6J22017	IMJ035W	LCS Duplicate
TMW28102023	J114-01A	5	NA	10/31/2314:16	10/26/2309:53	H6J22027	H6J22025	IMJ035W	Analytical Spike Sample
TMW28102023	J114-01G	5	NA	10/31/2314:19	10/26/2309:53	H6J22028	H6J22025	IMJ035W	Diluted Sample
TMW28102023	J114-01J	25	NA	10/31/2314:22	10/26/2309:53	H6J22029	H6J22025	IMJ035W	Diluted Sample
TMW28102023MS	J114-01M	5	NA	10/31/2314:25	10/26/2309:53	H6J22030	H6J22025	IMJ035W	Matrix Spike Sample (MS)
TMW28102023MSD	J114-01S	5	NA	10/31/2314:28	10/26/2309:53	H6J22031	H6J22025	IMJ035W	MS Duplicate (MSD)
BGMW13D102023	J114-02G	5	NA	10/31/2314:31	10/26/2309:53	H6J22032	H6J22025	IMJ035W	Diluted Sample
FDUP08-102023	J114-03G	5	NA	10/31/2314:34	10/26/2309:53	H6J22033	H6J22025	IMJ035W	Diluted Sample
TMW31D102023	J114-04G	5	NA	10/31/2314:37	10/26/2309:53	H6J22034	H6J22025	IMJ035W	Diluted Sample
TMW03102023	J114-05G	5	NA	10/31/2314:40	10/26/2309:53	H6J22035	H6J22025	IMJ035W	Diluted Sample
FDUP06-102023	J114-06G	5	NA	10/31/2314:43	10/26/2309:53	H6J22036	H6J22025	IMJ035W	Diluted Sample
BGMW13S102023	J114-07G	5	NA	10/31/2314:52	10/26/2309:53	H6J22039	H6J22037	IMJ035W	Diluted Sample
TMW34102023	J114-08I	10	NA	10/31/2314:54	10/26/2309:53	H6J22040	H6J22037	IMJ035W	Diluted Sample
FDUP07-102023	J114-09I	10	NA	10/31/2314:57	10/26/2309:53	H6J22041	H6J22037	IMJ035W	Diluted Sample
QC10102023EB	J114-10	1	NA	10/31/2315:00	10/26/2309:53	H6J22042	H6J22037	IMJ035W	Field Sample
TMW43102023	J114-11G	5	NA	10/31/2315:03	10/26/2309:53	H6J22043	H6J22037	IMJ035W	Diluted Sample
TMW28102023	J114-01A	50	NA	10/31/2315:06	10/26/2309:53	H6J22044	H6J22037	IMJ035W	Analytical Spike Sample
TMW28102023	J114-01T	50	NA	10/31/2315:09	10/26/2309:53	H6J22045	H6J22037	IMJ035W	Diluted Sample
TMW28102023	J114-01J	250	NA	10/31/2315:12	10/26/2309:53	H6J22046	H6J22037	IMJ035W	Diluted Sample
TMW28102023MS	J114-01M	50	NA	10/31/2315:15	10/26/2309:53	H6J22047	H6J22037	IMJ035W	Matrix Spike Sample (MS)
TMW28102023MSD	J114-01S	50	NA	10/31/2315:18	10/26/2309:53	H6J22048	H6J22037	IMJ035W	MS Duplicate (MSD)
MBLK1W	IMJ035WB	1	NA	10/31/2315:32	10/26/2309:53	H6J22051	H6J22049	IMJ035W	Method Blank
BGMW13D102023	J114-02T	50	NA	10/31/2315:35	10/26/2309:53	H6J22052	H6J22049	IMJ035W	Diluted Sample
FDUP08-102023	J114-03T	50	NA	10/31/2315:38	10/26/2309:53	H6J22053	H6J22049	IMJ035W	Diluted Sample
TMW31D102023	J114-04T	50	NA	10/31/2315:41	10/26/2309:53	H6J22054	H6J22049	IMJ035W	Diluted Sample
TMW03102023	J114-05T	50	NA	10/31/2315:44	10/26/2309:53	H6J22055	H6J22049	IMJ035W	Diluted Sample
FDUP06-102023	J114-06T	50	NA	10/31/2315:47	10/26/2309:53	H6J22056	H6J22049	IMJ035W	Diluted Sample
BGMW13S102023	J114-07T	50	NA	10/31/2315:50	10/26/2309:53	H6J22057	H6J22049	IMJ035W	Diluted Sample
TMW34102023	J114-08T	50	NA	10/31/2315:53	10/26/2309:53	H6J22058	H6J22049	IMJ035W	Diluted Sample
FDUP07-102023	J114-09T	50	NA	10/31/2315:55	10/26/2309:53	H6J22059	H6J22049	IMJ035W	Diluted Sample
TMW43102023	J114-11T	50	NA	10/31/2315:58	10/26/2309:53	H6J22060	H6J22049	IMJ035W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW28102023
Lab Samp ID: J114-01G
Lab File ID: H6J22028
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22025

Date Collected: 10/10/23 09:15
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:19
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	60	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	94000	1000	250	500
Chromium	6.9	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	450J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	29000	500	100	250
Manganese	410	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	110	100	25	50

Sample ID: TMW28102023
Lab Samp ID: J114-01T
Lab File ID: H6J22045
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22037

Date Analyzed: 10/31/23 15:09
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	420000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 09:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW28102023	Date Analyzed:	10/31/23 14:19
Lab Samp ID:	J114-01G	Dilution Factor:	5
Lab File ID:	H6J22028	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22025	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	60	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	94000	1000	250	500
Chromium	6.9	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	450J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	29000	500	100	250
Manganese	410	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	420000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	110	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 09:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW28102023	Date Analyzed:	10/31/23 15:09
Lab Samp ID:	J114-01T	Dilution Factor:	50
Lab File ID:	H6J22045	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22037	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	60	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	95000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	29000	5000	1000	2500
Manganese	410	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	420000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: BGMW13D102023
Lab Samp ID: J114-02G
Lab File ID: H6J22032
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22025

Date Collected: 10/10/23 10:15
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:31
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	130J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	260	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	7.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	260J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4000	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	650J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW13D102023
Lab Samp ID: J114-02T
Lab File ID: H6J22052
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Analyzed: 10/31/23 15:35
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	BGMW13D102023	Date Analyzed:	10/31/23 14:31
Lab Samp ID:	J114-02G	Dilution Factor:	5
Lab File ID:	H6J22032	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22025	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	130J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	260	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	7.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	260J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4000	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	650J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	280000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	BGMW13D102023	Date Analyzed:	10/31/23 15:35
Lab Samp ID:	J114-02T	Dilution Factor:	50
Lab File ID:	H6J22052	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	240	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	16000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4000J	5000	1000	2500
Manganese	130	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: FDUP08-102023
Lab Samp ID: J114-03G
Lab File ID: H6J22033
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22025

Date Collected: 10/10/23 10:25
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:34
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	370J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	260	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	16000	1000	250	500
Chromium	11	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	460J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4300	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	3.6J	5.0	1.2	2.5
Potassium	640J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP08-102023
Lab Samp ID: J114-03T
Lab File ID: H6J22053
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Analyzed: 10/31/23 15:38
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	270000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP08-102023	Date Analyzed:	10/31/23 14:34
Lab Samp ID:	J114-03G	Dilution Factor:	5
Lab File ID:	H6J22033	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22025	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	370J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	260	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	16000	1000	250	500
Chromium	11	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	460J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4300	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	3.6J	5.0	1.2	2.5
Potassium	640J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	280000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: FDUP08-102023
Lab Samp ID: J114-03T
Lab File ID: H6J22053
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Collected: 10/10/23 10:25
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 15:38
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	240	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	15000	10000	2500	5000
Chromium	6.9J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4200J	5000	1000	2500
Manganese	140	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	270000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW31D102023	Date Analyzed:	10/31/23 14:37
Lab Samp ID:	J114-04G	Dilution Factor:	5
Lab File ID:	H6J22034	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22025	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.66J	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	35000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5500	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	1.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW31D102023	Date Analyzed:	10/31/23 15:41
Lab Samp ID:	J114-04T	Dilution Factor:	50
Lab File ID:	H6J22054	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1000000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW31D102023	Date Analyzed:	10/31/23 14:37
Lab Samp ID:	J114-04G	Dilution Factor:	5
Lab File ID:	H6J22034	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22025	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.66J	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	35000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5500	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	1.5J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	970000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW31D102023	Date Analyzed:	10/31/23 15:41
Lab Samp ID:	J114-04T	Dilution Factor:	50
Lab File ID:	H6J22054	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	36000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5700	5000	1000	2500
Manganese	150	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1000000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW03102023
Lab Samp ID: J114-05G
Lab File ID: H6J22035
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22025

Date Collected: 10/10/23 11:10
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:40
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	53000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	4.4J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	280J	1000	250	500
Selenium	62	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW03102023
Lab Samp ID: J114-05T
Lab File ID: H6J22055
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Analyzed: 10/31/23 15:44
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1000000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW03102023	Date Analyzed:	10/31/23 14:40
Lab Samp ID:	J114-05G	Dilution Factor:	5
Lab File ID:	H6J22035	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22025	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	53000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	4.4J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	280J	1000	250	500
Selenium	62	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	950000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW03102023	Date Analyzed:	10/31/23 15:44
Lab Samp ID:	J114-05T	Dilution Factor:	50
Lab File ID:	H6J22055	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	14J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	55000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	12000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	65	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1000000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP06-102023	Date Analyzed:	10/31/23 14:43
Lab Samp ID:	J114-06G	Dilution Factor:	5
Lab File ID:	H6J22036	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22025	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	53000	1000	250	500
Chromium	0.68J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	4.5J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	310J	1000	250	500
Selenium	64	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	FDUP06-102023	Date Analyzed:	10/31/23 15:47
Lab Samp ID:	J114-06T	Dilution Factor:	50
Lab File ID:	H6J22056	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	990000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: FDUP06-102023
Lab Samp ID: J114-06G
Lab File ID: H6J22036
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22025

Date Collected: 10/10/23 11:15
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:43
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	53000	1000	250	500
Chromium	0.68J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	4.5J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	310J	1000	250	500
Selenium	64	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	960000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP06-102023	Date Analyzed:	10/31/23 15:47
Lab Samp ID:	J114-06T	Dilution Factor:	50
Lab File ID:	H6J22056	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	54000	10000	2500	5000
Chromium	80	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	14000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	19J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	64	50	7.5	15
Silver	ND	50	5.0	10
Sodium	990000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: BGMW13S102023
Lab Samp ID: J114-07G
Lab File ID: H6J22039
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22037

Date Collected: 10/10/23 11:50
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:52
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	170J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	230	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	27000	1000	250	500
Chromium	0.99J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	790J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8300	500	100	250
Manganese	390	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	930J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW13S102023
Lab Samp ID: J114-07T
Lab File ID: H6J22057
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Analyzed: 10/31/23 15:50
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	290000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: BGMW13S102023
Lab Samp ID: J114-07G
Lab File ID: H6J22039
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22037

Date Collected: 10/10/23 11:50
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:52
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	170J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	230	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	27000	1000	250	500
Chromium	0.99J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	790J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8300	500	100	250
Manganese	390	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	930J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	290000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	BGMW13S102023	Date Analyzed:	10/31/23 15:50
Lab Samp ID:	J114-07T	Dilution Factor:	50
Lab File ID:	H6J22057	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	220	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	28000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8600	5000	1000	2500
Manganese	390	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	290000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW34102023
Lab Samp ID: J114-08I
Lab File ID: H6J22040
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22037

Date Collected: 10/10/23 12:50
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:54
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	120000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	25000	1000	200	500
Manganese	170	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	110	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW34102023
Lab Samp ID: J114-08T
Lab File ID: H6J22058
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Analyzed: 10/31/23 15:53
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 12:50
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW34102023	Date Analyzed:	10/31/23 14:54
Lab Samp ID:	J114-08I	Dilution Factor:	10
Lab File ID:	H6J22040	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22037	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	120000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	25000	1000	200	500
Manganese	170	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	110	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1200000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW34102023
Lab Samp ID: J114-08T
Lab File ID: H6J22058
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Collected: 10/10/23 12:50
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 15:53
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	120000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	26000	5000	1000	2500
Manganese	460	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	110	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: FDUP07-102023
Lab Samp ID: J114-09I
Lab File ID: H6J22041
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22037

Date Collected: 10/10/23 13:00
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 14:57
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	120000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	26000	1000	200	500
Manganese	170	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: FDUP07-102023
Lab Samp ID: J114-09T
Lab File ID: H6J22059
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Analyzed: 10/31/23 15:55
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP07-102023	Date Analyzed:	10/31/23 14:57
Lab Samp ID:	J114-09I	Dilution Factor:	10
Lab File ID:	H6J22041	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22037	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	120000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	26000	1000	200	500
Manganese	170	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1300000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP07-102023	Date Analyzed:	10/31/23 15:55
Lab Samp ID:	J114-09T	Dilution Factor:	50
Lab File ID:	H6J22059	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	120000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	26000	5000	1000	2500
Manganese	160	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	110	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:00
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	QC10102023EB	Date Analyzed:	10/31/23 15:00
Lab Samp ID:	J114-10	Dilution Factor:	1
Lab File ID:	H6J22042	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22037	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	0.12J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	55J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW43102023
Lab Samp ID: J114-11G
Lab File ID: H6J22043
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22037

Date Collected: 10/10/23 14:05
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 15:03
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6300	500	100	250
Manganese	61	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	530J	1000	250	500
Selenium	5.8	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW43102023
Lab Samp ID: J114-11T
Lab File ID: H6J22060
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22049

Date Analyzed: 10/31/23 15:58
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW43102023	Date Analyzed:	10/31/23 15:03
Lab Samp ID:	J114-11G	Dilution Factor:	5
Lab File ID:	H6J22043	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22037	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6300	500	100	250
Manganese	61	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	530J	1000	250	500
Selenium	5.8	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	560000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW43102023	Date Analyzed:	10/31/23 15:58
Lab Samp ID:	J114-11T	Dilution Factor:	50
Lab File ID:	H6J22060	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	22J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	35000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6800	5000	1000	2500
Manganese	64	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	580000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	MBLK1W	Date Analyzed:	10/31/23 15:32
Lab Samp ID:	IMJ035WB	Dilution Factor:	1
Lab File ID:	H6J22051	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ036WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ036WL/IMJ036WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J114-01M/J114-01S - Percent recoveries for Manganese(12X) and Sodium(129X) were not within MS/MSD QC limits. Percent recoveries for Calcium(27X) and Magnesium(8X) was not within MS QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.
J114-07,08,09,11 were reported from re-analysis to verify Chromium results.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J114
Project : USACE WINGATE Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ036WB	1	NA	10/31/2314:02	10/26/2309:53	H6J22022	H6J22017	IMJ036W	Method Blank
LCS1W	IMJ036WL	1	NA	10/31/2314:05	10/26/2309:53	H6J22023	H6J22017	IMJ036W	Lab Control Sample (LCS)
LCD1W	IMJ036WC	1	NA	10/31/2314:07	10/26/2309:53	H6J22024	H6J22017	IMJ036W	LCS Duplicate
TMW28102023	J114-01A	5	NA	10/31/2316:07	10/26/2309:53	H6J22063	H6J22061	IMJ036W	Analytical Spike Sample
TMW28102023	J114-01G	5	NA	10/31/2316:10	10/26/2309:53	H6J22064	H6J22061	IMJ036W	Diluted Sample
TMW28102023	J114-01J	25	NA	10/31/2316:13	10/26/2309:53	H6J22065	H6J22061	IMJ036W	Diluted Sample
TMW28102023MS	J114-01M	5	NA	10/31/2316:16	10/26/2309:53	H6J22066	H6J22061	IMJ036W	Matrix Spike Sample (MS)
TMW28102023MSD	J114-01S	5	NA	10/31/2316:19	10/26/2309:53	H6J22067	H6J22061	IMJ036W	MS Duplicate (MSD)
BGMW13D102023	J114-02G	5	NA	10/31/2316:22	10/26/2309:53	H6J22068	H6J22061	IMJ036W	Diluted Sample
FDUP08-102023	J114-03G	5	NA	10/31/2316:24	10/26/2309:53	H6J22069	H6J22061	IMJ036W	Diluted Sample
TMW31D102023	J114-04G	5	NA	10/31/2316:27	10/26/2309:53	H6J22070	H6J22061	IMJ036W	Diluted Sample
TMW03102023	J114-05G	5	NA	10/31/2316:30	10/26/2309:53	H6J22071	H6J22061	IMJ036W	Diluted Sample
FDUP06-102023	J114-06G	5	NA	10/31/2316:33	10/26/2309:53	H6J22072	H6J22061	IMJ036W	Diluted Sample
QC10102023EB	J114-10	1	NA	10/31/2316:51	10/26/2309:53	H6J22078	H6J22073	IMJ036W	Field Sample
TMW28102023	J114-01A	50	NA	10/31/2316:56	10/26/2309:53	H6J22080	H6J22073	IMJ036W	Analytical Spike Sample
TMW28102023	J114-01T	50	NA	10/31/2316:59	10/26/2309:53	H6J22081	H6J22073	IMJ036W	Diluted Sample
TMW28102023	J114-01J	250	NA	10/31/2317:02	10/26/2309:53	H6J22082	H6J22073	IMJ036W	Diluted Sample
TMW28102023MS	J114-01M	50	NA	10/31/2317:05	10/26/2309:53	H6J22083	H6J22073	IMJ036W	Matrix Spike Sample (MS)
TMW28102023MSD	J114-01S	50	NA	10/31/2317:08	10/26/2309:53	H6J22084	H6J22073	IMJ036W	MS Duplicate (MSD)
BGMW13D102023	J114-02T	50	NA	10/31/2317:17	10/26/2309:53	H6J22087	H6J22085	IMJ036W	Diluted Sample
FDUP08-102023	J114-03T	50	NA	10/31/2317:34	10/26/2309:53	H6J22088	H6J22085	IMJ036W	Diluted Sample
TMW31D102023	J114-04T	50	NA	10/31/2317:37	10/26/2309:53	H6J22089	H6J22085	IMJ036W	Diluted Sample
TMW03102023	J114-05T	50	NA	10/31/2317:40	10/26/2309:53	H6J22090	H6J22085	IMJ036W	Diluted Sample
FDUP06-102023	J114-06T	50	NA	10/31/2317:43	10/26/2309:53	H6J22091	H6J22085	IMJ036W	Diluted Sample
BGMW13S102023	J114-07T	50	NA	10/31/2317:46	10/26/2309:53	H6J22092	H6J22085	IMJ036W	Diluted Sample
TMW34102023	J114-08T	50	NA	10/31/2317:49	10/26/2309:53	H6J22093	H6J22085	IMJ036W	Diluted Sample
FDUP07-102023	J114-09T	50	NA	10/31/2317:52	10/26/2309:53	H6J22094	H6J22085	IMJ036W	Diluted Sample
TMW43102023	J114-11T	50	NA	10/31/2317:55	10/26/2309:53	H6J22095	H6J22085	IMJ036W	Diluted Sample
BGMW13S102023	J114-07G	5	NA	11/09/2317:39	10/26/2309:53	H6K07023	H6K07017	IMJ036W	Diluted Sample
TMW34102023	J114-08I	10	NA	11/09/2317:42	10/26/2309:53	H6K07024	H6K07017	IMJ036W	Diluted Sample
FDUP07-102023	J114-09I	10	NA	11/09/2317:45	10/26/2309:53	H6K07025	H6K07017	IMJ036W	Diluted Sample
TMW43102023	J114-11G	5	NA	11/09/2317:48	10/26/2309:53	H6K07026	H6K07017	IMJ036W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW28102023
Lab Samp ID: J114-01G
Lab File ID: H6J22064
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22061

Date Collected: 10/10/23 09:15
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 16:10
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	54	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	80000	1000	250	500
Chromium	6.9	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	360J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	25000	500	100	250
Manganese	350	5.0	1.2	2.5
Nickel	1.9J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW28102023
Lab Samp ID: J114-01T
Lab File ID: H6J22081
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22073

Date Analyzed: 10/31/23 16:59
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	390000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 09:15
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J114	Date Extracted: 10/26/23 09:53
Sample ID: TMW28102023	Date Analyzed: 10/31/23 16:10
Lab Samp ID: J114-01G	Dilution Factor: 5
Lab File ID: H6J22064	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6J22061	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	54	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	80000	1000	250	500
Chromium	6.9	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	360J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	25000	500	100	250
Manganese	350	5.0	1.2	2.5
Nickel	1.9J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	380000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 09:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW28102023	Date Analyzed:	10/31/23 16:59
Lab Samp ID:	J114-01T	Dilution Factor:	50
Lab File ID:	H6J22081	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22073	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	49J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	77000	10000	2500	5000
Chromium	79	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	25000	5000	1000	2500
Manganese	330	50	12	25
Nickel	17J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	390000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: BGMW13D102023
Lab Samp ID: J114-02G
Lab File ID: H6J22068
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22061

Date Collected: 10/10/23 10:15
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 16:22
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	250	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	7.4	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	180J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4100	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW13D102023
Lab Samp ID: J114-02T
Lab File ID: H6J22087
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22085

Date Analyzed: 10/31/23 17:17
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	BGMW13D102023	Date Analyzed:	10/31/23 16:22
Lab Samp ID:	J114-02G	Dilution Factor:	5
Lab File ID:	H6J22068	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	250	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	7.4	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	180J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4100	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	290000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 10:15
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J114	Date Extracted: 10/26/23 09:53
Sample ID: BGMW13D102023	Date Analyzed: 10/31/23 17:17
Lab Samp ID: J114-02T	Dilution Factor: 50
Lab File ID: H6J22087	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6J22085	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	250	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	15000	10000	2500	5000
Chromium	81	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5800	5000	1000	2500
Manganese	130	50	12	25
Nickel	18J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client :	ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project :	USACE WINGATE	Date Received:	10/11/23
SDG NO. :	23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP08-102023	Date Analyzed:	10/31/23 16:24
Lab Samp ID:	J114-03G	Dilution Factor:	5
Lab File ID:	H6J22069	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	250	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	7.0	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	170J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4200	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	2.2J	5.0	1.2	2.5
Potassium	600J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	FDUP08-102023	Date Analyzed:	10/31/23 17:34
Lab Samp ID:	J114-03T	Dilution Factor:	50
Lab File ID:	H6J22088	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	270000	10000	2500	5000

Sample Amount :	50ml	Final Volume:	50ml
Prepared by :	THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 10:25
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J114	Date Extracted: 10/26/23 09:53
Sample ID: FDUP08-102023	Date Analyzed: 10/31/23 16:24
Lab Samp ID: J114-03G	Dilution Factor: 5
Lab File ID: H6J22069	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6J22061	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	250	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	15000	1000	250	500
Chromium	7.0	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	170J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4200	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	2.2J	5.0	1.2	2.5
Potassium	600J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	280000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:25
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP08-102023	Date Analyzed:	10/31/23 17:34
Lab Samp ID:	J114-03T	Dilution Factor:	50
Lab File ID:	H6J22088	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	230	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	14000	10000	2500	5000
Chromium	80	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5700	5000	1000	2500
Manganese	130	50	12	25
Nickel	18J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	270000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW31D102023
Lab Samp ID: J114-04G
Lab File ID: H6J22070
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22061

Date Collected: 10/10/23 10:45
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 16:27
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.0J	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	35000	1000	250	500
Chromium	7.3	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4800	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	2.7J	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW31D102023
Lab Samp ID: J114-04T
Lab File ID: H6J22089
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22085

Date Analyzed: 10/31/23 17:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW31D102023	Date Analyzed:	10/31/23 16:27
Lab Samp ID:	J114-04G	Dilution Factor:	5
Lab File ID:	H6J22070	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22061	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.0J	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	35000	1000	250	500
Chromium	7.3	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4800	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	2.7J	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID	: TMW31D102023	Date Analyzed:	10/31/23 17:37
Lab Samp ID	: J114-04T	Dilution Factor:	50
Lab File ID	: H6J22089	Matrix:	WATER
Ext Btch ID	: IMJ036W	% Moisture:	NA
Calib. Ref.	: H6J22085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	35000	10000	2500	5000
Chromium	81	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	6400	5000	1000	2500
Manganese	150	50	12	25
Nickel	16J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW03102023
Lab Samp ID: J114-05G
Lab File ID: H6J22071
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22061

Date Collected: 10/10/23 11:10
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 16:30
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.70J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	55000	1000	250	500
Chromium	6.4	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	4.2J	5.0	1.2	2.5
Nickel	1.6J	5.0	1.2	2.5
Potassium	280J	1000	250	500
Selenium	62	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW03102023
Lab Samp ID: J114-05T
Lab File ID: H6J22090
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22085

Date Analyzed: 10/31/23 17:40
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	980000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 11:10
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J114	Date Extracted: 10/26/23 09:53
Sample ID: TMW03102023	Date Analyzed: 10/31/23 16:30
Lab Samp ID: J114-05G	Dilution Factor: 5
Lab File ID: H6J22071	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6J22061	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.70J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	55000	1000	250	500
Chromium	6.4	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	4.2J	5.0	1.2	2.5
Nickel	1.6J	5.0	1.2	2.5
Potassium	280J	1000	250	500
Selenium	62	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	980000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW03102023	Date Analyzed:	10/31/23 17:40
Lab Samp ID:	J114-05T	Dilution Factor:	50
Lab File ID:	H6J22090	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	14J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	52000	10000	2500	5000
Chromium	78	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	13000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	17J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	66	50	7.5	15
Silver	ND	50	5.0	10
Sodium	980000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: FDUP06-102023
Lab Samp ID: J114-06G
Lab File ID: H6J22072
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22061

Date Collected: 10/10/23 11:15
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 16:33
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.68J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	53000	1000	250	500
Chromium	6.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	4.2J	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	280J	1000	250	500
Selenium	64	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.1J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP06-102023
Lab Samp ID: J114-06T
Lab File ID: H6J22091
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22085

Date Analyzed: 10/31/23 17:43
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	960000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 11:15
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J114	Date Extracted: 10/26/23 09:53
Sample ID: FDUP06-102023	Date Analyzed: 10/31/23 16:33
Lab Samp ID: J114-06G	Dilution Factor: 5
Lab File ID: H6J22072	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6J22061	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.68J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	53000	1000	250	500
Chromium	6.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	4.2J	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	280J	1000	250	500
Selenium	64	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	960000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.1J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP06-102023	Date Analyzed:	10/31/23 17:43
Lab Samp ID:	J114-06T	Dilution Factor:	50
Lab File ID:	H6J22091	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	53000	10000	2500	5000
Chromium	81	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	14000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	15J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	59	50	7.5	15
Silver	ND	50	5.0	10
Sodium	960000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: BGMW13S102023
Lab Samp ID: J114-07G
Lab File ID: H6K07023
Ext Btch ID: IMJ036W
Calib. Ref.: H6K07017

Date Collected: 10/10/23 11:50
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 11/09/23 17:39
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	220	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	27000	1000	250	500
Chromium	0.65J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	8.2J	10	2.5	5.0
Iron	580J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8600	500	100	250
Manganese	380	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	940J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW13S102023
Lab Samp ID: J114-07T
Lab File ID: H6J22092
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22085

Date Analyzed: 10/31/23 17:46
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	290000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 11:50
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	BGMW13S102023	Date Analyzed:	11/09/23 17:39
Lab Samp ID:	J114-07G	Dilution Factor:	5
Lab File ID:	H6K07023	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6K07017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	220	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	27000	1000	250	500
Chromium	0.65J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	8.2J	10	2.5	5.0
Iron	580J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8600	500	100	250
Manganese	380	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	940J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	290000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 11:50
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J114	Date Extracted: 10/26/23 09:53
Sample ID: BGMW13S102023	Date Analyzed: 10/31/23 17:46
Lab Samp ID: J114-07T	Dilution Factor: 50
Lab File ID: H6J22092	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6J22085	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	230	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	27000	10000	2500	5000
Chromium	83	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	9700	5000	1000	2500
Manganese	380	50	12	25
Nickel	16J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	290000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	2800	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW34102023
Lab Samp ID: J114-08I
Lab File ID: H6K07024
Ext Btch ID: IMJ036W
Calib. Ref.: H6K07017

Date Collected: 10/10/23 12:50
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 11/09/23 17:42
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	130000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	14J	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	27000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	700J	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW34102023
Lab Samp ID: J114-08T
Lab File ID: H6J22093
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22085

Date Analyzed: 10/31/23 17:49
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 12:50
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J114	Date Extracted: 10/26/23 09:53
Sample ID: TMW34102023	Date Analyzed: 11/09/23 17:42
Lab Samp ID: J114-08I	Dilution Factor: 10
Lab File ID: H6K07024	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6K07017	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	130000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	14J	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	27000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	700J	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1300000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/10/23 12:50
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J114	Date Extracted: 10/26/23 09:53
Sample ID: TMW34102023	Date Analyzed: 10/31/23 17:49
Lab Samp ID: J114-08T	Dilution Factor: 50
Lab File ID: H6J22093	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6J22085	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	120000	10000	2500	5000
Chromium	83	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	28000	5000	1000	2500
Manganese	140	50	12	25
Nickel	18J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	110	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: FDUP07-102023
Lab Samp ID: J114-09I
Lab File ID: H6K07025
Ext Btch ID: IMJ036W
Calib. Ref.: H6K07017

Date Collected: 10/10/23 13:00
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 11/09/23 17:45
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	120000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	12J	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	27000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	730J	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: FDUP07-102023
Lab Samp ID: J114-09T
Lab File ID: H6J22094
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22085

Date Analyzed: 10/31/23 17:52
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP07-102023	Date Analyzed:	11/09/23 17:45
Lab Samp ID:	J114-09I	Dilution Factor:	10
Lab File ID:	H6K07025	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6K07017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	13	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	120000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	12J	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	27000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	730J	2000	500	1000
Selenium	120	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1300000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 13:00
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP07-102023	Date Analyzed:	10/31/23 17:52
Lab Samp ID:	J114-09T	Dilution Factor:	50
Lab File ID:	H6J22094	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	120000	10000	2500	5000
Chromium	85	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	27000	5000	1000	2500
Manganese	140	50	12	25
Nickel	23J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	110	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1300000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:00
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	QC10102023EB	Date Analyzed:	10/31/23 16:51
Lab Samp ID:	J114-10	Dilution Factor:	1
Lab File ID:	H6J22078	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22073	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	55J	200	50	100
Chromium	0.56J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	180J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J114
Sample ID: TMW43102023
Lab Samp ID: J114-11G
Lab File ID: H6K07026
Ext Btch ID: IMJ036W
Calib. Ref.: H6K07017

Date Collected: 10/10/23 14:05
Date Received: 10/11/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 11/09/23 17:48
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	8.0J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6400	500	100	250
Manganese	52	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	680J	1000	250	500
Selenium	6.4	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW43102023
Lab Samp ID: J114-11T
Lab File ID: H6J22095
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22085

Date Analyzed: 10/31/23 17:55
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	560000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW43102023	Date Analyzed:	11/09/23 17:48
Lab Samp ID:	J114-11G	Dilution Factor:	5
Lab File ID:	H6K07026	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6K07017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	8.0J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6400	500	100	250
Manganese	52	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	680J	1000	250	500
Selenium	6.4	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	580000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/10/23 14:05
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	TMW43102023	Date Analyzed:	10/31/23 17:55
Lab Samp ID:	J114-11T	Dilution Factor:	50
Lab File ID:	H6J22095	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	19J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	35000	10000	2500	5000
Chromium	78	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8100	5000	1000	2500
Manganese	49J	50	12	25
Nickel	17J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	560000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J114	Date Extracted:	10/26/23 09:53
Sample ID:	MBLK1W	Date Analyzed:	10/31/23 14:02
Lab Samp ID:	IMJ036WB	Dilution Factor:	1
Lab File ID:	H6J22022	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ030WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ030WL/HGJ030WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J114-01M/J114-01S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ030WB	1	NA	10/31/2315:14	10/31/2311:09	M47J016012	M47J016	23HGJ030W	Method Blank
LCS1W	HGJ030WL	1	NA	10/31/2315:15	10/31/2311:09	M47J016013	M47J016	23HGJ030W	Lab Control Sample (LCS)
LCD1W	HGJ030WC	1	NA	10/31/2315:17	10/31/2311:09	M47J016014	M47J016	23HGJ030W	LCS Duplicate
TMW28102023MS	J114-01M	1	NA	10/31/2315:40	10/31/2311:09	M47J016026	M47J016	23HGJ030W	Matrix Spike Sample (MS)
TMW28102023MSD	J114-01S	1	NA	10/31/2315:42	10/31/2311:09	M47J016027	M47J016	23HGJ030W	MS Duplicate (MSD)
TMW28102023	J114-01	1	NA	10/31/2315:46	10/31/2311:09	M47J016029	M47J016	23HGJ030W	Field Sample
BGMW13D102023	J114-02	1	NA	10/31/2315:51	10/31/2311:09	M47J016031	M47J016	23HGJ030W	Field Sample
FDUP08-102023	J114-03	1	NA	10/31/2315:53	10/31/2311:09	M47J016032	M47J016	23HGJ030W	Field Sample
TMW31D102023	J114-04	1	NA	10/31/2315:55	10/31/2311:09	M47J016033	M47J016	23HGJ030W	Field Sample
TMW03102023	J114-05	1	NA	10/31/2316:00	10/31/2311:09	M47J016036	M47J016	23HGJ030W	Field Sample
FDUP06-102023	J114-06	1	NA	10/31/2316:02	10/31/2311:09	M47J016037	M47J016	23HGJ030W	Field Sample
BGMW13S102023	J114-07	1	NA	10/31/2316:04	10/31/2311:09	M47J016038	M47J016	23HGJ030W	Field Sample
TMW34102023	J114-08	1	NA	10/31/2316:06	10/31/2311:09	M47J016039	M47J016	23HGJ030W	Field Sample
FDUP07-102023	J114-09	1	NA	10/31/2316:08	10/31/2311:09	M47J016040	M47J016	23HGJ030W	Field Sample
QC10102023EB	J114-10	1	NA	10/31/2316:09	10/31/2311:09	M47J016041	M47J016	23HGJ030W	Field Sample
TMW43102023	J114-11	1	NA	10/31/2316:11	10/31/2311:09	M47J016042	M47J016	23HGJ030W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ030WB	ND	1	NA	0.50	0.10	0.20	10/31/2315:14	10/31/2311:09	M47J016012	M47J016	23HGJ030W	NA	NA
LCS1W	HGJ030WL	2.6	1	NA	0.50	0.10	0.20	10/31/2315:15	10/31/2311:09	M47J016013	M47J016	23HGJ030W	NA	NA
LCD1W	HGJ030WC	2.5	1	NA	0.50	0.10	0.20	10/31/2315:17	10/31/2311:09	M47J016014	M47J016	23HGJ030W	NA	NA
TMW28102023MS	J114-01M	2.6	1	NA	0.50	0.10	0.20	10/31/2315:40	10/31/2311:09	M47J016026	M47J016	23HGJ030W	10/10/2309:15	10/11/23
TMW28102023MSD	J114-01S	2.6	1	NA	0.50	0.10	0.20	10/31/2315:42	10/31/2311:09	M47J016027	M47J016	23HGJ030W	10/10/2309:15	10/11/23
TMW28102023	J114-01	ND	1	NA	0.50	0.10	0.20	10/31/2315:46	10/31/2311:09	M47J016029	M47J016	23HGJ030W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02	ND	1	NA	0.50	0.10	0.20	10/31/2315:51	10/31/2311:09	M47J016031	M47J016	23HGJ030W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03	ND	1	NA	0.50	0.10	0.20	10/31/2315:53	10/31/2311:09	M47J016032	M47J016	23HGJ030W	10/10/2310:25	10/11/23
TMW31D102023	J114-04	ND	1	NA	0.50	0.10	0.20	10/31/2315:55	10/31/2311:09	M47J016033	M47J016	23HGJ030W	10/10/2310:45	10/11/23
TMW03102023	J114-05	ND	1	NA	0.50	0.10	0.20	10/31/2316:00	10/31/2311:09	M47J016036	M47J016	23HGJ030W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06	ND	1	NA	0.50	0.10	0.20	10/31/2316:02	10/31/2311:09	M47J016037	M47J016	23HGJ030W	10/10/2311:15	10/11/23
BGMW13S102023	J114-07	ND	1	NA	0.50	0.10	0.20	10/31/2316:04	10/31/2311:09	M47J016038	M47J016	23HGJ030W	10/10/2311:50	10/11/23
TMW34102023	J114-08	ND	1	NA	0.50	0.10	0.20	10/31/2316:06	10/31/2311:09	M47J016039	M47J016	23HGJ030W	10/10/2312:50	10/11/23
FDUP07-102023	J114-09	ND	1	NA	0.50	0.10	0.20	10/31/2316:08	10/31/2311:09	M47J016040	M47J016	23HGJ030W	10/10/2313:00	10/11/23
QC10102023EB	J114-10	ND	1	NA	0.50	0.10	0.20	10/31/2316:09	10/31/2311:09	M47J016041	M47J016	23HGJ030W	10/10/2314:00	10/11/23
TMW43102023	J114-11	ND	1	NA	0.50	0.10	0.20	10/31/2316:11	10/31/2311:09	M47J016042	M47J016	23HGJ030W	10/10/2314:05	10/11/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGJ031WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGJ031WL/HGJ031WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J114-01M/J114-01S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J114
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGJ031WB	1	NA	10/31/2316:13	10/31/2311:54	M47J016043	M47J016	23HGJ031W	Method Blank
LCS1W	HGJ031WL	1	NA	10/31/2316:15	10/31/2311:54	M47J016044	M47J016	23HGJ031W	Lab Control Sample (LCS)
LCD1W	HGJ031WC	1	NA	10/31/2316:16	10/31/2311:54	M47J016045	M47J016	23HGJ031W	LCS Duplicate
TMW28102023MS	J114-01M	1	NA	10/31/2316:38	10/31/2311:54	M47J016057	M47J016	23HGJ031W	Matrix Spike Sample (MS)
TMW28102023MSD	J114-01S	1	NA	10/31/2316:44	10/31/2311:54	M47J016060	M47J016	23HGJ031W	MS Duplicate (MSD)
TMW28102023	J114-01	1	NA	10/31/2316:48	10/31/2311:54	M47J016062	M47J016	23HGJ031W	Field Sample
BGMW13D102023	J114-02	1	NA	10/31/2316:52	10/31/2311:54	M47J016064	M47J016	23HGJ031W	Field Sample
FDUP08-102023	J114-03	1	NA	10/31/2316:55	10/31/2311:54	M47J016065	M47J016	23HGJ031W	Field Sample
TMW31D102023	J114-04	1	NA	10/31/2316:57	10/31/2311:54	M47J016066	M47J016	23HGJ031W	Field Sample
TMW03102023	J114-05	1	NA	10/31/2316:58	10/31/2311:54	M47J016067	M47J016	23HGJ031W	Field Sample
FDUP06-102023	J114-06	1	NA	10/31/2317:00	10/31/2311:54	M47J016068	M47J016	23HGJ031W	Field Sample
BGMW13S102023	J114-07	1	NA	10/31/2317:02	10/31/2311:54	M47J016069	M47J016	23HGJ031W	Field Sample
TMW34102023	J114-08	1	NA	10/31/2317:07	10/31/2311:54	M47J016072	M47J016	23HGJ031W	Field Sample
FDUP07-102023	J114-09	1	NA	10/31/2317:09	10/31/2311:54	M47J016073	M47J016	23HGJ031W	Field Sample
QC10102023EB	J114-10	1	NA	10/31/2317:11	10/31/2311:54	M47J016074	M47J016	23HGJ031W	Field Sample
TMW43102023	J114-11	1	NA	10/31/2317:13	10/31/2311:54	M47J016075	M47J016	23HGJ031W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGJ031WB	ND	1	NA	0.50	0.10	0.20	10/31/2316:13	10/31/2311:54	M47J016043	M47J016	23HGJ031W	NA	NA
LCS1W	HGJ031WL	2.6	1	NA	0.50	0.10	0.20	10/31/2316:15	10/31/2311:54	M47J016044	M47J016	23HGJ031W	NA	NA
LCD1W	HGJ031WC	2.5	1	NA	0.50	0.10	0.20	10/31/2316:16	10/31/2311:54	M47J016045	M47J016	23HGJ031W	NA	NA
TMW28102023MS	J114-01M	2.5	1	NA	0.50	0.10	0.20	10/31/2316:38	10/31/2311:54	M47J016057	M47J016	23HGJ031W	10/10/2309:15	10/11/23
TMW28102023MSD	J114-01S	2.5	1	NA	0.50	0.10	0.20	10/31/2316:44	10/31/2311:54	M47J016060	M47J016	23HGJ031W	10/10/2309:15	10/11/23
TMW28102023	J114-01	ND	1	NA	0.50	0.10	0.20	10/31/2316:48	10/31/2311:54	M47J016062	M47J016	23HGJ031W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02	ND	1	NA	0.50	0.10	0.20	10/31/2316:52	10/31/2311:54	M47J016064	M47J016	23HGJ031W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03	ND	1	NA	0.50	0.10	0.20	10/31/2316:55	10/31/2311:54	M47J016065	M47J016	23HGJ031W	10/10/2310:25	10/11/23
TMW31D102023	J114-04	ND	1	NA	0.50	0.10	0.20	10/31/2316:57	10/31/2311:54	M47J016066	M47J016	23HGJ031W	10/10/2310:45	10/11/23
TMW03102023	J114-05	ND	1	NA	0.50	0.10	0.20	10/31/2316:58	10/31/2311:54	M47J016067	M47J016	23HGJ031W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06	ND	1	NA	0.50	0.10	0.20	10/31/2317:00	10/31/2311:54	M47J016068	M47J016	23HGJ031W	10/10/2311:15	10/11/23
BGMW13S102023	J114-07	ND	1	NA	0.50	0.10	0.20	10/31/2317:02	10/31/2311:54	M47J016069	M47J016	23HGJ031W	10/10/2311:50	10/11/23
TMW34102023	J114-08	ND	1	NA	0.50	0.10	0.20	10/31/2317:07	10/31/2311:54	M47J016072	M47J016	23HGJ031W	10/10/2312:50	10/11/23
FDUP07-102023	J114-09	ND	1	NA	0.50	0.10	0.20	10/31/2317:09	10/31/2311:54	M47J016073	M47J016	23HGJ031W	10/10/2313:00	10/11/23
QC10102023EB	J114-10	ND	1	NA	0.50	0.10	0.20	10/31/2317:11	10/31/2311:54	M47J016074	M47J016	23HGJ031W	10/10/2314:00	10/11/23
TMW43102023	J114-11	ND	1	NA	0.50	0.10	0.20	10/31/2317:13	10/31/2311:54	M47J016075	M47J016	23HGJ031W	10/10/2314:05	10/11/23

Note: Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23J114

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of ten(10) water samples were received on 10/11/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Perchlorate was not detected in PLJ014WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. PLJ014WL/PLJ014WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Perchlorate was within MS QC limits in J114-02M/J114-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J114-02I, -03I, -07I, -08I, -09I, and -11I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ014WB	ND	1	NA	0.20	0.050	0.10	10/23/2311:07	NA	23MJ23007	MJ23004	PLJ014W	NA	NA
LCS1W	PLJ014WL	0.22	1	NA	0.20	0.050	0.10	10/23/2311:22	NA	23MJ23008	MJ23004	PLJ014W	NA	NA
LCD1W	PLJ014WC	0.21	1	NA	0.20	0.050	0.10	10/23/2311:37	NA	23MJ23009	MJ23004	PLJ014W	NA	NA
BGMW13D102023	J114-02I	ND	5	NA	1.0	0.25	0.50	10/23/2315:47	NA	23MJ23023	MJ23017	PLJ014W	10/10/2310:15	10/11/23
BGMW13D102023MS	J114-02M	1.0	5	NA	1.0	0.25	0.50	10/23/2316:04	NA	23MJ23024	MJ23017	PLJ014W	10/10/2310:15	10/11/23
BGMW13D102023MSD	J114-02S	1.0	5	NA	1.0	0.25	0.50	10/23/2316:19	NA	23MJ23025	MJ23017	PLJ014W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03I	ND	5	NA	1.0	0.25	0.50	10/23/2316:34	NA	23MJ23026	MJ23017	PLJ014W	10/10/2310:25	10/11/23
TMW31D102023	J114-04I	80	20	NA	4.0	1.0	2.0	10/23/2316:48	NA	23MJ23027	MJ23017	PLJ014W	10/10/2310:45	10/11/23
TMW03102023	J114-05I	0.92	2	NA	0.40	0.10	0.20	10/23/2317:17	NA	23MJ23029	MJ23028	PLJ014W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06I	0.89	2	NA	0.40	0.10	0.20	10/23/2317:47	NA	23MJ23031	MJ23028	PLJ014W	10/10/2311:15	10/11/23
BGMW13S102023	J114-07I	ND	5	NA	1.0	0.25	0.50	10/23/2318:16	NA	23MJ23033	MJ23028	PLJ014W	10/10/2311:50	10/11/23
TMW34102023	J114-08I	ND	5	NA	1.0	0.25	0.50	10/23/2318:31	NA	23MJ23034	MJ23028	PLJ014W	10/10/2312:50	10/11/23
FDUP07-102023	J114-09I	ND	5	NA	1.0	0.25	0.50	10/23/2318:45	NA	23MJ23035	MJ23028	PLJ014W	10/10/2313:00	10/11/23
QC10102023EB	J114-10	ND	1	NA	0.20	0.050	0.10	10/23/2314:56	NA	23MJ23021	MJ23017	PLJ014W	10/10/2314:00	10/11/23
TMW43102023	J114-11I	ND	5	NA	1.0	0.25	0.50	10/23/2319:00	NA	23MJ23036	MJ23028	PLJ014W	10/10/2314:05	10/11/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD 9056A
BROMIDE

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ024WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ024WL/ICJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J114-02I was reported at a 2X dilution factor due to yellow color. Samples J114-04I, -05I, -06I, -08I, and -09I were reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD 9056A
CHLORIDE-CL

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Chloride-CL in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ024WB and ICJ054WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ024WL/ICJ024WC and ICJ054WL/ICJ054WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD 9056A
FLUORIDE

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Fluoride-F was not detected in ICJ024WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ024WL/ICJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J114-02I was reported at a 2X dilution factor due to yellow color. Samples J114-04I, -05I, -06I, -08I, and -09I were reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW9056A
NITRATE-N

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrate was not detected in ICJ024WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ024WL/ICJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J114-02I was reported at a 2X dilution factor due to yellow color. Sample J114-04I was reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD SW9056A
NITRITE-N

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrite was not detected in ICJ024WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ024WL/ICJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J114-02I was reported at a 2X dilution factor due to yellow color. Samples J114-04I, -05I, -06I, -08I, and -09I were reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD 9056A
ORTHOPHOSPHATE-P

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ024WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ024WL/ICJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J114-02I was reported at a 2X dilution factor due to yellow color. Samples J114-04I, -05I, -06I, -08I, and -09I were reported at a 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J114

METHOD 9056A
SULFATE

A total of eleven(11) water samples were received on 10/11/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ024WB and ICJ054WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ024WL/ICJ024WC and ICJ054WL/ICJ054WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ024WB	ND	1	NA	0.5	0.13	0.25	10/11/2315:49	NA	AJ14-03	AJ14-01	ICJ024W	NA	NA
LCS1W	ICJ024WL	0.98	1	NA	0.5	0.13	0.25	10/11/2316:10	NA	AJ14-04	AJ14-01	ICJ024W	NA	NA
LCD1W	ICJ024WC	0.98	1	NA	0.5	0.13	0.25	10/11/2316:30	NA	AJ14-05	AJ14-01	ICJ024W	NA	NA
TMW28102023	J114-01	0.65	1	NA	0.5	0.13	0.25	10/11/2316:50	NA	AJ14-06	AJ14-01	ICJ024W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02I	0.70J	2	NA	1	0.26	0.5	10/11/2317:11	NA	AJ14-07	AJ14-01	ICJ024W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03	0.45J	1	NA	0.5	0.13	0.25	10/11/2317:31	NA	AJ14-08	AJ14-01	ICJ024W	10/10/2310:25	10/11/23
TMW31D102023	J114-04I	1.1	2	NA	1	0.26	0.5	10/11/2317:51	NA	AJ14-09	AJ14-01	ICJ024W	10/10/2310:45	10/11/23
TMW03102023	J114-05I	1.2	2	NA	1	0.26	0.5	10/11/2318:11	NA	AJ14-10	AJ14-01	ICJ024W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06I	1.1	2	NA	1	0.26	0.5	10/11/2318:32	NA	AJ14-11	AJ14-01	ICJ024W	10/10/2311:15	10/11/23
TMW34102023	J114-08I	1.3	2	NA	1	0.26	0.5	10/11/2318:52	NA	AJ14-12	AJ14-01	ICJ024W	10/10/2312:50	10/11/23
QC10102023EB	J114-10	ND	1	NA	0.5	0.13	0.25	10/11/2320:17	NA	AJ14-15	AJ14-13	ICJ024W	10/10/2314:00	10/11/23
BGMW13S102023	J114-07	1.1	1	NA	0.5	0.13	0.25	10/11/2320:38	NA	AJ14-16	AJ14-13	ICJ024W	10/10/2311:50	10/11/23
FDUP07-102023	J114-09I	1.2	2	NA	1	0.26	0.5	10/11/2320:58	NA	AJ14-17	AJ14-13	ICJ024W	10/10/2313:00	10/11/23
TMW43102023	J114-11	0.67	1	NA	0.5	0.13	0.25	10/11/2321:18	NA	AJ14-18	AJ14-13	ICJ024W	10/10/2314:05	10/11/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ024WB	ND	1	NA	0.2	0.05	0.1	10/11/2315:49	NA	AJ14-03	AJ14-01	ICJ024W	NA	NA
LCS1W	ICJ024WL	1.8	1	NA	0.2	0.05	0.1	10/11/2316:10	NA	AJ14-04	AJ14-01	ICJ024W	NA	NA
LCD1W	ICJ024WC	1.8	1	NA	0.2	0.05	0.1	10/11/2316:30	NA	AJ14-05	AJ14-01	ICJ024W	NA	NA
QC10102023EB	J114-10	0.17J	1	NA	0.2	0.05	0.1	10/11/2320:17	NA	AJ14-15	AJ14-13	ICJ024W	10/10/2314:00	10/11/23
TMW03102023	J114-05J	160	100	NA	20	5	10	10/11/2321:59	NA	AJ14-20	AJ14-13	ICJ024W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06J	170	100	NA	20	5	10	10/11/2322:19	NA	AJ14-21	AJ14-13	ICJ024W	10/10/2311:15	10/11/23
TMW34102023	J114-08J	190	100	NA	20	5	10	10/11/2322:39	NA	AJ14-22	AJ14-13	ICJ024W	10/10/2312:50	10/11/23
FDUP07-102023	J114-09J	200	100	NA	20	5	10	10/11/2323:00	NA	AJ14-23	AJ14-13	ICJ024W	10/10/2313:00	10/11/23
MBLK2W	ICJ054WB	ND	1	NA	0.2	0.05	0.1	10/25/2313:14	NA	AJ30-03	AJ30-01	ICJ054W	NA	NA
LCS2W	ICJ054WL	1.9	1	NA	0.2	0.05	0.1	10/25/2313:35	NA	AJ30-04	AJ30-01	ICJ054W	NA	NA
LCD2W	ICJ054WC	1.9	1	NA	0.2	0.05	0.1	10/25/2313:55	NA	AJ30-05	AJ30-01	ICJ054W	NA	NA
TMW28102023	J114-01I	98	50	NA	10	2.5	5	10/25/2317:58	NA	AJ30-17	AJ30-13	ICJ054W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02K	80	40	NA	8	2	4	10/25/2318:38	NA	AJ30-19	AJ30-13	ICJ054W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03J	76	40	NA	8	2	4	10/25/2319:43	NA	AJ30-21	AJ30-13	ICJ054W	10/10/2310:25	10/11/23
TMW31D102023	J114-04J	590	200	NA	40	10	20	10/25/2320:04	NA	AJ30-22	AJ30-13	ICJ054W	10/10/2310:45	10/11/23
BGMW13S102023	J114-07J	200	200	NA	40	10	20	10/25/2320:44	NA	AJ30-24	AJ30-13	ICJ054W	10/10/2311:50	10/11/23
TMW43102023	J114-11J	60	40	NA	8	2	4	10/25/2321:45	NA	AJ30-27	AJ30-25	ICJ054W	10/10/2314:05	10/11/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ024WB	ND	1	NA	0.1	0.025	0.05	10/11/2315:49	NA	AJ14-03	AJ14-01	ICJ024W	NA	NA
LCS1W	ICJ024WL	0.91	1	NA	0.1	0.025	0.05	10/11/2316:10	NA	AJ14-04	AJ14-01	ICJ024W	NA	NA
LCD1W	ICJ024WC	0.91	1	NA	0.1	0.025	0.05	10/11/2316:30	NA	AJ14-05	AJ14-01	ICJ024W	NA	NA
TMW28102023	J114-01	0.61	1	NA	0.1	0.025	0.05	10/11/2316:50	NA	AJ14-06	AJ14-01	ICJ024W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02I	1.0	2	NA	0.2	0.05	0.1	10/11/2317:11	NA	AJ14-07	AJ14-01	ICJ024W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03	1.0	1	NA	0.1	0.025	0.05	10/11/2317:31	NA	AJ14-08	AJ14-01	ICJ024W	10/10/2310:25	10/11/23
TMW31D102023	J114-04I	0.66	2	NA	0.2	0.05	0.1	10/11/2317:51	NA	AJ14-09	AJ14-01	ICJ024W	10/10/2310:45	10/11/23
TMW03102023	J114-05I	0.97	2	NA	0.2	0.05	0.1	10/11/2318:11	NA	AJ14-10	AJ14-01	ICJ024W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06I	0.96	2	NA	0.2	0.05	0.1	10/11/2318:32	NA	AJ14-11	AJ14-01	ICJ024W	10/10/2311:15	10/11/23
TMW34102023	J114-08I	0.41	2	NA	0.2	0.05	0.1	10/11/2318:52	NA	AJ14-12	AJ14-01	ICJ024W	10/10/2312:50	10/11/23
QC10102023EB	J114-10	ND	1	NA	0.1	0.025	0.05	10/11/2320:17	NA	AJ14-15	AJ14-13	ICJ024W	10/10/2314:00	10/11/23
BGMW13S102023	J114-07	2.1	1	NA	0.1	0.025	0.05	10/11/2320:38	NA	AJ14-16	AJ14-13	ICJ024W	10/10/2311:50	10/11/23
FDUP07-102023	J114-09I	0.38	2	NA	0.2	0.05	0.1	10/11/2320:58	NA	AJ14-17	AJ14-13	ICJ024W	10/10/2313:00	10/11/23
TMW43102023	J114-11	1.2	1	NA	0.1	0.025	0.05	10/11/2321:18	NA	AJ14-18	AJ14-13	ICJ024W	10/10/2314:05	10/11/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ024WB	ND	1	NA	0.1	0.03	0.06	10/11/2315:49	NA	AJ14-03	AJ14-01	ICJ024W	NA	NA
LCS1W	ICJ024WL	0.95	1	NA	0.1	0.03	0.06	10/11/2316:10	NA	AJ14-04	AJ14-01	ICJ024W	NA	NA
LCD1W	ICJ024WC	0.95	1	NA	0.1	0.03	0.06	10/11/2316:30	NA	AJ14-05	AJ14-01	ICJ024W	NA	NA
TMW28102023	J114-01	0.19	1	NA	0.1	0.03	0.06	10/11/2316:50	NA	AJ14-06	AJ14-01	ICJ024W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02I	ND	2	NA	0.2	0.06	0.12	10/11/2317:11	NA	AJ14-07	AJ14-01	ICJ024W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03	ND	1	NA	0.1	0.03	0.06	10/11/2317:31	NA	AJ14-08	AJ14-01	ICJ024W	10/10/2310:25	10/11/23
TMW31D102023	J114-04I	0.67	2	NA	0.2	0.06	0.12	10/11/2317:51	NA	AJ14-09	AJ14-01	ICJ024W	10/10/2310:45	10/11/23
QC10102023EB	J114-10	0.064J	1	NA	0.1	0.03	0.06	10/11/2320:17	NA	AJ14-15	AJ14-13	ICJ024W	10/10/2314:00	10/11/23
BGMW13S102023	J114-07	ND	1	NA	0.1	0.03	0.06	10/11/2320:38	NA	AJ14-16	AJ14-13	ICJ024W	10/10/2311:50	10/11/23
TMW03102023	J114-05J	130	100	NA	10	3	6	10/11/2321:59	NA	AJ14-20	AJ14-13	ICJ024W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06J	120	100	NA	10	3	6	10/11/2322:19	NA	AJ14-21	AJ14-13	ICJ024W	10/10/2311:15	10/11/23
TMW34102023	J114-08J	63	100	NA	10	3	6	10/11/2322:39	NA	AJ14-22	AJ14-13	ICJ024W	10/10/2312:50	10/11/23
FDUP07-102023	J114-09J	66	100	NA	10	3	6	10/11/2323:00	NA	AJ14-23	AJ14-13	ICJ024W	10/10/2313:00	10/11/23
TMW43102023	J114-11I	6.7	5	NA	0.5	0.15	0.3	10/11/2323:20	NA	AJ14-24	AJ14-13	ICJ024W	10/10/2314:05	10/11/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ024WB	ND	1	NA	0.1	0.03	0.06	10/11/2315:49	NA	AJ14-03	AJ14-01	ICJ024W	NA	NA
LCS1W	ICJ024WL	2.0	1	NA	0.1	0.03	0.06	10/11/2316:10	NA	AJ14-04	AJ14-01	ICJ024W	NA	NA
LCD1W	ICJ024WC	2.0	1	NA	0.1	0.03	0.06	10/11/2316:30	NA	AJ14-05	AJ14-01	ICJ024W	NA	NA
TMW28102023	J114-01	ND	1	NA	0.1	0.03	0.06	10/11/2316:50	NA	AJ14-06	AJ14-01	ICJ024W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02I	ND	2	NA	0.2	0.06	0.12	10/11/2317:11	NA	AJ14-07	AJ14-01	ICJ024W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03	ND	1	NA	0.1	0.03	0.06	10/11/2317:31	NA	AJ14-08	AJ14-01	ICJ024W	10/10/2310:25	10/11/23
TMW31D102023	J114-04I	ND	2	NA	0.2	0.06	0.12	10/11/2317:51	NA	AJ14-09	AJ14-01	ICJ024W	10/10/2310:45	10/11/23
TMW03102023	J114-05I	ND	2	NA	0.2	0.06	0.12	10/11/2318:11	NA	AJ14-10	AJ14-01	ICJ024W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06I	ND	2	NA	0.2	0.06	0.12	10/11/2318:32	NA	AJ14-11	AJ14-01	ICJ024W	10/10/2311:15	10/11/23
TMW34102023	J114-08I	ND	2	NA	0.2	0.06	0.12	10/11/2318:52	NA	AJ14-12	AJ14-01	ICJ024W	10/10/2312:50	10/11/23
QC10102023EB	J114-10	ND	1	NA	0.1	0.03	0.06	10/11/2320:17	NA	AJ14-15	AJ14-13	ICJ024W	10/10/2314:00	10/11/23
BGMW13S102023	J114-07	ND	1	NA	0.1	0.03	0.06	10/11/2320:38	NA	AJ14-16	AJ14-13	ICJ024W	10/10/2311:50	10/11/23
FDUP07-102023	J114-09I	ND	2	NA	0.2	0.06	0.12	10/11/2320:58	NA	AJ14-17	AJ14-13	ICJ024W	10/10/2313:00	10/11/23
TMW43102023	J114-11	ND	1	NA	0.1	0.03	0.06	10/11/2321:18	NA	AJ14-18	AJ14-13	ICJ024W	10/10/2314:05	10/11/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ024WB	ND	1	NA	0.5	0.12	0.25	10/11/2315:49	NA	AJ14-03	AJ14-01	ICJ024W	NA	NA
LCS1W	ICJ024WL	1.9	1	NA	0.5	0.12	0.25	10/11/2316:10	NA	AJ14-04	AJ14-01	ICJ024W	NA	NA
LCD1W	ICJ024WC	1.9	1	NA	0.5	0.12	0.25	10/11/2316:30	NA	AJ14-05	AJ14-01	ICJ024W	NA	NA
TMW28102023	J114-01	0.38J	1	NA	0.5	0.12	0.25	10/11/2316:50	NA	AJ14-06	AJ14-01	ICJ024W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02I	0.61J	2	NA	1	0.25	0.5	10/11/2317:11	NA	AJ14-07	AJ14-01	ICJ024W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03	0.46J	1	NA	0.5	0.12	0.25	10/11/2317:31	NA	AJ14-08	AJ14-01	ICJ024W	10/10/2310:25	10/11/23
TMW31D102023	J114-04I	ND	2	NA	1	0.25	0.5	10/11/2317:51	NA	AJ14-09	AJ14-01	ICJ024W	10/10/2310:45	10/11/23
TMW03102023	J114-05I	ND	2	NA	1	0.25	0.5	10/11/2318:11	NA	AJ14-10	AJ14-01	ICJ024W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06I	ND	2	NA	1	0.25	0.5	10/11/2318:32	NA	AJ14-11	AJ14-01	ICJ024W	10/10/2311:15	10/11/23
TMW34102023	J114-08I	ND	2	NA	1	0.25	0.5	10/11/2318:52	NA	AJ14-12	AJ14-01	ICJ024W	10/10/2312:50	10/11/23
QC10102023EB	J114-10	ND	1	NA	0.5	0.12	0.25	10/11/2320:17	NA	AJ14-15	AJ14-13	ICJ024W	10/10/2314:00	10/11/23
BGMW13S102023	J114-07	1.2	1	NA	0.5	0.12	0.25	10/11/2320:38	NA	AJ14-16	AJ14-13	ICJ024W	10/10/2311:50	10/11/23
FDUP07-102023	J114-09I	ND	2	NA	1	0.25	0.5	10/11/2320:58	NA	AJ14-17	AJ14-13	ICJ024W	10/10/2313:00	10/11/23
TMW43102023	J114-11	ND	1	NA	0.5	0.12	0.25	10/11/2321:18	NA	AJ14-18	AJ14-13	ICJ024W	10/10/2314:05	10/11/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J114

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ024WB	ND	1	NA	0.5	0.13	0.25	10/11/2315:49	NA	AJ14-03	AJ14-01	ICJ024W	NA	NA
LCS1W	ICJ024WL	4.5	1	NA	0.5	0.13	0.25	10/11/2316:10	NA	AJ14-04	AJ14-01	ICJ024W	NA	NA
LCD1W	ICJ024WC	4.5	1	NA	0.5	0.13	0.25	10/11/2316:30	NA	AJ14-05	AJ14-01	ICJ024W	NA	NA
QC10102023EB	J114-10	2.0	1	NA	0.5	0.13	0.25	10/11/2320:17	NA	AJ14-15	AJ14-13	ICJ024W	10/10/2314:00	10/11/23
TMW03102023	J114-05J	970	100	NA	50	13	25	10/11/2321:59	NA	AJ14-20	AJ14-13	ICJ024W	10/10/2311:10	10/11/23
FDUP06-102023	J114-06J	960	100	NA	50	13	25	10/11/2322:19	NA	AJ14-21	AJ14-13	ICJ024W	10/10/2311:15	10/11/23
TMW34102023	J114-08J	1500	100	NA	50	13	25	10/11/2322:39	NA	AJ14-22	AJ14-13	ICJ024W	10/10/2312:50	10/11/23
FDUP07-102023	J114-09J	1500	100	NA	50	13	25	10/11/2323:00	NA	AJ14-23	AJ14-13	ICJ024W	10/10/2313:00	10/11/23
MBLK2W	ICJ054WB	ND	1	NA	0.5	0.13	0.25	10/25/2313:14	NA	AJ30-03	AJ30-01	ICJ054W	NA	NA
LCS2W	ICJ054WL	4.7	1	NA	0.5	0.13	0.25	10/25/2313:35	NA	AJ30-04	AJ30-01	ICJ054W	NA	NA
LCD2W	ICJ054WC	4.7	1	NA	0.5	0.13	0.25	10/25/2313:55	NA	AJ30-05	AJ30-01	ICJ054W	NA	NA
TMW28102023	J114-01I	530	50	NA	25	6.5	12	10/25/2317:58	NA	AJ30-17	AJ30-13	ICJ054W	10/10/2309:15	10/11/23
BGMW13D102023	J114-02J	64	5	NA	2.5	0.65	1.2	10/25/2318:18	NA	AJ30-18	AJ30-13	ICJ054W	10/10/2310:15	10/11/23
FDUP08-102023	J114-03I	66	5	NA	2.5	0.65	1.2	10/25/2319:23	NA	AJ30-20	AJ30-13	ICJ054W	10/10/2310:25	10/11/23
TMW31D102023	J114-04J	1100	200	NA	100	26	50	10/25/2320:04	NA	AJ30-22	AJ30-13	ICJ054W	10/10/2310:45	10/11/23
BGMW13S102023	J114-07I	60	10	NA	5	1.3	2.5	10/25/2320:24	NA	AJ30-23	AJ30-13	ICJ054W	10/10/2311:50	10/11/23
TMW43102023	J114-11J	390	40	NA	20	5.2	10	10/25/2321:45	NA	AJ30-27	AJ30-25	ICJ054W	10/10/2314:05	10/11/23

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 11-27-2023
EMAX Batch No.: 23J115

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/11/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW30102023	J115-01	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
MW26102023	J115-02	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
MW34102023	J115-03	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW17102023	J115-04	10/09/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
TMW53102023	J115-05	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
MW33102023	J115-06	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
MW31102023	J115-07	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
TMW57102023	J115-08	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
MW27102023	J115-09	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
TMW61102023	J115-10	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
MW39102023	J115-11	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
MW38102023	J115-12	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW24102023	J115-13	10/09/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
FW31102023	J115-14	10/09/23	WATER	VOCS BY 8260C
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
TMW59102023	J115-15	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
TMW39D102023	J115-16	10/09/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
TMW49102023	J115-17	10/09/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
MW35102023	J115-18	10/09/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6B50
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
QC09102023TB	J115-19	10/09/23	WATER	VOCS BY 8260C TPH GASOLINE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of nineteen(19) water samples were received on 10/11/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data file IDs: RJG258, and RJG283) associated with this SDG. All calibration requirements were satisfied. All calibration requirements were satisfied. Note that" Minimum Response Factor" for all analytes were within method recommended response factors with the exception of 2-Butanone. However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VOE2J12B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VOE2J12L/VOE2J12C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : E2

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOE2J12L	1	NA	10/19/2311:46	10/19/2311:46	RJG259	RJG046	VOE2J12	Lab Control Sample (LCS)
LCD1W	VOE2J12C	1	NA	10/19/2312:11	10/19/2312:11	RJG260	RJG046	VOE2J12	LCS Duplicate
MBLK1W	VOE2J12B	1	NA	10/19/2313:00	10/19/2313:00	RJG262	RJG046	VOE2J12	Method Blank
MW30102023	23J115-01	1	NA	10/19/2313:24	10/19/2313:24	RJG263	RJG046	VOE2J12	Field Sample
MW26102023	23J115-02	1	NA	10/19/2313:48	10/19/2313:48	RJG264	RJG046	VOE2J12	Field Sample
MW34102023	23J115-03	1	NA	10/19/2314:12	10/19/2314:12	RJG265	RJG046	VOE2J12	Field Sample
TMW17102023	23J115-04	1	NA	10/19/2314:37	10/19/2314:37	RJG266	RJG046	VOE2J12	Field Sample
TMW53102023	23J115-05	1	NA	10/19/2315:01	10/19/2315:01	RJG267	RJG046	VOE2J12	Field Sample
MW33102023	23J115-06	1	NA	10/19/2315:26	10/19/2315:26	RJG268	RJG046	VOE2J12	Field Sample
MW31102023	23J115-07	1	NA	10/19/2315:50	10/19/2315:50	RJG269	RJG046	VOE2J12	Field Sample
TMW57102023	23J115-08	1	NA	10/19/2316:15	10/19/2316:15	RJG270	RJG046	VOE2J12	Field Sample
MW27102023	23J115-09	1	NA	10/19/2316:39	10/19/2316:39	RJG271	RJG046	VOE2J12	Field Sample
TMW61102023	23J115-10	1	NA	10/19/2317:03	10/19/2317:03	RJG272	RJG046	VOE2J12	Field Sample
MW39102023	23J115-11	1	NA	10/19/2317:27	10/19/2317:27	RJG273	RJG046	VOE2J12	Field Sample
MW38102023	23J115-12	1	NA	10/19/2317:52	10/19/2317:52	RJG274	RJG046	VOE2J12	Field Sample
TMW24102023	23J115-13	1	NA	10/19/2318:16	10/19/2318:16	RJG275	RJG046	VOE2J12	Field Sample
FW31102023	23J115-14	1	NA	10/19/2318:40	10/19/2318:40	RJG276	RJG046	VOE2J12	Field Sample
TMW59102023	23J115-15	1	NA	10/19/2319:05	10/19/2319:05	RJG277	RJG046	VOE2J12	Field Sample
TMW39D102023	23J115-16	1	NA	10/19/2319:29	10/19/2319:29	RJG278	RJG046	VOE2J12	Field Sample
TMW49102023	23J115-17	1	NA	10/19/2319:53	10/19/2319:53	RJG279	RJG046	VOE2J12	Field Sample
MW35102023	23J115-18	1	NA	10/19/2320:18	10/19/2320:18	RJG280	RJG046	VOE2J12	Field Sample
QC09102023TB	23J115-19	1	NA	10/19/2320:42	10/19/2320:42	RJG281	RJG046	VOE2J12	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 13:24
Sample ID	: MW30102023	Date Analyzed:	10/19/23 13:24
Lab Samp ID:	23J115-01	Dilution Factor:	1
Lab File ID:	RJG263	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.3	10.0	103	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	9.80	10.0	98	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 13:48
Sample ID	: MW26102023	Date Analyzed:	10/19/23 13:48
Lab Samp ID:	23J115-02	Dilution Factor:	1
Lab File ID:	RJG264	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.4	10.0	104	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.76	10.0	98	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 14:12
Sample ID	: MW34102023	Date Analyzed:	10/19/23 14:12
Lab Samp ID:	23J115-03	Dilution Factor:	1
Lab File ID:	RJG265	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.4	10.0	104	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	9.67	10.0	97	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 14:37
Sample ID	: TMW17102023	Date Analyzed:	10/19/23 14:37
Lab Samp ID:	23J115-04	Dilution Factor:	1
Lab File ID:	RJG266	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	0.35J	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.4	10.0	104	81-118
4-Bromofluorobenzene	10.3	10.0	103	85-114
Toluene-d8	9.80	10.0	98	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 15:01
Sample ID	: TMW53102023	Date Analyzed:	10/19/23 15:01
Lab Samp ID:	23J115-05	Dilution Factor:	1
Lab File ID:	RJG267	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.6	10.0	106	81-118
4-Bromofluorobenzene	9.99	10.0	100	85-114
Toluene-d8	9.64	10.0	96	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 15:26
Sample ID	: MW33102023	Date Analyzed:	10/19/23 15:26
Lab Samp ID:	23J115-06	Dilution Factor:	1
Lab File ID:	RJG268	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.5	10.0	105	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.76	10.0	98	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 15:50
Sample ID	: MW31102023	Date Analyzed:	10/19/23 15:50
Lab Samp ID:	23J115-07	Dilution Factor:	1
Lab File ID:	RJG269	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	25	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.3	10.0	103	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	9.68	10.0	97	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 16:15
Sample ID	: TMW57102023	Date Analyzed:	10/19/23 16:15
Lab Samp ID:	23J115-08	Dilution Factor:	1
Lab File ID:	RJG270	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.5	10.0	105	81-118
4-Bromofluorobenzene	9.87	10.0	99	85-114
Toluene-d8	9.63	10.0	96	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 16:39
Sample ID	: MW27102023	Date Analyzed:	10/19/23 16:39
Lab Samp ID:	23J115-09	Dilution Factor:	1
Lab File ID:	RJG271	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.5	10.0	105	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.71	10.0	97	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 17:03
Sample ID	: TMW61102023	Date Analyzed:	10/19/23 17:03
Lab Samp ID:	23J115-10	Dilution Factor:	1
Lab File ID:	RJG272	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.6	10.0	106	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	9.71	10.0	97	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 17:27
Sample ID	: MW39102023	Date Analyzed:	10/19/23 17:27
Lab Samp ID:	23J115-11	Dilution Factor:	1
Lab File ID:	RJG273	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.8	10.0	108	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.72	10.0	97	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 17:52
Sample ID	: MW3B102023	Date Analyzed:	10/19/23 17:52
Lab Samp ID:	23J115-12	Dilution Factor:	1
Lab File ID:	RJG274	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	9.85	10.0	99	85-114
Toluene-d8	9.93	10.0	99	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 18:16
Sample ID	: TMW24102023	Date Analyzed:	10/19/23 18:16
Lab Samp ID:	23J115-13	Dilution Factor:	1
Lab File ID:	RJG275	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.7	10.0	107	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.90	10.0	99	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 18:40
Sample ID	: FW31102023	Date Analyzed:	10/19/23 18:40
Lab Samp ID:	23J115-14	Dilution Factor:	1
Lab File ID:	RJG276	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.6	10.0	106	81-118
4-Bromofluorobenzene	9.97	10.0	100	85-114
Toluene-d8	9.88	10.0	99	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 19:05
Sample ID	: TMW59102023	Date Analyzed:	10/19/23 19:05
Lab Samp ID:	23J115-15	Dilution Factor:	1
Lab File ID:	RJG277	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.7	10.0	107	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.90	10.0	99	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 19:29
Sample ID	: TMW39D102023	Date Analyzed:	10/19/23 19:29
Lab Samp ID:	23J115-16	Dilution Factor:	1
Lab File ID:	RJG278	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.0	10.0	110	81-118
4-Bromofluorobenzene	9.83	10.0	98	85-114
Toluene-d8	9.64	10.0	96	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 19:53
Sample ID	: TMW49102023	Date Analyzed:	10/19/23 19:53
Lab Samp ID:	23J115-17	Dilution Factor:	1
Lab File ID:	RJG279	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.0	10.0	110	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	9.70	10.0	97	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 20:18
Sample ID	: MW35102023	Date Analyzed:	10/19/23 20:18
Lab Samp ID:	23J115-18	Dilution Factor:	1
Lab File ID:	RJG280	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	9.94	10.0	99	85-114
Toluene-d8	9.81	10.0	98	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 20:42
Sample ID	: QC09102023TB	Date Analyzed:	10/19/23 20:42
Lab Samp ID:	23J115-19	Dilution Factor:	1
Lab File ID:	RJG281	Matrix:	WATER
Ext Btch ID:	VOE2J12	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.9	10.0	109	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.76	10.0	98	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS + APPENDIX 9

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of sixteen(16) water samples were received on 10/11/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were four(4)CCVs (Data File IDs: RJJ413, RJJ414, RJJ447 and RJJ448) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ033WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: SVJ033WL/SVJ033WC - Percent recoveries for bis(2-Ethylhexyl) Phthalate, Butylbenzylphthalate, and Di-N-Butyl Phthalate in LCS/LCD and percent recoveries for 1,2-Diphenylhydrazine, 2-Chloronaphthalene, 3/4-Methylphenol, 4-Bromophenyl Phenyl Ether, 4-Chloroaniline, Benzo(a)Pyrene, Benzyl Alcohol, bis(2-Chloroethoxy)methane, Chrysene, Dibenzofuran, DI-N-Octyl Phthalate, N-Nitrosodiphenylamine and Pyrene in LCS were biased high. However, all analytes were not detected in the associated samples. RPD for 4,6-Dinitro-2-Methylphenol(RPD=28*) was greater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. For this SDG, all surrogate recoveries were within QC limits except for Phenol-D5 in J115-05; most likely due to matrix interference. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J115-15 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of sixteen(16) water samples were received on 10/11/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data File IDs: RJJ416 and RJJ446) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ033WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. The target analyte was within LCS limits except for: CLJ033WL/CLJ033WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=47*) was greater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J115-15 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of sixteen(16) water samples were received on 10/11/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method 3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data File IDs: RJJ414 and RJJ447) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ033WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: CLJ033WL/CLJ033WC - RPDs for Caprolactam(RPD=46*), and Benzaldehyde(RPD=35*) were greater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Sample J115-15 was initially analyzed at dilution due to suspected matrix interference as exhibited by the color of its extract.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ033WB	1	NA	10/18/2312:16	10/15/2313:30	RJJ417	RGJ087	23SVJ033W	Method Blank
LCS1W	SVJ033WL	1	NA	10/18/2312:35	10/15/2313:30	RJJ418	RGJ087	23SVJ033W	Lab Control Sample (LCS)
LCD1W	SVJ033WC	1	NA	10/18/2312:54	10/15/2313:30	RJJ419	RGJ087	23SVJ033W	LCS Duplicate
MW30102023	23J115-01	1	NA	10/18/2315:05	10/15/2313:30	RJJ426	RGJ087	23SVJ033W	Field Sample
MW26102023	23J115-02	1	NA	10/18/2315:24	10/15/2313:30	RJJ427	RGJ087	23SVJ033W	Field Sample
MW34102023	23J115-03	1	NA	10/18/2315:42	10/15/2313:30	RJJ428	RGJ087	23SVJ033W	Field Sample
TMW53102023	23J115-05	1	NA	10/18/2316:01	10/15/2313:30	RJJ429	RGJ087	23SVJ033W	Field Sample
MW33102023	23J115-06	1	NA	10/18/2316:20	10/15/2313:30	RJJ430	RGJ087	23SVJ033W	Field Sample
MW31102023	23J115-07	1	NA	10/18/2316:39	10/15/2313:30	RJJ431	RGJ087	23SVJ033W	Field Sample
TMW57102023	23J115-08	1	NA	10/18/2316:58	10/15/2313:30	RJJ432	RGJ087	23SVJ033W	Field Sample
MW27102023	23J115-09	1	NA	10/18/2317:16	10/15/2313:30	RJJ433	RGJ087	23SVJ033W	Field Sample
TMW61102023	23J115-10	1	NA	10/18/2317:35	10/15/2313:30	RJJ434	RGJ087	23SVJ033W	Field Sample
MW39102023	23J115-11	1	NA	10/18/2317:54	10/15/2313:30	RJJ435	RGJ087	23SVJ033W	Field Sample
MW38102023	23J115-12	1	NA	10/18/2318:12	10/15/2313:30	RJJ436	RGJ087	23SVJ033W	Field Sample
FW31102023	23J115-14	1	NA	10/18/2318:31	10/15/2313:30	RJJ437	RGJ087	23SVJ033W	Field Sample
TMW59102023	23J115-15	2	NA	10/18/2318:50	10/15/2313:30	RJJ438	RGJ087	23SVJ033W	Field Sample
TMW39D102023	23J115-16	1	NA	10/18/2319:08	10/15/2313:30	RJJ439	RGJ087	23SVJ033W	Field Sample
TMW49102023	23J115-17	1	NA	10/18/2319:27	10/15/2313:30	RJJ440	RGJ087	23SVJ033W	Field Sample
MW35102023	23J115-18	1	NA	10/18/2319:46	10/15/2313:30	RJJ441	RGJ087	23SVJ033W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ033WB	1	NA	10/18/2312:16	10/15/2313:30	RJJ417	RGJ100	23SVJ033W	Method Blank
LCS1W	CLJ033WL	1	NA	10/18/2313:12	10/15/2313:30	RJJ420	RGJ100	23SVJ033W	Lab Control Sample (LCS)
LCD1W	CLJ033WC	1	NA	10/18/2313:31	10/15/2313:30	RJJ421	RGJ100	23SVJ033W	LCS Duplicate
MW30102023	23J115-01	1	NA	10/18/2315:05	10/15/2313:30	RJJ426	RGJ100	23SVJ033W	Field Sample
MW26102023	23J115-02	1	NA	10/18/2315:24	10/15/2313:30	RJJ427	RGJ100	23SVJ033W	Field Sample
MW34102023	23J115-03	1	NA	10/18/2315:42	10/15/2313:30	RJJ428	RGJ100	23SVJ033W	Field Sample
TMW53102023	23J115-05	1	NA	10/18/2316:01	10/15/2313:30	RJJ429	RGJ100	23SVJ033W	Field Sample
MW33102023	23J115-06	1	NA	10/18/2316:20	10/15/2313:30	RJJ430	RGJ100	23SVJ033W	Field Sample
MW31102023	23J115-07	1	NA	10/18/2316:39	10/15/2313:30	RJJ431	RGJ100	23SVJ033W	Field Sample
TMW57102023	23J115-08	1	NA	10/18/2316:58	10/15/2313:30	RJJ432	RGJ100	23SVJ033W	Field Sample
MW27102023	23J115-09	1	NA	10/18/2317:16	10/15/2313:30	RJJ433	RGJ100	23SVJ033W	Field Sample
TMW61102023	23J115-10	1	NA	10/18/2317:35	10/15/2313:30	RJJ434	RGJ100	23SVJ033W	Field Sample
MW39102023	23J115-11	1	NA	10/18/2317:54	10/15/2313:30	RJJ435	RGJ100	23SVJ033W	Field Sample
MW38102023	23J115-12	1	NA	10/18/2318:12	10/15/2313:30	RJJ436	RGJ100	23SVJ033W	Field Sample
FW31102023	23J115-14	1	NA	10/18/2318:31	10/15/2313:30	RJJ437	RGJ100	23SVJ033W	Field Sample
TMW59102023	23J115-15	2	NA	10/18/2318:50	10/15/2313:30	RJJ438	RGJ100	23SVJ033W	Field Sample
TMW39D102023	23J115-16	1	NA	10/18/2319:08	10/15/2313:30	RJJ439	RGJ100	23SVJ033W	Field Sample
TMW49102023	23J115-17	1	NA	10/18/2319:27	10/15/2313:30	RJJ440	RGJ100	23SVJ033W	Field Sample
MW35102023	23J115-18	1	NA	10/18/2319:46	10/15/2313:30	RJJ441	RGJ100	23SVJ033W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ033WB	1	NA	10/18/2312:16	10/15/2313:30	RJJ417	RGJ079	23SVJ033W	Method Blank
LCS1W	CLJ033WL	1	NA	10/18/2313:12	10/15/2313:30	RJJ420	RGJ079	23SVJ033W	Lab Control Sample (LCS)
LCD1W	CLJ033WC	1	NA	10/18/2313:31	10/15/2313:30	RJJ421	RGJ079	23SVJ033W	LCS Duplicate
MW30102023	23J115-01	1	NA	10/18/2315:05	10/15/2313:30	RJJ426	RGJ079	23SVJ033W	Field Sample
MW26102023	23J115-02	1	NA	10/18/2315:24	10/15/2313:30	RJJ427	RGJ079	23SVJ033W	Field Sample
MW34102023	23J115-03	1	NA	10/18/2315:42	10/15/2313:30	RJJ428	RGJ079	23SVJ033W	Field Sample
TMW53102023	23J115-05	1	NA	10/18/2316:01	10/15/2313:30	RJJ429	RGJ079	23SVJ033W	Field Sample
MW33102023	23J115-06	1	NA	10/18/2316:20	10/15/2313:30	RJJ430	RGJ079	23SVJ033W	Field Sample
MW31102023	23J115-07	1	NA	10/18/2316:39	10/15/2313:30	RJJ431	RGJ079	23SVJ033W	Field Sample
TMW57102023	23J115-08	1	NA	10/18/2316:58	10/15/2313:30	RJJ432	RGJ079	23SVJ033W	Field Sample
MW27102023	23J115-09	1	NA	10/18/2317:16	10/15/2313:30	RJJ433	RGJ079	23SVJ033W	Field Sample
TMW61102023	23J115-10	1	NA	10/18/2317:35	10/15/2313:30	RJJ434	RGJ079	23SVJ033W	Field Sample
MW39102023	23J115-11	1	NA	10/18/2317:54	10/15/2313:30	RJJ435	RGJ079	23SVJ033W	Field Sample
MW38102023	23J115-12	1	NA	10/18/2318:12	10/15/2313:30	RJJ436	RGJ079	23SVJ033W	Field Sample
FW31102023	23J115-14	1	NA	10/18/2318:31	10/15/2313:30	RJJ437	RGJ079	23SVJ033W	Field Sample
TMW59102023	23J115-15	2	NA	10/18/2318:50	10/15/2313:30	RJJ438	RGJ079	23SVJ033W	Field Sample
TMW39D102023	23J115-16	1	NA	10/18/2319:08	10/15/2313:30	RJJ439	RGJ079	23SVJ033W	Field Sample
TMW49102023	23J115-17	1	NA	10/18/2319:27	10/15/2313:30	RJJ440	RGJ079	23SVJ033W	Field Sample
MW35102023	23J115-18	1	NA	10/18/2319:46	10/15/2313:30	RJJ441	RGJ079	23SVJ033W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW30102023	Date Analyzed:	10/18/23 15:05
Lab Samp ID:	23J115-01	Dilution Factor:	1
Lab File ID:	RJJ426	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	35.6	66.6	53	43-140
2-Fluorobiphenyl	19.5	22.2	88	44-119
2-Fluorophenol	22.2	66.6	33	19-119
Nitrobenzene-d5	17.0	22.2	77	44-120
Phenol-d5	29.9	66.6	45	40-130
Terphenyl-d14	21.9	22.2	99	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW30102023	Date Analyzed:	10/18/23 15:05
Lab Samp ID:	23J115-01	Dilution Factor:	1
Lab File ID:	RJJ426	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW30102023	Date Analyzed:	10/18/23 15:05
Lab Samp ID:	23J115-01	Dilution Factor:	1
Lab File ID:	RJJ426	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW26102023	Date Analyzed:	10/18/23 15:24
Lab Samp ID:	23J115-02	Dilution Factor:	1
Lab File ID:	RJJ427	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.5	11
1,2-Dichlorobenzene	ND	11	2.8	5.5
1,2-Diphenylhydrazine	ND	11	2.8	5.5
1,3-Dichlorobenzene	ND	11	2.8	5.5
1,4-Dichlorobenzene	ND	11	2.8	5.5
2,4,5-Trichlorophenol	ND	11	2.8	5.5
2,4,6-Trichlorophenol	ND	11	2.8	5.5
2,4-Dichlorophenol	ND	11	2.8	5.5
2,4-Dimethylphenol	ND	11	2.8	5.5
2,4-Dinitrophenol	ND	22	2.8	5.5
2,4-Dinitrotoluene	ND	11	2.8	5.5
2,6-Dinitrotoluene	ND	11	2.8	5.5
2-Chloronaphthalene	ND	11	2.8	5.5
2-Chlorophenol	ND	11	2.8	5.5
2-Methylnaphthalene	ND	11	2.8	5.5
2-Methylphenol	ND	11	2.8	5.5
2-Nitroaniline	ND	11	2.8	5.5
2-Nitrophenol	ND	11	2.8	5.5
3,3'-Dichlorobenzidine	ND	11	2.8	5.5
3/4-Methylphenol	ND	11	2.8	5.5
3-Nitroaniline	ND	11	2.8	5.5
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.5
4-Bromophenyl phenyl ether	ND	11	2.8	5.5
4-Chloro-3-methylphenol	ND	11	2.8	5.5
4-Chloroaniline	ND	22	5.5	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.5
4-Nitroaniline	ND	11	2.8	5.5
4-Nitrophenol	ND	22	2.8	5.5
Acenaphthene	ND	11	2.8	5.5
Acenaphthylene	ND	11	2.8	5.5
Anthracene	ND	11	2.8	5.5
Benzo(a)anthracene	ND	11	2.8	5.5
Benzo(a)pyrene	ND	11	2.8	5.5
Benzo(b)fluoranthene	ND	11	2.8	5.5
Benzo(g,h,i)perylene	ND	11	2.8	5.5
Benzo(k)fluoranthene	ND	11	2.8	5.5
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.5
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.5
bis(2-Chloroethoxy)methane	ND	11	2.8	5.5
bis(2-Chloroethyl) ether	ND	11	2.8	5.5
bis(2-Ethylhexyl) phthalate	ND	22	5.5	11
Butylbenzylphthalate	ND	11	2.8	5.5
Carbazole	ND	11	2.8	5.5
Chrysene	ND	11	2.8	5.5
Dibenzo(a,h)anthracene	ND	11	2.8	5.5
Dibenzofuran	ND	11	2.8	5.5
Diethylphthalate	ND	11	2.8	5.5
Dimethylphthalate	ND	11	2.8	5.5
Di-n-butyl phthalate	ND	11	2.8	5.5
Di-n-octyl phthalate	ND	11	2.8	5.5
Fluoranthene	ND	11	2.8	5.5
Fluorene	ND	11	2.8	5.5
Hexachlorobenzene	ND	11	2.8	5.5
Hexachlorobutadiene	ND	11	2.8	5.5
Hexachloroethane	ND	11	2.8	5.5
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.5
Isophorone	ND	11	2.8	5.5
Naphthalene	ND	11	2.8	5.5
Nitrobenzene	ND	11	2.8	5.5
N-Nitrosodimethylamine	ND	11	2.8	5.5
n-Nitroso-di-n-propylamine	ND	11	2.8	5.5
n-Nitrosodiphenylamine	ND	11	2.8	5.5
Pentachlorophenol	ND	22	2.8	5.5
Phenanthrene	ND	11	2.8	5.5
Phenol	ND	11	2.8	5.5
Pyrene	ND	11	2.8	5.5
Hexachlorocyclopentadiene	ND	11	2.8	5.5
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.5
2,6-Dichlorophenol	ND	11	2.8	5.5

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	40.8	66.0	62	43-140
2-Fluorobiphenyl	14.8	22.0	67	44-119
2-Fluorophenol	24.2	66.0	37	19-119
Nitrobenzene-d5	13.1	22.0	59	44-120
Phenol-d5	30.1	66.0	46	40-130
Terphenyl-d14	23.3	22.0	106	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW26102023	Date Analyzed:	10/18/23 15:24
Lab Samp ID:	23J115-02	Dilution Factor:	1
Lab File ID:	RJJ427	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.5

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW26102023	Date Analyzed:	10/18/23 15:24
Lab Samp ID:	23J115-02	Dilution Factor:	1
Lab File ID:	RJJ427	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.5	11
Benzaldehyde	ND	22	5.5	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW34102023	Date Analyzed:	10/18/23 15:42
Lab Samp ID:	23J115-03	Dilution Factor:	1
Lab File ID:	RJJ428	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	52.2	66.6	78	43-140
2-Fluorobiphenyl	19.0	22.2	86	44-119
2-Fluorophenol	34.0	66.6	51	19-119
Nitrobenzene-d5	17.0	22.2	77	44-120
Phenol-d5	43.6	66.6	65	40-130
Terphenyl-d14	23.2	22.2	104	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW34102023	Date Analyzed:	10/18/23 15:42
Lab Samp ID:	23J115-03	Dilution Factor:	1
Lab File ID:	RJJ428	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW34102023	Date Analyzed:	10/18/23 15:42
Lab Samp ID:	23J115-03	Dilution Factor:	1
Lab File ID:	RJJ428	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW53102023	Date Analyzed:	10/18/23 16:01
Lab Samp ID:	23J115-05	Dilution Factor:	1
Lab File ID:	RJJ429	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.8	12
1,2-Dichlorobenzene	ND	12	2.9	5.8
1,2-Diphenylhydrazine	ND	12	2.9	5.8
1,3-Dichlorobenzene	ND	12	2.9	5.8
1,4-Dichlorobenzene	ND	12	2.9	5.8
2,4,5-Trichlorophenol	ND	12	2.9	5.8
2,4,6-Trichlorophenol	ND	12	2.9	5.8
2,4-Dichlorophenol	ND	12	2.9	5.8
2,4-Dimethylphenol	ND	12	2.9	5.8
2,4-Dinitrophenol	ND	23	2.9	5.8
2,4-Dinitrotoluene	ND	12	2.9	5.8
2,6-Dinitrotoluene	ND	12	2.9	5.8
2-Chloronaphthalene	ND	12	2.9	5.8
2-Chlorophenol	ND	12	2.9	5.8
2-Methylnaphthalene	ND	12	2.9	5.8
2-Methylphenol	ND	12	2.9	5.8
2-Nitroaniline	ND	12	2.9	5.8
2-Nitrophenol	ND	12	2.9	5.8
3,3'-Dichlorobenzidine	ND	12	2.9	5.8
3/4-Methylphenol	ND	12	2.9	5.8
3-Nitroaniline	ND	12	2.9	5.8
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.8
4-Bromophenyl phenyl ether	ND	12	2.9	5.8
4-Chloro-3-methylphenol	ND	12	2.9	5.8
4-Chloroaniline	ND	23	5.8	12
4-Chlorophenyl-phenyl ether	ND	12	2.9	5.8
4-Nitroaniline	ND	12	2.9	5.8
4-Nitrophenol	ND	23	2.9	5.8
Acenaphthene	ND	12	2.9	5.8
Acenaphthylene	ND	12	2.9	5.8
Anthracene	ND	12	2.9	5.8
Benzo(a)anthracene	ND	12	2.9	5.8
Benzo(a)pyrene	ND	12	2.9	5.8
Benzo(b)fluoranthene	ND	12	2.9	5.8
Benzo(g,h,i)perylene	ND	12	2.9	5.8
Benzo(k)fluoranthene	ND	12	2.9	5.8
Benzoic Acid	ND	120	23	46
Benzyl Alcohol	ND	12	2.9	5.8
bis(2-Chloroisopropyl) ether	ND	12	2.9	5.8
bis(2-Chloroethoxy)methane	ND	12	2.9	5.8
bis(2-Chloroethyl) ether	ND	12	2.9	5.8
bis(2-Ethylhexyl) phthalate	ND	23	5.8	12
Butylbenzylphthalate	ND	12	2.9	5.8
Carbazole	ND	12	2.9	5.8
Chrysene	ND	12	2.9	5.8
Dibenzo(a,h)anthracene	ND	12	2.9	5.8
Dibenzofuran	ND	12	2.9	5.8
Diethylphthalate	ND	12	2.9	5.8
Dimethylphthalate	ND	12	2.9	5.8
Di-n-butyl phthalate	ND	12	2.9	5.8
Di-n-octyl phthalate	ND	12	2.9	5.8
Fluoranthene	ND	12	2.9	5.8
Fluorene	ND	12	2.9	5.8
Hexachlorobenzene	ND	12	2.9	5.8
Hexachlorobutadiene	ND	12	2.9	5.8
Hexachloroethane	ND	12	2.9	5.8
Indeno(1,2,3-cd)pyrene	ND	12	2.9	5.8
Isophorone	ND	12	2.9	5.8
Naphthalene	ND	12	2.9	5.8
Nitrobenzene	ND	12	2.9	5.8
N-Nitrosodimethylamine	ND	12	2.9	5.8
n-Nitroso-di-n-propylamine	ND	12	2.9	5.8
n-Nitrosodiphenylamine	ND	12	2.9	5.8
Pentachlorophenol	ND	23	2.9	5.8
Phenanthrene	ND	12	2.9	5.8
Phenol	ND	12	2.9	5.8
Pyrene	ND	12	2.9	5.8
Hexachlorocyclopentadiene	ND	12	2.9	5.8
Benzidine	ND	46	12	23
2,3,4,6-Tetrachlorophenol	ND	12	2.9	5.8
2,6-Dichlorophenol	ND	12	2.9	5.8

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	41.7	69.6	60	43-140
2-Fluorobiphenyl	12.7	23.2	55	44-119
2-Fluorophenol	16.3	69.6	23	19-119
Nitrobenzene-d5	12.5	23.2	54	44-120
Phenol-d5	24.7	69.6	35*	40-130
Terphenyl-d14	26.2	23.2	113	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 860ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW53102023	Date Analyzed:	10/18/23 16:01
Lab Samp ID:	23J115-05	Dilution Factor:	1
Lab File ID:	RJJ429	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	2.9	5.8

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 860ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW53102023	Date Analyzed:	10/18/23 16:01
Lab Samp ID:	23J115-05	Dilution Factor:	1
Lab File ID:	RJJ429	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.8	12
Benzaldehyde	ND	23	5.8	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 860ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW33102023	Date Analyzed:	10/18/23 16:20
Lab Samp ID:	23J115-06	Dilution Factor:	1
Lab File ID:	RJJ430	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	51.6	65.4	79	43-140
2-Fluorobiphenyl	20.4	21.8	94	44-119
2-Fluorophenol	21.7	65.4	33	19-119
Nitrobenzene-d5	17.4	21.8	80	44-120
Phenol-d5	35.5	65.4	54	40-130
Terphenyl-d14	21.2	21.8	97	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW33102023	Date Analyzed:	10/18/23 16:20
Lab Samp ID:	23J115-06	Dilution Factor:	1
Lab File ID:	RJJ430	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW33102023	Date Analyzed:	10/18/23 16:20
Lab Samp ID:	23J115-06	Dilution Factor:	1
Lab File ID:	RJJ430	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 920ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW31102023	Date Analyzed:	10/18/23 16:39
Lab Samp ID:	23J115-07	Dilution Factor:	1
Lab File ID:	RJJ431	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.9	5.7
1,2-Diphenylhydrazine	ND	11	2.9	5.7
1,3-Dichlorobenzene	ND	11	2.9	5.7
1,4-Dichlorobenzene	ND	11	2.9	5.7
2,4,5-Trichlorophenol	ND	11	2.9	5.7
2,4,6-Trichlorophenol	ND	11	2.9	5.7
2,4-Dichlorophenol	ND	11	2.9	5.7
2,4-Dimethylphenol	ND	11	2.9	5.7
2,4-Dinitrophenol	ND	23	2.9	5.7
2,4-Dinitrotoluene	ND	11	2.9	5.7
2,6-Dinitrotoluene	ND	11	2.9	5.7
2-Chloronaphthalene	ND	11	2.9	5.7
2-Chlorophenol	ND	11	2.9	5.7
2-Methylnaphthalene	ND	11	2.9	5.7
2-Methylphenol	ND	11	2.9	5.7
2-Nitroaniline	ND	11	2.9	5.7
2-Nitrophenol	ND	11	2.9	5.7
3,3'-Dichlorobenzidine	ND	11	2.9	5.7
3/4-Methylphenol	ND	11	2.9	5.7
3-Nitroaniline	ND	11	2.9	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.7
4-Bromophenyl phenyl ether	ND	11	2.9	5.7
4-Chloro-3-methylphenol	ND	11	2.9	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.9	5.7
4-Nitroaniline	ND	11	2.9	5.7
4-Nitrophenol	ND	23	2.9	5.7
Acenaphthene	ND	11	2.9	5.7
Acenaphthylene	ND	11	2.9	5.7
Anthracene	ND	11	2.9	5.7
Benzo(a)anthracene	ND	11	2.9	5.7
Benzo(a)pyrene	ND	11	2.9	5.7
Benzo(b)fluoranthene	ND	11	2.9	5.7
Benzo(g,h,i)perylene	ND	11	2.9	5.7
Benzo(k)fluoranthene	ND	11	2.9	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.9	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.9	5.7
bis(2-Chloroethoxy)methane	ND	11	2.9	5.7
bis(2-Chloroethyl) ether	ND	11	2.9	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.9	5.7
Carbazole	ND	11	2.9	5.7
Chrysene	ND	11	2.9	5.7
Dibenzo(a,h)anthracene	ND	11	2.9	5.7
Dibenzofuran	ND	11	2.9	5.7
Diethylphthalate	ND	11	2.9	5.7
Dimethylphthalate	ND	11	2.9	5.7
Di-n-butyl phthalate	ND	11	2.9	5.7
Di-n-octyl phthalate	ND	11	2.9	5.7
Fluoranthene	ND	11	2.9	5.7
Fluorene	ND	11	2.9	5.7
Hexachlorobenzene	ND	11	2.9	5.7
Hexachlorobutadiene	ND	11	2.9	5.7
Hexachloroethane	ND	11	2.9	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.9	5.7
Isophorone	ND	11	2.9	5.7
Naphthalene	ND	11	2.9	5.7
Nitrobenzene	ND	11	2.9	5.7
N-Nitrosodimethylamine	ND	11	2.9	5.7
n-Nitroso-di-n-propylamine	ND	11	2.9	5.7
n-Nitrosodiphenylamine	ND	11	2.9	5.7
Pentachlorophenol	ND	23	2.9	5.7
Phenanthrene	ND	11	2.9	5.7
Phenol	ND	11	2.9	5.7
Pyrene	ND	11	2.9	5.7
Hexachlorocyclopentadiene	ND	11	2.9	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.9	5.7
2,6-Dichlorophenol	ND	11	2.9	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	58.5	69.0	85	43-140
2-Fluorobiphenyl	24.4	23.0	106	44-119
2-Fluorophenol	30.5	69.0	44	19-119
Nitrobenzene-d5	19.5	23.0	85	44-120
Phenol-d5	46.7	69.0	68	40-130
Terphenyl-d14	29.8	23.0	130	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW31102023	Date Analyzed:	10/18/23 16:39
Lab Samp ID:	23J115-07	Dilution Factor:	1
Lab File ID:	RJJ431	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.9	5.7

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW31102023	Date Analyzed:	10/18/23 16:39
Lab Samp ID:	23J115-07	Dilution Factor:	1
Lab File ID:	RJJ431	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW57102023	Date Analyzed:	10/18/23 16:58
Lab Samp ID:	23J115-08	Dilution Factor:	1
Lab File ID:	RJJ432	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	49.2	72.0	68	43-140
2-Fluorobiphenyl	16.2	24.0	68	44-119
2-Fluorophenol	31.4	72.0	44	19-119
Nitrobenzene-d5	16.2	24.0	67	44-120
Phenol-d5	38.5	72.0	53	40-130
Terphenyl-d14	26.6	24.0	111	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW57102023	Date Analyzed:	10/18/23 16:58
Lab Samp ID:	23J115-08	Dilution Factor:	1
Lab File ID:	RJJ432	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW57102023	Date Analyzed:	10/18/23 16:58
Lab Samp ID:	23J115-08	Dilution Factor:	1
Lab File ID:	RJJ432	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW27102023	Date Analyzed:	10/18/23 17:16
Lab Samp ID:	23J115-09	Dilution Factor:	1
Lab File ID:	RJJ433	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	59.2	72.0	82	43-140
2-Fluorobiphenyl	22.1	24.0	92	44-119
2-Fluorophenol	30.5	72.0	42	19-119
Nitrobenzene-d5	19.0	24.0	79	44-120
Phenol-d5	46.3	72.0	64	40-130
Terphenyl-d14	28.6	24.0	119	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW27102023	Date Analyzed:	10/18/23 17:16
Lab Samp ID:	23J115-09	Dilution Factor:	1
Lab File ID:	RJJ433	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW27102023	Date Analyzed:	10/18/23 17:16
Lab Samp ID:	23J115-09	Dilution Factor:	1
Lab File ID:	RJJ433	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW61102023	Date Analyzed:	10/18/23 17:35
Lab Samp ID:	23J115-10	Dilution Factor:	1
Lab File ID:	RJJ434	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	47.7	66.6	72	43-140
2-Fluorobiphenyl	18.3	22.2	82	44-119
2-Fluorophenol	26.2	66.6	39	19-119
Nitrobenzene-d5	17.0	22.2	77	44-120
Phenol-d5	35.9	66.6	54	40-130
Terphenyl-d14	28.1	22.2	127	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW61102023	Date Analyzed:	10/18/23 17:35
Lab Samp ID:	23J115-10	Dilution Factor:	1
Lab File ID:	RJJ434	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW61102023	Date Analyzed:	10/18/23 17:35
Lab Samp ID:	23J115-10	Dilution Factor:	1
Lab File ID:	RJJ434	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW39102023	Date Analyzed:	10/18/23 17:54
Lab Samp ID:	23J115-11	Dilution Factor:	1
Lab File ID:	RJJ435	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	45
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	45	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	65.5	67.2	97	43-140
2-Fluorobiphenyl	24.4	22.4	109	44-119
2-Fluorophenol	43.4	67.2	65	19-119
Nitrobenzene-d5	22.0	22.4	98	44-120
Phenol-d5	53.5	67.2	80	40-130
Terphenyl-d14	22.6	22.4	101	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW39102023	Date Analyzed:	10/18/23 17:54
Lab Samp ID:	23J115-11	Dilution Factor:	1
Lab File ID:	RJJ435	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW39102023	Date Analyzed:	10/18/23 17:54
Lab Samp ID:	23J115-11	Dilution Factor:	1
Lab File ID:	RJJ435	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW38102023	Date Analyzed:	10/18/23 18:12
Lab Samp ID:	23J115-12	Dilution Factor:	1
Lab File ID:	RJJ436	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	32.5	72.0	45	43-140
2-Fluorobiphenyl	20.2	24.0	84	44-119
2-Fluorophenol	25.5	72.0	35	19-119
Nitrobenzene-d5	18.2	24.0	76	44-120
Phenol-d5	32.3	72.0	45	40-130
Terphenyl-d14	23.8	24.0	99	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW38102023	Date Analyzed:	10/18/23 18:12
Lab Samp ID:	23J115-12	Dilution Factor:	1
Lab File ID:	RJJ436	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW38102023	Date Analyzed:	10/18/23 18:12
Lab Samp ID:	23J115-12	Dilution Factor:	1
Lab File ID:	RJJ436	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: FW31102023	Date Analyzed:	10/18/23 18:31
Lab Samp ID:	23J115-14	Dilution Factor:	1
Lab File ID:	RJJ437	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	56.3	66.6	85	43-140
2-Fluorobiphenyl	21.1	22.2	95	44-119
2-Fluorophenol	45.9	66.6	69	19-119
Nitrobenzene-d5	21.0	22.2	94	44-120
Phenol-d5	50.4	66.6	76	40-130
Terphenyl-d14	28.1	22.2	127	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: FW31102023	Date Analyzed:	10/18/23 18:31
Lab Samp ID:	23J115-14	Dilution Factor:	1
Lab File ID:	RJJ437	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: FW31102023	Date Analyzed:	10/18/23 18:31
Lab Samp ID:	23J115-14	Dilution Factor:	1
Lab File ID:	RJJ437	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW59102023	Date Analyzed:	10/18/23 18:50
Lab Samp ID:	23J115-15	Dilution Factor:	2
Lab File ID:	RJJ438	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	50	12	25
1,2-Dichlorobenzene	ND	25	6.2	12
1,2-Diphenylhydrazine	ND	25	6.2	12
1,3-Dichlorobenzene	ND	25	6.2	12
1,4-Dichlorobenzene	ND	25	6.2	12
2,4,5-Trichlorophenol	ND	25	6.2	12
2,4,6-Trichlorophenol	ND	25	6.2	12
2,4-Dichlorophenol	ND	25	6.2	12
2,4-Dimethylphenol	ND	25	6.2	12
2,4-Dinitrophenol	ND	50	6.2	12
2,4-Dinitrotoluene	ND	25	6.2	12
2,6-Dinitrotoluene	ND	25	6.2	12
2-Chloronaphthalene	ND	25	6.2	12
2-Chlorophenol	ND	25	6.2	12
2-Methylnaphthalene	ND	25	6.2	12
2-Methylphenol	ND	25	6.2	12
2-Nitroaniline	ND	25	6.2	12
2-Nitrophenol	ND	25	6.2	12
3,3'-Dichlorobenzidine	ND	25	6.2	12
3/4-Methylphenol	ND	25	6.2	12
3-Nitroaniline	ND	25	6.2	12
4,6-Dinitro-2-methylphenol	ND	50	6.2	12
4-Bromophenyl phenyl ether	ND	25	6.2	12
4-Chloro-3-methylphenol	ND	25	6.2	12
4-Chloroaniline	ND	50	12	25
4-Chlorophenyl-phenyl ether	ND	25	6.2	12
4-Nitroaniline	ND	25	6.2	12
4-Nitrophenol	ND	50	6.2	12
Acenaphthene	ND	25	6.2	12
Acenaphthylene	ND	25	6.2	12
Anthracene	ND	25	6.2	12
Benzo(a)anthracene	ND	25	6.2	12
Benzo(a)pyrene	ND	25	6.2	12
Benzo(b)fluoranthene	ND	25	6.2	12
Benzo(g,h,i)perylene	ND	25	6.2	12
Benzo(k)fluoranthene	ND	25	6.2	12
Benzoic Acid	ND	250	50	100
Benzyl Alcohol	ND	25	6.2	12
bis(2-Chloroisopropyl) ether	ND	25	6.2	12
bis(2-Chloroethoxy)methane	ND	25	6.2	12
bis(2-Chloroethyl) ether	ND	25	6.2	12
bis(2-Ethylhexyl) phthalate	ND	50	12	25
Butylbenzylphthalate	ND	25	6.2	12
Carbazole	ND	25	6.2	12
Chrysene	ND	25	6.2	12
Dibenzo(a,h)anthracene	ND	25	6.2	12
Dibenzofuran	ND	25	6.2	12
Diethylphthalate	ND	25	6.2	12
Dimethylphthalate	ND	25	6.2	12
Di-n-butyl phthalate	ND	25	6.2	12
Di-n-octyl phthalate	ND	25	6.2	12
Fluoranthene	ND	25	6.2	12
Fluorene	ND	25	6.2	12
Hexachlorobenzene	ND	25	6.2	12
Hexachlorobutadiene	ND	25	6.2	12
Hexachloroethane	ND	25	6.2	12
Indeno(1,2,3-cd)pyrene	ND	25	6.2	12
Isophorone	ND	25	6.2	12
Naphthalene	ND	25	6.2	12
Nitrobenzene	ND	25	6.2	12
N-Nitrosodimethylamine	ND	25	6.2	12
n-Nitroso-di-n-propylamine	ND	25	6.2	12
n-Nitrosodiphenylamine	ND	25	6.2	12
Pentachlorophenol	ND	50	6.2	12
Phenanthrene	ND	25	6.2	12
Phenol	ND	25	6.2	12
Pyrene	ND	25	6.2	12
Hexachlorocyclopentadiene	ND	25	6.2	12
Benzidine	ND	100	25	50
2,3,4,6-Tetrachlorophenol	ND	25	6.2	12
2,6-Dichlorophenol	ND	25	6.2	12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	62.0	75.0	83	43-140
2-Fluorobiphenyl	23.6	25.0	94	44-119
2-Fluorophenol	44.6	75.0	59	19-119
Nitrobenzene-d5	21.1	25.0	85	44-120
Phenol-d5	54.0	75.0	72	40-130
Terphenyl-d14	27.9	25.0	112	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 800ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW59102023	Date Analyzed:	10/18/23 18:50
Lab Samp ID:	23J115-15	Dilution Factor:	2
Lab File ID:	RJJ438	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	25	6.2	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 800ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW59102023	Date Analyzed:	10/18/23 18:50
Lab Samp ID:	23J115-15	Dilution Factor:	2
Lab File ID:	RJJ438	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	50	12	25
Benzaldehyde	ND	50	12	25

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 800ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW39D102023	Date Analyzed:	10/18/23 19:08
Lab Samp ID:	23J115-16	Dilution Factor:	1
Lab File ID:	RJJ439	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	57.6	71.4	81	43-140
2-Fluorobiphenyl	20.1	23.8	85	44-119
2-Fluorophenol	41.5	71.4	58	19-119
Nitrobenzene-d5	19.8	23.8	83	44-120
Phenol-d5	46.3	71.4	65	40-130
Terphenyl-d14	29.2	23.8	123	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW39D102023	Date Analyzed:	10/18/23 19:08
Lab Samp ID:	23J115-16	Dilution Factor:	1
Lab File ID:	RJJ439	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW39D102023	Date Analyzed:	10/18/23 19:08
Lab Samp ID:	23J115-16	Dilution Factor:	1
Lab File ID:	RJJ439	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW49102023	Date Analyzed:	10/18/23 19:27
Lab Samp ID:	23J115-17	Dilution Factor:	1
Lab File ID:	RJJ440	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	44
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	44	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	54.7	66.6	82	43-140
2-Fluorobiphenyl	19.2	22.2	87	44-119
2-Fluorophenol	36.6	66.6	55	19-119
Nitrobenzene-d5	17.4	22.2	79	44-120
Phenol-d5	44.2	66.6	66	40-130
Terphenyl-d14	25.5	22.2	115	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW49102023	Date Analyzed:	10/18/23 19:27
Lab Samp ID:	23J115-17	Dilution Factor:	1
Lab File ID:	RJJ440	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: TMW49102023	Date Analyzed:	10/18/23 19:27
Lab Samp ID:	23J115-17	Dilution Factor:	1
Lab File ID:	RJJ440	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW35102023	Date Analyzed:	10/18/23 19:46
Lab Samp ID:	23J115-18	Dilution Factor:	1
Lab File ID:	RJJ441	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	5.9	12
1,2-Dichlorobenzene	ND	12	2.9	5.9
1,2-Diphenylhydrazine	ND	12	2.9	5.9
1,3-Dichlorobenzene	ND	12	2.9	5.9
1,4-Dichlorobenzene	ND	12	2.9	5.9
2,4,5-Trichlorophenol	ND	12	2.9	5.9
2,4,6-Trichlorophenol	ND	12	2.9	5.9
2,4-Dichlorophenol	ND	12	2.9	5.9
2,4-Dimethylphenol	ND	12	2.9	5.9
2,4-Dinitrophenol	ND	24	2.9	5.9
2,4-Dinitrotoluene	ND	12	2.9	5.9
2,6-Dinitrotoluene	ND	12	2.9	5.9
2-Chloronaphthalene	ND	12	2.9	5.9
2-Chlorophenol	ND	12	2.9	5.9
2-Methylnaphthalene	ND	12	2.9	5.9
2-Methylphenol	ND	12	2.9	5.9
2-Nitroaniline	ND	12	2.9	5.9
2-Nitrophenol	ND	12	2.9	5.9
3,3'-Dichlorobenzidine	ND	12	2.9	5.9
3/4-Methylphenol	ND	12	2.9	5.9
3-Nitroaniline	ND	12	2.9	5.9
4,6-Dinitro-2-methylphenol	ND	24	2.9	5.9
4-Bromophenyl phenyl ether	ND	12	2.9	5.9
4-Chloro-3-methylphenol	ND	12	2.9	5.9
4-Chloroaniline	ND	24	5.9	12
4-Chlorophenyl-phenyl ether	ND	12	2.9	5.9
4-Nitroaniline	ND	12	2.9	5.9
4-Nitrophenol	ND	24	2.9	5.9
Acenaphthene	ND	12	2.9	5.9
Acenaphthylene	ND	12	2.9	5.9
Anthracene	ND	12	2.9	5.9
Benzo(a)anthracene	ND	12	2.9	5.9
Benzo(a)pyrene	ND	12	2.9	5.9
Benzo(b)fluoranthene	ND	12	2.9	5.9
Benzo(g,h,i)perylene	ND	12	2.9	5.9
Benzo(k)fluoranthene	ND	12	2.9	5.9
Benzoic Acid	ND	120	24	47
Benzyl Alcohol	ND	12	2.9	5.9
bis(2-Chloroisopropyl) ether	ND	12	2.9	5.9
bis(2-Chloroethoxy)methane	ND	12	2.9	5.9
bis(2-Chloroethyl) ether	ND	12	2.9	5.9
bis(2-Ethylhexyl) phthalate	ND	24	5.9	12
Butylbenzylphthalate	ND	12	2.9	5.9
Carbazole	ND	12	2.9	5.9
Chrysene	ND	12	2.9	5.9
Dibenzo(a,h)anthracene	ND	12	2.9	5.9
Dibenzofuran	ND	12	2.9	5.9
Diethylphthalate	ND	12	2.9	5.9
Dimethylphthalate	ND	12	2.9	5.9
Di-n-butyl phthalate	ND	12	2.9	5.9
Di-n-octyl phthalate	ND	12	2.9	5.9
Fluoranthene	ND	12	2.9	5.9
Fluorene	ND	12	2.9	5.9
Hexachlorobenzene	ND	12	2.9	5.9
Hexachlorobutadiene	ND	12	2.9	5.9
Hexachloroethane	ND	12	2.9	5.9
Indeno(1,2,3-cd)pyrene	ND	12	2.9	5.9
Isophorone	ND	12	2.9	5.9
Naphthalene	ND	12	2.9	5.9
Nitrobenzene	ND	12	2.9	5.9
N-Nitrosodimethylamine	ND	12	2.9	5.9
n-Nitroso-di-n-propylamine	ND	12	2.9	5.9
n-Nitrosodiphenylamine	ND	12	2.9	5.9
Pentachlorophenol	ND	24	2.9	5.9
Phenanthrene	ND	12	2.9	5.9
Phenol	ND	12	2.9	5.9
Pyrene	ND	12	2.9	5.9
Hexachlorocyclopentadiene	ND	12	2.9	5.9
Benzidine	ND	47	12	24
2,3,4,6-Tetrachlorophenol	ND	12	2.9	5.9
2,6-Dichlorophenol	ND	12	2.9	5.9

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	61.1	70.8	86	43-140
2-Fluorobiphenyl	22.4	23.6	95	44-119
2-Fluorophenol	45.1	70.8	64	19-119
Nitrobenzene-d5	22.9	23.6	97	44-120
Phenol-d5	52.8	70.8	75	40-130
Terphenyl-d14	30.0	23.6	127	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ414

Detection limits are reported relative to sample result significant figures.
Sample Amount : 850ml Final Volume : 2ml
Prepared by : POreto Analyzed by : KVu

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW35102023	Date Analyzed:	10/18/23 19:46
Lab Samp ID:	23J115-18	Dilution Factor:	1
Lab File ID:	RJJ441	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	2.9	5.9

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 850ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/15/23 13:30
Sample ID	: MW35102023	Date Analyzed:	10/18/23 19:46
Lab Samp ID:	23J115-18	Dilution Factor:	1
Lab File ID:	RJJ441	Matrix:	WATER
Ext Btch ID:	23SVJ033W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	5.9	12
Benzaldehyde	ND	24	5.9	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 850ml	Final Volume :	2ml
Prepared by	: POreto	Analyzed by :	KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of fourteen(14) water samples were received on 10/11/23 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7J03B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VGH7J03L/VGH7J03C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. TPH-Gasoline was within MS QC limits in J115-01M/J115-01S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7J03B	1	NA	10/12/2312:33	10/12/2312:33	AJ12004A	AJ12003A	23VGH7J03	Method Blank
LCS1W	VGH7J03L	1	NA	10/12/2313:12	10/12/2313:12	AJ12005A	AJ12003A	23VGH7J03	Lab Control Sample (LCS)
LCD1W	VGH7J03C	1	NA	10/12/2313:52	10/12/2313:52	AJ12006A	AJ12003A	23VGH7J03	LCS Duplicate
MW30102023	J115-01	1	NA	10/12/2320:27	10/12/2320:27	AJ12016A	AJ12015A	23VGH7J03	Field Sample
MW30102023MS	J115-01M	1	NA	10/12/2321:06	10/12/2321:06	AJ12017A	AJ12015A	23VGH7J03	Matrix Spike Sample (MS)
MW30102023MSD	J115-01S	1	NA	10/12/2321:46	10/12/2321:46	AJ12018A	AJ12015A	23VGH7J03	MS Duplicate (MSD)
MW26102023	J115-02	1	NA	10/12/2322:25	10/12/2322:25	AJ12019A	AJ12015A	23VGH7J03	Field Sample
MW34102023	J115-03	1	NA	10/12/2323:05	10/12/2323:05	AJ12020A	AJ12015A	23VGH7J03	Field Sample
TMW53102023	J115-05	1	NA	10/12/2323:44	10/12/2323:44	AJ12021A	AJ12015A	23VGH7J03	Field Sample
MW33102023	J115-06	1	NA	10/13/2300:23	10/13/2300:23	AJ12022A	AJ12015A	23VGH7J03	Field Sample
MW31102023	J115-07	1	NA	10/13/2301:03	10/13/2301:03	AJ12023A	AJ12015A	23VGH7J03	Field Sample
TMW57102023	J115-08	1	NA	10/13/2301:42	10/13/2301:42	AJ12024A	AJ12015A	23VGH7J03	Field Sample
MW27102023	J115-09	1	NA	10/13/2302:21	10/13/2302:21	AJ12025A	AJ12015A	23VGH7J03	Field Sample
TMW61102023	J115-10	1	NA	10/13/2303:40	10/13/2303:40	AJ12027A	AJ12026A	23VGH7J03	Field Sample
MW39102023	J115-11	1	NA	10/13/2304:19	10/13/2304:19	AJ12028A	AJ12026A	23VGH7J03	Field Sample
MW38102023	J115-12	1	NA	10/13/2304:59	10/13/2304:59	AJ12029A	AJ12026A	23VGH7J03	Field Sample
TMW59102023	J115-15	1	NA	10/13/2305:38	10/13/2305:38	AJ12030A	AJ12026A	23VGH7J03	Field Sample
MW35102023	J115-18	1	NA	10/13/2306:17	10/13/2306:17	AJ12031A	AJ12026A	23VGH7J03	Field Sample
QC09102023TB	J115-19	1	NA	10/13/2306:56	10/13/2306:56	AJ12032A	AJ12026A	23VGH7J03	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12/23 20:27
Sample ID	: MW30102023	Date Analyzed:	10/12/23 20:27
Lab Samp ID:	J115-01	Dilution Factor:	1
Lab File ID:	AJ12016A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12015A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.0	40.0	90	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12/23 22:25
Sample ID	: MW26102023	Date Analyzed:	10/12/23 22:25
Lab Samp ID:	J115-02	Dilution Factor:	1
Lab File ID:	AJ12019A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12015A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.9	40.0	92	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12/23 23:05
Sample ID	: MW34102023	Date Analyzed:	10/12/23 23:05
Lab Samp ID:	J115-03	Dilution Factor:	1
Lab File ID:	AJ12020A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12015A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	38.6	40.0	96	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12/23 23:44
Sample ID	: TMW53102023	Date Analyzed:	10/12/23 23:44
Lab Samp ID:	J115-05	Dilution Factor:	1
Lab File ID:	AJ12021A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12015A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.2	40.0	90	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 00:23
Sample ID	: MW33102023	Date Analyzed:	10/13/23 00:23
Lab Samp ID:	J115-06	Dilution Factor:	1
Lab File ID:	AJ12022A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12015A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	35.5	40.0	89	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 01:03
Sample ID	: MW31102023	Date Analyzed:	10/13/23 01:03
Lab Samp ID:	J115-07	Dilution Factor:	1
Lab File ID:	AJ12023A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12015A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	14J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.9	40.0	95	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 01:42
Sample ID	: TMW57102023	Date Analyzed:	10/13/23 01:42
Lab Samp ID:	J115-08	Dilution Factor:	1
Lab File ID:	AJ12024A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12015A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	12J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.6	40.0	92	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 02:21
Sample ID	: MW27102023	Date Analyzed:	10/13/23 02:21
Lab Samp ID:	J115-09	Dilution Factor:	1
Lab File ID:	AJ12025A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12015A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	13J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.3	40.0	83	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 03:40
Sample ID	: TMW61102023	Date Analyzed:	10/13/23 03:40
Lab Samp ID:	J115-10	Dilution Factor:	1
Lab File ID:	AJ12027A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12026A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	35.5	40.0	89	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 04:19
Sample ID	: MW39102023	Date Analyzed:	10/13/23 04:19
Lab Samp ID:	J115-11	Dilution Factor:	1
Lab File ID:	AJ12028A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12026A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	18J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.8	40.0	92	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 04:59
Sample ID	: MW38102023	Date Analyzed:	10/13/23 04:59
Lab Samp ID:	J115-12	Dilution Factor:	1
Lab File ID:	AJ12029A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12026A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.6	40.0	94	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 05:38
Sample ID	: TMW59102023	Date Analyzed:	10/13/23 05:38
Lab Samp ID:	J115-15	Dilution Factor:	1
Lab File ID:	AJ12030A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12026A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	18J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.0	40.0	82	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 06:17
Sample ID	: MW35102023	Date Analyzed:	10/13/23 06:17
Lab Samp ID:	J115-18	Dilution Factor:	1
Lab File ID:	AJ12031A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12026A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	18J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	38.1	40.0	95	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:00
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 06:56
Sample ID	: QC09102023TB	Date Analyzed:	10/13/23 06:56
Lab Samp ID:	J115-19	Dilution Factor:	1
Lab File ID:	AJ12032A	Matrix:	WATER
Ext Btch ID:	23VGH7J03	% Moisture:	NA
Calib. Ref.:	AJ12026A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	51J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.3	40.0	93	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of thirteen(13) water samples were received on 10/11/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ016WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSJ016WL/DSJ016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ016WB	1	NA	10/14/2317:21	10/13/2313:30	LJ13059A	LJ13055A	23DSJ016W	Method Blank
LCS1W	DSJ016WL	1	NA	10/14/2317:39	10/13/2313:30	LJ13060A	LJ13055A	23DSJ016W	Lab Control Sample (LCS)
LCD1W	DSJ016WC	1	NA	10/14/2317:58	10/13/2313:30	LJ13061A	LJ13055A	23DSJ016W	LCS Duplicate
MW30102023	J115-01	1	NA	10/14/2320:09	10/13/2313:30	LJ13068A	LJ13055A	23DSJ016W	Field Sample
MW26102023	J115-02	1	NA	10/14/2320:27	10/13/2313:30	LJ13069A	LJ13055A	23DSJ016W	Field Sample
MW34102023	J115-03	1	NA	10/14/2320:46	10/13/2313:30	LJ13070A	LJ13055A	23DSJ016W	Field Sample
TMW53102023	J115-05	1	NA	10/14/2321:05	10/13/2313:30	LJ13071A	LJ13055A	23DSJ016W	Field Sample
MW33102023	J115-06	1	NA	10/14/2322:01	10/13/2313:30	LJ13074A	LJ13072A	23DSJ016W	Field Sample
MW31102023	J115-07	1	NA	10/14/2322:19	10/13/2313:30	LJ13075A	LJ13072A	23DSJ016W	Field Sample
TMW57102023	J115-08	1	NA	10/14/2322:38	10/13/2313:30	LJ13076A	LJ13072A	23DSJ016W	Field Sample
MW27102023	J115-09	1	NA	10/14/2322:57	10/13/2313:30	LJ13077A	LJ13072A	23DSJ016W	Field Sample
TMW61102023	J115-10	1	NA	10/14/2323:15	10/13/2313:30	LJ13078A	LJ13072A	23DSJ016W	Field Sample
MW39102023	J115-11	1	NA	10/14/2323:34	10/13/2313:30	LJ13079A	LJ13072A	23DSJ016W	Field Sample
MW38102023	J115-12	1	NA	10/14/2323:53	10/13/2313:30	LJ13080A	LJ13072A	23DSJ016W	Field Sample
TMW59102023	J115-15	1	NA	10/15/2300:11	10/13/2313:30	LJ13081A	LJ13072A	23DSJ016W	Field Sample
MW35102023	J115-18	1	NA	10/15/2300:30	10/13/2313:30	LJ13082A	LJ13072A	23DSJ016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW30102023	Date Analyzed:	10/14/23 20:09
Lab Samp ID:	23J115-01	Dilution Factor:	1
Lab File ID:	LJ13068A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.48	0.048	0.095

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.665	0.950	70	60-130
Hexacosane	0.230	0.238	97	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1050ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW26102023	Date Analyzed:	10/14/23 20:27
Lab Samp ID:	23J115-02	Dilution Factor:	1
Lab File ID:	LJ13069A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.54	0.054	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.763	1.08	71	60-130
Hexacosane	0.261	0.270	97	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW34102023	Date Analyzed:	10/14/23 20:46
Lab Samp ID:	23J115-03	Dilution Factor:	1
Lab File ID:	LJ13070A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.53	0.053	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.783	1.06	74	60-130
Hexacosane	0.265	0.265	100	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: TMW53102023	Date Analyzed:	10/14/23 21:05
Lab Samp ID:	23J115-05	Dilution Factor:	1
Lab File ID:	LJ13071A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13055A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.735	1.09	67	60-130
Hexacosane	0.250	0.273	92	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW33102023	Date Analyzed:	10/14/23 22:01
Lab Samp ID:	23J115-06	Dilution Factor:	1
Lab File ID:	LJ13074A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.783	1.09	72	60-130
Hexacosane	0.250	0.273	92	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW31102023	Date Analyzed:	10/14/23 22:19
Lab Samp ID:	23J115-07	Dilution Factor:	1
Lab File ID:	LJ13075A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.50	0.050	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.684	1.00	68	60-130
Hexacosane	0.262	0.250	105	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: TMW57102023	Date Analyzed:	10/14/23 22:38
Lab Samp ID:	23J115-08	Dilution Factor:	1
Lab File ID:	LJ13076A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.747	1.10	68	60-130
Hexacosane	0.249	0.275	91	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW27102023	Date Analyzed:	10/14/23 22:57
Lab Samp ID:	23J115-09	Dilution Factor:	1
Lab File ID:	LJ13077A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.50	0.050	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.707	1.00	71	60-130
Hexacosane	0.240	0.250	96	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1000ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: TMW61102023	Date Analyzed:	10/14/23 23:15
Lab Samp ID:	23J115-10	Dilution Factor:	1
Lab File ID:	LJ13078A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.747	1.10	68	60-130
Hexacosane	0.251	0.275	91	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW39102023	Date Analyzed:	10/14/23 23:34
Lab Samp ID:	23J115-11	Dilution Factor:	1
Lab File ID:	LJ13079A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.58	0.058	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.820	1.16	71	60-130
Hexacosane	0.271	0.290	93	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 860ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW38102023	Date Analyzed:	10/14/23 23:53
Lab Samp ID:	23J115-12	Dilution Factor:	1
Lab File ID:	LJ13080A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.58	0.058	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.816	1.15	71	60-130
Hexacosane	0.271	0.288	94	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: TMW59102023	Date Analyzed:	10/15/23 00:11
Lab Samp ID:	23J115-15	Dilution Factor:	1
Lab File ID:	LJ13081A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.58	0.058	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.804	1.16	69	60-130
Hexacosane	0.260	0.290	90	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 860ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 13:30
Sample ID	: MW35102023	Date Analyzed:	10/15/23 00:30
Lab Samp ID:	23J115-18	Dilution Factor:	1
Lab File ID:	LJ13082A	Matrix:	WATER
Ext Btch ID:	23DSJ016W	% Moisture:	NA
Calib. Ref.:	LJ13072A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.49	0.049	0.098

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.655	0.980	67	60-130
Hexacosane	0.216	0.245	88	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1020ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW3520C/8081B
PESTICIDES

A total of seventeen(17) water samples were received on 10/11/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ021WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ021WL/CPJ021WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : E8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ021WB	1	NA	11/16/2301:28	10/16/2312:30	MK15040	MK15038	23CPJ021W	Method Blank
LCS1W	CPJ021WL	1	NA	11/16/2301:51	10/16/2312:30	MK15041	MK15038	23CPJ021W	Lab Control Sample (LCS)
LCD1W	CPJ021WC	1	NA	11/16/2302:14	10/16/2312:30	MK15042	MK15038	23CPJ021W	LCS Duplicate
MW30102023	J115-01	1	NA	11/16/2303:23	10/16/2312:30	MK15045	MK15038	23CPJ021W	Field Sample
MW26102023	J115-02	1	NA	11/16/2303:45	10/16/2312:30	MK15046	MK15038	23CPJ021W	Field Sample
MW34102023	J115-03	1	NA	11/16/2304:08	10/16/2312:30	MK15047	MK15038	23CPJ021W	Field Sample
TMW53102023	J115-05	1	NA	11/16/2304:31	10/16/2312:30	MK15048	MK15038	23CPJ021W	Field Sample
MW33102023	J115-06	1	NA	11/16/2304:54	10/16/2312:30	MK15049	MK15038	23CPJ021W	Field Sample
MW31102023	J115-07	1	NA	11/16/2306:25	10/16/2312:30	MK15053	MK15051	23CPJ021W	Field Sample
TMW57102023	J115-08	1	NA	11/16/2306:48	10/16/2312:30	MK15054	MK15051	23CPJ021W	Field Sample
MW27102023	J115-09	1	NA	11/16/2307:11	10/16/2312:30	MK15055	MK15051	23CPJ021W	Field Sample
TMW61102023	J115-10	1	NA	11/16/2307:34	10/16/2312:30	MK15056	MK15051	23CPJ021W	Field Sample
MW39102023	J115-11	1	NA	11/16/2307:57	10/16/2312:30	MK15057	MK15051	23CPJ021W	Field Sample
MW38102023	J115-12	1	NA	11/16/2308:20	10/16/2312:30	MK15058	MK15051	23CPJ021W	Field Sample
TMW24102023	J115-13	1	NA	11/16/2308:42	10/16/2312:30	MK15059	MK15051	23CPJ021W	Field Sample
FW31102023	J115-14	1	NA	11/16/2309:05	10/16/2312:30	MK15060	MK15051	23CPJ021W	Field Sample
TMW59102023	J115-15	1	NA	11/16/2309:28	10/16/2312:30	MK15061	MK15051	23CPJ021W	Field Sample
TMW39D102023	J115-16	1	NA	11/20/2319:09	10/16/2312:30	MK20010	MK20003	23CPJ021W	Field Sample
TMW49102023	J115-17	1	NA	11/20/2319:32	10/16/2312:30	MK20011	MK20003	23CPJ021W	Field Sample
MW35102023	J115-18	1	NA	11/20/2319:54	10/16/2312:30	MK20012	MK20003	23CPJ021W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : MW30102023
Lab Samp ID: J115-01
Lab File ID: MK15045
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15038

Date Collected: 10/09/23 07:35
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 03:23
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.045
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.045
beta-BHC	(ND) | ND	0.11	0.022	0.045
Heptachlor	(ND) | ND	0.11	0.022	0.045
delta-BHC	(ND) | ND	0.11	0.022	0.045
Aldrin	(ND) | ND	0.11	0.022	0.045
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.045
gamma-Chlordane	(ND) | ND	0.11	0.022	0.045
alpha-Chlordane	(ND) | ND	0.11	0.022	0.045
Endosulfan I	(ND) | ND	0.11	0.022	0.045
4,4'-DDE	(ND) | ND	0.11	0.022	0.045
Dieldrin	(ND) | ND	0.11	0.022	0.045
Endrin	(ND) | ND	0.11	0.022	0.045
4,4'-DDD	(ND) | ND	0.11	0.022	0.045
Endosulfan II	(ND) | ND	0.11	0.022	0.045
4,4'-DDT	(ND) | ND	0.11	0.022	0.045
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.045
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.045
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.045

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.250) | 0.231	0.449	56	44-124
Decachlorobiphenyl	(0.427) | 0.344	0.449	95	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15039

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/16/23 12:30
Sample ID	: MW26102023	Date Analyzed:	11/16/23 03:45
Lab Samp ID:	J115-02	Dilution Factor:	1
Lab File ID:	MK15046	Matrix:	WATER
Ext Btch ID:	23CPJ021W	% Moisture:	NA
Calib. Ref.:	MK15038	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.27	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.280) | 0.249	0.435	64	44-124
Decachlorobiphenyl	(0.403) | 0.325	0.435	93	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15039

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : MW34102023
Lab Samp ID: J115-03
Lab File ID: MK15047
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15038

Date Collected: 10/09/23 08:15
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 04:08
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.11	0.021	0.042
beta-BHC	(ND) | ND	0.11	0.021	0.042
Heptachlor	(ND) | ND	0.11	0.021	0.042
delta-BHC	(ND) | ND	0.11	0.021	0.042
Aldrin	(ND) | ND	0.11	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.11	0.021	0.042
gamma-Chlordane	(ND) | ND	0.11	0.021	0.042
alpha-Chlordane	(ND) | ND	0.11	0.021	0.042
Endosulfan I	(ND) | ND	0.11	0.021	0.042
4,4'-DDE	(ND) | ND	0.11	0.021	0.042
Dieldrin	(ND) | ND	0.11	0.021	0.042
Endrin	(ND) | ND	0.11	0.021	0.042
4,4'-DDD	(ND) | ND	0.11	0.021	0.042
Endosulfan II	(ND) | ND	0.11	0.021	0.042
4,4'-DDT	(ND) | ND	0.11	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.11	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.11	0.021	0.042
Methoxychlor	(ND) | ND	1.1	0.11	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.53
Endrin Ketone	(ND) | ND	0.11	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.286) | 0.259	0.425	67	44-124
Decachlorobipheny1	(0.392) | 0.329	0.425	92	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml
Prepared by : RGalan
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15039

Final Volume : 10ml
Analyzed by : EKim

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : TMW53102023
Lab Samp ID: J115-05
Lab File ID: MK15048
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15038

Date Collected: 10/09/23 08:20
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 04:31
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.264) | 0.239	0.444	59	44-124
Decachlorobiphenyl	(0.413) | 0.330	0.444	93	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15039

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : MW33102023
Lab Samp ID: J115-06
Lab File ID: MK15049
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15038

Date Collected: 10/09/23 08:40
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 04:54
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.041
beta-BHC	(ND) | ND	0.10	0.021	0.041
Heptachlor	(ND) | ND	0.10	0.021	0.041
delta-BHC	(ND) | ND	0.10	0.021	0.041
Aldrin	(ND) | ND	0.10	0.021	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.041
gamma-Chlordane	(ND) | ND	0.10	0.021	0.041
alpha-Chlordane	(ND) | ND	0.10	0.021	0.041
Endosulfan I	(ND) | ND	0.10	0.021	0.041
4,4'-DDE	(ND) | ND	0.10	0.021	0.041
Dieldrin	(ND) | ND	0.10	0.021	0.041
Endrin	(ND) | ND	0.10	0.021	0.041
4,4'-DDD	(ND) | ND	0.10	0.021	0.041
Endosulfan II	(ND) | ND	0.10	0.021	0.041
4,4'-DDT	(ND) | ND	0.10	0.021	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.256) | 0.234	0.412	62	44-124
Decachlorobipheny1	(0.383) | 0.313	0.412	93	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15039

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : MW31102023
Lab Samp ID: J115-07
Lab File ID: MK15053
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15051

Date Collected: 10/09/23 09:10
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 06:25
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.041
beta-BHC	(ND) | ND	0.10	0.020	0.041
Heptachlor	(ND) | ND	0.10	0.020	0.041
delta-BHC	(ND) | ND	0.10	0.020	0.041
Aldrin	(ND) | ND	0.10	0.020	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.041
gamma-Chlordane	(ND) | ND	0.10	0.020	0.041
alpha-Chlordane	(ND) | ND	0.10	0.020	0.041
Endosulfan I	(ND) | ND	0.10	0.020	0.041
4,4'-DDE	(ND) | ND	0.10	0.020	0.041
Dieldrin	(ND) | ND	0.10	0.020	0.041
Endrin	(ND) | ND	0.10	0.020	0.041
4,4'-DDD	(ND) | ND	0.10	0.020	0.041
Endosulfan II	(ND) | ND	0.10	0.020	0.041
4,4'-DDT	(ND) | ND	0.10	0.020	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.51
Endrin Ketone	(ND) | ND	0.10	0.020	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.274) | 0.246	0.408	67	44-124
Decachlorobiphenyl	(0.400) | 0.322	0.408	98	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 980ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15052

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : TMW57102023
Lab Samp ID: J115-08
Lab File ID: MK15054
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15051

Date Collected: 10/09/23 09:10
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 06:48
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.289) | 0.287	0.417	69	44-124
Decachlorobiphenyl	(0.431) | 0.344	0.417	103	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15052

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : MW27102023
Lab Samp ID: J115-09
Lab File ID: MK15055
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15051

Date Collected: 10/09/23 09:40
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 07:11
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.041
beta-BHC	(ND) | ND	0.10	0.020	0.041
Heptachlor	(ND) | ND	0.10	0.020	0.041
delta-BHC	(ND) | ND	0.10	0.020	0.041
Aldrin	(ND) | ND	0.10	0.020	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.041
gamma-Chlordane	(ND) | ND	0.10	0.020	0.041
alpha-Chlordane	(ND) | ND	0.10	0.020	0.041
Endosulfan I	(ND) | ND	0.10	0.020	0.041
4,4'-DDE	(ND) | ND	0.10	0.020	0.041
Dieldrin	(ND) | ND	0.10	0.020	0.041
Endrin	(ND) | ND	0.10	0.020	0.041
4,4'-DDD	(ND) | ND	0.10	0.020	0.041
Endosulfan II	(ND) | ND	0.10	0.020	0.041
4,4'-DDT	(ND) | ND	0.10	0.020	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.51
Endrin Ketone	(ND) | ND	0.10	0.020	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.284) | 0.259	0.408	70	44-124
Decachlorobiphenyl	(0.404) | 0.322	0.408	99	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 980ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15052

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : TMW61102023
Lab Samp ID: J115-10
Lab File ID: MK15056
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15051

Date Collected: 10/09/23 10:15
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 07:34
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.27	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.301) | 0.278	0.435	69	44-124
Decachlorobiphenyl	(0.446) | 0.353	0.435	103	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15052

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : MW39102023
Lab Samp ID: J115-11
Lab File ID: MK15057
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15051

Date Collected: 10/09/23 10:15
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 07:57
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | ND	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.309) | 0.288	0.400	77	44-124
Decachlorobiphenyl	(0.413) | 0.335	0.400	103	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml
Prepared by : RGalan
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15052

Final Volume : 10ml
Analyzed by : EKim

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : MW38102023
Lab Samp ID: J115-12
Lab File ID: MK15058
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15051

Date Collected: 10/09/23 10:45
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 08:20
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.041
beta-BHC	(ND) | ND	0.10	0.020	0.041
Heptachlor	(ND) | ND	0.10	0.020	0.041
delta-BHC	(ND) | ND	0.10	0.020	0.041
Aldrin	(ND) | ND	0.10	0.020	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.041
gamma-Chlordane	(ND) | ND	0.10	0.020	0.041
alpha-Chlordane	(ND) | ND	0.10	0.020	0.041
Endosulfan I	(ND) | ND	0.10	0.020	0.041
4,4'-DDE	(ND) | ND	0.10	0.020	0.041
Dieldrin	(ND) | ND	0.10	0.020	0.041
Endrin	(ND) | ND	0.10	0.020	0.041
4,4'-DDD	(ND) | ND	0.10	0.020	0.041
Endosulfan II	(ND) | ND	0.10	0.020	0.041
4,4'-DDT	(ND) | ND	0.10	0.020	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.51
Endrin Ketone	(ND) | ND	0.10	0.020	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.312) | 0.284	0.408	77	44-124
Decachlorobiphenyl	(0.408) | 0.322	0.408	100	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 980ml
Prepared by : RGalan
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15052

Final Volume : 10ml
Analyzed by : EKim

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : TMW24102023
Lab Samp ID: J115-13
Lab File ID: MK15059
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15051

Date Collected: 10/09/23 10:55
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 08:42
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.11	0.021	0.042
beta-BHC	(ND) | ND	0.11	0.021	0.042
Heptachlor	(ND) | ND	0.11	0.021	0.042
delta-BHC	(ND) | ND	0.11	0.021	0.042
Aldrin	(ND) | ND	0.11	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.11	0.021	0.042
gamma-Chlordane	(ND) | ND	0.11	0.021	0.042
alpha-Chlordane	(ND) | ND	0.11	0.021	0.042
Endosulfan I	(ND) | ND	0.11	0.021	0.042
4,4'-DDE	(ND) | ND	0.11	0.021	0.042
Dieldrin	(ND) | ND	0.11	0.021	0.042
Endrin	(ND) | ND	0.11	0.021	0.042
4,4'-DDD	(ND) | ND	0.11	0.021	0.042
Endosulfan II	(ND) | ND	0.11	0.021	0.042
4,4'-DDT	(ND) | ND	0.11	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.11	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.11	0.021	0.042
Methoxychlor	(ND) | ND	1.1	0.11	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.53
Endrin Ketone	(ND) | ND	0.11	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.275) | 0.256	0.426	65	44-124
Decachlorobiphenyl	(0.423) | 0.338	0.426	99	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml
Prepared by : RGalan
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15052

Final Volume : 10ml
Analyzed by : EKim

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 11:15
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID : FW31102023	Date Analyzed: 11/16/23 09:05
Lab Samp ID: J115-14	Dilution Factor: 1
Lab File ID: MK15060	Matrix: WATER
Ext Btch ID: 23CPJ021W	% Moisture: NA
Calib. Ref.: MK15051	Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.11	0.021	0.042
beta-BHC	(ND) | ND	0.11	0.021	0.042
Heptachlor	(ND) | ND	0.11	0.021	0.042
delta-BHC	(ND) | ND	0.11	0.021	0.042
Aldrin	(ND) | ND	0.11	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.11	0.021	0.042
gamma-Chlordane	(ND) | ND	0.11	0.021	0.042
alpha-Chlordane	(ND) | ND	0.11	0.021	0.042
Endosulfan I	(ND) | ND	0.11	0.021	0.042
4,4'-DDE	(ND) | ND	0.11	0.021	0.042
Dieldrin	(ND) | ND	0.11	0.021	0.042
Endrin	(ND) | ND	0.11	0.021	0.042
4,4'-DDD	(ND) | ND	0.11	0.021	0.042
Endosulfan II	(ND) | ND	0.11	0.021	0.042
4,4'-DDT	(ND) | ND	0.11	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.11	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.11	0.021	0.042
Methoxychlor	(ND) | ND	1.1	0.11	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.53
Endrin Ketone	(ND) | ND	0.11	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.277) | 0.251	0.426	65	44-124
Decachlorobiphenyl	(0.425) | 0.336	0.426	100	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 940ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: MK15052	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID : TMW59102023
Lab Samp ID: J115-15
Lab File ID: MK15061
Ext Btch ID: 23CPJ021W
Calib. Ref.: MK15051

Date Collected: 10/09/23 11:30
Date Received: 10/11/23
Date Extracted: 10/16/23 12:30
Date Analyzed: 11/16/23 09:28
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.27	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.337) | 0.269	0.435	77	44-124
Decachlorobiphenyl	(0.414) | 0.333	0.435	95	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml
Prepared by : RGalan
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK15052

Final Volume : 10ml
Analyzed by : EKim

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 13:30
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID : TMW39D102023	Date Analyzed: 11/20/23 19:09
Lab Samp ID: J115-16	Dilution Factor: 1
Lab File ID: MK20010	Matrix: WATER
Ext Btch ID: 23CPJ021W	% Moisture: NA
Calib. Ref.: MK20003	Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | 0.088J	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.51
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.248) | 0.242	0.404	61	44-124
Decachlorobiphenyl	(0.397) | 0.321	0.404	98	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 990ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: MK20004	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 13:55
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID : TMW49102023	Date Analyzed: 11/20/23 19:32
Lab Samp ID: J115-17	Dilution Factor: 1
Lab File ID: MK20011	Matrix: WATER
Ext Btch ID: 23CPJ021W	% Moisture: NA
Calib. Ref.: MK20003	Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.11	0.021	0.042
beta-BHC	(ND) | ND	0.11	0.021	0.042
Heptachlor	(ND) | ND	0.11	0.021	0.042
delta-BHC	(ND) | ND	0.11	0.021	0.042
Aldrin	(ND) | ND	0.11	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.11	0.021	0.042
gamma-Chlordane	(ND) | ND	0.11	0.021	0.042
alpha-Chlordane	(ND) | ND	0.11	0.021	0.042
Endosulfan I	(ND) | ND	0.11	0.021	0.042
4,4'-DDE	(ND) | ND	0.11	0.021	0.042
Dieldrin	(ND) | ND	0.11	0.021	0.042
Endrin	(ND) | ND	0.11	0.021	0.042
4,4'-DDD	(ND) | ND	0.11	0.021	0.042
Endosulfan II	(ND) | ND	0.11	0.021	0.042
4,4'-DDT	(ND) | ND	0.11	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.11	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.11	0.021	0.042
Methoxychlor	(ND) | ND	1.1	0.11	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.53
Endrin Ketone	(ND) | ND	0.11	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.274 | (0.316)	0.426	74	44-124
Decachlorobiphenyl	(0.402) | 0.333	0.426	94	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 940ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK20004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 13:55
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID : MW35102023	Date Analyzed: 11/20/23 19:54
Lab Samp ID: J115-18	Dilution Factor: 1
Lab File ID: MK20012	Matrix: WATER
Ext Btch ID: 23CPJ021W	% Moisture: NA
Calib. Ref.: MK20003	Instrument ID: E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | 0.020J	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.232) | 0.219	0.400	58	44-124
Decachlorobiphenyl	(0.375) | 0.304	0.400	94	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml	Final Volume : 10ml
Prepared by : RGalan	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK20004

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW3520C/8082A
PCBS

A total of thirteen(13) water samples were received on 10/11/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ021WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 60J021WL/60J021WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PCBs

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : 71

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ021WB	1	NA	10/17/2315:13	10/16/2312:30	KJ17011A	KJ17002A	CPJ021W	Method Blank
LCS1W	60J021WL	1	NA	10/17/2315:33	10/16/2312:30	KJ17012A	KJ17002A	CPJ021W	Lab Control Sample (LCS)
LCD1W	60J021WC	1	NA	10/17/2315:53	10/16/2312:30	KJ17013A	KJ17002A	CPJ021W	LCS Duplicate
MW30102023	J115-01	1.12	NA	10/17/2317:13	10/16/2312:30	KJ17017A	KJ17015A	CPJ021W	Field Sample
MW26102023	J115-02	1.09	NA	10/17/2317:33	10/16/2312:30	KJ17018A	KJ17015A	CPJ021W	Field Sample
MW34102023	J115-03	1.06	NA	10/17/2317:54	10/16/2312:30	KJ17019A	KJ17015A	CPJ021W	Field Sample
TMW53102023	J115-05	1.11	NA	10/17/2318:14	10/16/2312:30	KJ17020A	KJ17015A	CPJ021W	Field Sample
MW33102023	J115-06	1.03	NA	10/17/2318:34	10/16/2312:30	KJ17021A	KJ17015A	CPJ021W	Field Sample
MW31102023	J115-07	1.02	NA	10/17/2318:54	10/16/2312:30	KJ17022A	KJ17015A	CPJ021W	Field Sample
TMW57102023	J115-08	1.04	NA	10/17/2319:14	10/16/2312:30	KJ17023A	KJ17015A	CPJ021W	Field Sample
MW27102023	J115-09	1.02	NA	10/17/2319:34	10/16/2312:30	KJ17024A	KJ17015A	CPJ021W	Field Sample
TMW61102023	J115-10	1.09	NA	10/17/2319:54	10/16/2312:30	KJ17025A	KJ17015A	CPJ021W	Field Sample
MW39102023	J115-11	1	NA	10/17/2320:14	10/16/2312:30	KJ17026A	KJ17015A	CPJ021W	Field Sample
MW38102023	J115-12	1.02	NA	10/17/2321:34	10/16/2312:30	KJ17030A	KJ17028A	CPJ021W	Field Sample
TMW59102023	J115-15	1.09	NA	10/17/2322:34	10/16/2312:30	KJ17033A	KJ17028A	CPJ021W	Field Sample
MW35102023	J115-18	1	NA	10/17/2323:33	10/16/2312:30	KJ17036A	KJ17028A	CPJ021W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/09/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J115	Date Extracted	: 10/16/23 12:30
Sample ID	: MW30102023	Date Analyzed	: 10/17/23 17:13
Lab Samp ID	: J115-01	Dilution Factor	: 1.12
Lab File ID	: KJ17017A	Matrix	: WATER
Ext Btch ID	: CPJ021W	% Moisture	: NA
Calib. Ref.	: KJ17015A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.56
PCB-1221	(ND)|ND	1.1	0.28	0.56
PCB-1232	(ND)|ND	1.1	0.28	0.56
PCB-1242	(ND)|ND	1.1	0.28	0.56
PCB-1248	(ND)|ND	1.1	0.28	0.56
PCB-1254	(ND)|ND	1.1	0.28	0.56
PCB-1260	(ND)|ND	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.5013)|0.4323	0.4480	(112)|96.5	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/09/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J115	Date Extracted	: 10/16/23 12:30
Sample ID	: MW26102023	Date Analyzed	: 10/17/23 17:33
Lab Samp ID	: J115-02	Dilution Factor	: 1.09
Lab File ID	: KJ17018A	Matrix	: WATER
Ext Btch ID	: CPJ021W	% Moisture	: NA
Calib. Ref.	: KJ17015A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.27	0.55
PCB-1221	(ND)|ND	1.1	0.27	0.55
PCB-1232	(ND)|ND	1.1	0.27	0.55
PCB-1242	(ND)|ND	1.1	0.27	0.55
PCB-1248	(ND)|ND	1.1	0.27	0.55
PCB-1254	(ND)|ND	1.1	0.27	0.55
PCB-1260	(ND)|ND	1.1	0.27	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4964)|0.4219	0.4360	(114)|96.8	40-135

Left of | is related to first column : Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID: MW34102023	Date Analyzed: 10/17/23 17:54
Lab Samp ID: J115-03	Dilution Factor: 1.06
Lab File ID: KJ17019A	Matrix : WATER
Ext Btch ID: CPJ021W	% Moisture : NA
Calib. Ref.: KJ17015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.26	0.53
PCB-1221	(ND)|ND	1.1	0.26	0.53
PCB-1232	(ND)|ND	1.1	0.26	0.53
PCB-1242	(ND)|ND	1.1	0.26	0.53
PCB-1248	(ND)|ND	1.1	0.26	0.53
PCB-1254	(ND)|ND	1.1	0.26	0.53
PCB-1260	(ND)|ND	1.1	0.26	0.53

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4721)|0.4029	0.4240	(111)|95.0	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/09/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J115	Date Extracted	: 10/16/23 12:30
Sample ID	: TMW53102023	Date Analyzed	: 10/17/23 18:14
Lab Samp ID	: J115-05	Dilution Factor	: 1.11
Lab File ID	: KJ17020A	Matrix	: WATER
Ext Btch ID	: CPJ021W	% Moisture	: NA
Calib. Ref.	: KJ17015A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.56
PCB-1221	(ND)|ND	1.1	0.28	0.56
PCB-1232	(ND)|ND	1.1	0.28	0.56
PCB-1242	(ND)|ND	1.1	0.28	0.56
PCB-1248	(ND)|ND	1.1	0.28	0.56
PCB-1254	(ND)|ND	1.1	0.28	0.56
PCB-1260	(ND)|ND	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.5047)|0.4330	0.4440	(114)|97.5	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID: MW33102023	Date Analyzed: 10/17/23 18:34
Lab Samp ID: J115-06	Dilution Factor: 1.03
Lab File ID: KJ17021A	Matrix : WATER
Ext Btch ID: CPJ021W	% Moisture : NA
Calib. Ref.: KJ17015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4650)|0.3889	0.4120	(113)|94.4	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID: MW31102023	Date Analyzed: 10/17/23 18:54
Lab Samp ID: J115-07	Dilution Factor: 1.02
Lab File ID: KJ17022A	Matrix : WATER
Ext Btch ID: CPJ021W	% Moisture : NA
Calib. Ref.: KJ17015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.51
PCB-1221	(ND)|ND	1.0	0.25	0.51
PCB-1232	(ND)|ND	1.0	0.25	0.51
PCB-1242	(ND)|ND	1.0	0.25	0.51
PCB-1248	(ND)|ND	1.0	0.25	0.51
PCB-1254	(ND)|ND	1.0	0.25	0.51
PCB-1260	(ND)|ND	1.0	0.25	0.51

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4516)|0.3883	0.4080	(111)|95.2	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID: TMW57102023	Date Analyzed: 10/17/23 19:14
Lab Samp ID: J115-08	Dilution Factor: 1.04
Lab File ID: KJ17023A	Matrix : WATER
Ext Btch ID: CPJ021W	% Moisture : NA
Calib. Ref.: KJ17015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4763)|0.4075	0.4160	(114)|98.0	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/09/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J115	Date Extracted	: 10/16/23 12:30
Sample ID	: MW27102023	Date Analyzed	: 10/17/23 19:34
Lab Samp ID	: J115-09	Dilution Factor	: 1.02
Lab File ID	: KJ17024A	Matrix	: WATER
Ext Btch ID	: CPJ021W	% Moisture	: NA
Calib. Ref.	: KJ17015A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.51
PCB-1221	(ND)|ND	1.0	0.25	0.51
PCB-1232	(ND)|ND	1.0	0.25	0.51
PCB-1242	(ND)|ND	1.0	0.25	0.51
PCB-1248	(ND)|ND	1.0	0.25	0.51
PCB-1254	(ND)|ND	1.0	0.25	0.51
PCB-1260	(ND)|ND	1.0	0.25	0.51

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4483)|0.3916	0.4080	(110)|96.0	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID: TMW61102023	Date Analyzed: 10/17/23 19:54
Lab Samp ID: J115-10	Dilution Factor: 1.09
Lab File ID: KJ17025A	Matrix : WATER
Ext Btch ID: CPJ021W	% Moisture : NA
Calib. Ref.: KJ17015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.27	0.55
PCB-1221	(ND)|ND	1.1	0.27	0.55
PCB-1232	(ND)|ND	1.1	0.27	0.55
PCB-1242	(ND)|ND	1.1	0.27	0.55
PCB-1248	(ND)|ND	1.1	0.27	0.55
PCB-1254	(ND)|ND	1.1	0.27	0.55
PCB-1260	(ND)|ND	1.1	0.27	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4794)|0.4166	0.4360	(110)|95.6	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID: MW39102023	Date Analyzed: 10/17/23 20:14
Lab Samp ID: J115-11	Dilution Factor: 1
Lab File ID: KJ17026A	Matrix : WATER
Ext Btch ID: CPJ021W	% Moisture : NA
Calib. Ref.: KJ17015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.50
PCB-1221	(ND)|ND	1.0	0.25	0.50
PCB-1232	(ND)|ND	1.0	0.25	0.50
PCB-1242	(ND)|ND	1.0	0.25	0.50
PCB-1248	(ND)|ND	1.0	0.25	0.50
PCB-1254	(ND)|ND	1.0	0.25	0.50
PCB-1260	(ND)|ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4537)|0.3869	0.4000	(113)|96.7	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/09/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J115	Date Extracted	: 10/16/23 12:30
Sample ID	: MW38102023	Date Analyzed	: 10/17/23 21:34
Lab Samp ID	: J115-12	Dilution Factor	: 1.02
Lab File ID	: KJ17030A	Matrix	: WATER
Ext Btch ID	: CPJ021W	% Moisture	: NA
Calib. Ref.	: KJ17028A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.51
PCB-1221	(ND)|ND	1.0	0.25	0.51
PCB-1232	(ND)|ND	1.0	0.25	0.51
PCB-1242	(ND)|ND	1.0	0.25	0.51
PCB-1248	(ND)|ND	1.0	0.25	0.51
PCB-1254	(ND)|ND	1.0	0.25	0.51
PCB-1260	(ND)|ND	1.0	0.25	0.51

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4672)|0.3995	0.4080	(114)|97.9	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID: TMW59102023	Date Analyzed: 10/17/23 22:34
Lab Samp ID: J115-15	Dilution Factor: 1.09
Lab File ID: KJ17033A	Matrix : WATER
Ext Btch ID: CPJ021W	% Moisture : NA
Calib. Ref.: KJ17028A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.27	0.55
PCB-1221	(ND)|ND	1.1	0.27	0.55
PCB-1232	(ND)|ND	1.1	0.27	0.55
PCB-1242	(ND)|ND	1.1	0.27	0.55
PCB-1248	(ND)|ND	1.1	0.27	0.55
PCB-1254	(ND)|ND	1.1	0.27	0.55
PCB-1260	(ND)|ND	1.1	0.27	0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4813)|0.4172	0.4360	(110)|95.7	40-135

Left of | is related to first column : Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/16/23 12:30
Sample ID: MW35102023	Date Analyzed: 10/17/23 23:33
Lab Samp ID: J115-18	Dilution Factor: 1
Lab File ID: KJ17036A	Matrix : WATER
Ext Btch ID: CPJ021W	% Moisture : NA
Calib. Ref.: KJ17028A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.25	0.50
PCB-1221	(ND)|ND	1.0	0.25	0.50
PCB-1232	(ND)|ND	1.0	0.25	0.50
PCB-1242	(ND)|ND	1.0	0.25	0.50
PCB-1248	(ND)|ND	1.0	0.25	0.50
PCB-1254	(ND)|ND	1.0	0.25	0.50
PCB-1260	(ND)|ND	1.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4232)|0.3738	0.4000	(106)|93.4	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD 8151A
HERBICIDES

A total of thirteen(13) water samples were received on 10/11/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
Samples J115-01, J115-02, J115-03, J115-07, J115-08, J115-09, J115-10, J115-12, and J115-15 were re-extracted 3 days out of holding time due to low surrogate recoveries which were out of QC limits. All other samples were extracted and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, three(3) method blanks were analyzed. HEJ007WB, HEJ008WB and HEJ013WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, three(3) sets of LCS/LCD were analyzed. HEJ007WL/HEJ007WC, HEJ008WL/HEJ008WC and HEJ013WL/HEJ013WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J115
Project : USACE WINGATE Instrument ID : 16

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEJ007WB	1	NA	10/16/2322:57	10/12/2312:20	WJ16006A	WJ16002A	HEJ007W	Method Blank
LCS1W	HEJ007WL	1	NA	10/16/2323:25	10/12/2312:20	WJ16007A	WJ16002A	HEJ007W	Lab Control Sample (LCS)
LCD1W	HEJ007WC	1	NA	10/16/2323:54	10/12/2312:20	WJ16008A	WJ16002A	HEJ007W	LCS Duplicate
MBLK2W	HEJ008WB	1	NA	10/17/2320:13	10/13/2312:30	WJ17003A	WJ17002A	HEJ008W	Method Blank
LCS2W	HEJ008WL	1	NA	10/17/2320:42	10/13/2312:30	WJ17004A	WJ17002A	HEJ008W	Lab Control Sample (LCS)
LCD2W	HEJ008WC	1	NA	10/17/2321:10	10/13/2312:30	WJ17005A	WJ17002A	HEJ008W	LCS Duplicate
MBLK3W	HEJ013WB	1	NA	10/26/2321:42	10/19/2311:00	WJ26003A	WJ26002A	HEJ013W	Method Blank
LCS3W	HEJ013WL	1	NA	10/26/2322:10	10/19/2311:00	WJ26004A	WJ26002A	HEJ013W	Lab Control Sample (LCS)
LCD3W	HEJ013WC	1	NA	10/26/2322:39	10/19/2311:00	WJ26005A	WJ26002A	HEJ013W	LCS Duplicate
MW30102023	J115-01R	1	NA	10/26/2323:07	10/19/2311:00	WJ26006A	WJ26002A	HEJ013W	Field Sample
MW26102023	J115-02R	1	NA	10/26/2323:36	10/19/2311:00	WJ26007A	WJ26002A	HEJ013W	Field Sample
MW34102023	J115-03R	1	NA	10/27/2300:05	10/19/2311:00	WJ26008A	WJ26002A	HEJ013W	Field Sample
TMW53102023	J115-05	1	NA	10/17/2306:04	10/12/2312:20	WJ16021A	WJ16013A	HEJ007W	Field Sample
MW33102023	J115-06	1	NA	10/17/2306:32	10/12/2312:20	WJ16022A	WJ16013A	HEJ007W	Field Sample
MW31102023	J115-07R	1	NA	10/27/2300:33	10/19/2311:00	WJ26009A	WJ26002A	HEJ013W	Field Sample
TMW57102023	J115-08R	1	NA	10/27/2301:02	10/19/2311:00	WJ26010A	WJ26002A	HEJ013W	Field Sample
MW27102023	J115-09R	1	NA	10/27/2301:30	10/19/2311:00	WJ26011A	WJ26002A	HEJ013W	Field Sample
TMW61102023	J115-10R	1	NA	10/27/2301:59	10/19/2311:00	WJ26012A	WJ26002A	HEJ013W	Field Sample
MW39102023	J115-11	1	NA	10/18/2303:22	10/13/2312:30	WJ17018A	WJ17013A	HEJ008W	Field Sample
MW38102023	J115-12R	1	NA	10/27/2303:24	10/19/2311:00	WJ26015A	WJ26014A	HEJ013W	Field Sample
TMW59102023	J115-15R	1	NA	10/27/2303:52	10/19/2311:00	WJ26016A	WJ26014A	HEJ013W	Field Sample
MW35102023	J115-18	1	NA	10/18/2304:47	10/13/2312:30	WJ17021A	WJ17013A	HEJ008W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/19/23 11:00
Sample ID:	MW30102023	Date Analyzed:	10/26/23 23:07
Lab Samp ID:	J115-01R	Dilution Factor:	1
Lab File ID:	WJ26006A	Matrix :	WATER
Ext Btch ID:	HEJ013W	% Moisture :	NA
Calib. Ref.:	WJ26002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.16J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	31J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.811 | (8.984)	10.00	88.1 | (89.8)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/19/23 11:00
Sample ID: MW26102023	Date Analyzed: 10/26/23 23:36
Lab Samp ID: J115-02R	Dilution Factor: 1
Lab File ID: WJ26007A	Matrix : WATER
Ext Btch ID: HEJ013W	% Moisture : NA
Calib. Ref.: WJ26002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.23J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 1.0	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	65 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(9.262) | 9.221	10.00	(92.6) | 92.2	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/19/23 11:00
Sample ID: MW34102023	Date Analyzed: 10/27/23 00:05
Lab Samp ID: J115-03R	Dilution Factor: 1
Lab File ID: WJ26008A	Matrix : WATER
Ext Btch ID: HEJ013W	% Moisture : NA
Calib. Ref.: WJ26002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.16J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 0.88J	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	51 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.512 | (8.788)	10.00	85.1 | (87.9)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:20
Sample ID: TMW53102023	Date Analyzed: 10/17/23 06:04
Lab Samp ID: J115-05	Dilution Factor: 1
Lab File ID: WJ16021A	Matrix : WATER
Ext Btch ID: HEJ007W	% Moisture : NA
Calib. Ref.: WJ16013A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.18J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	71 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.561 | (9.103)	10.00	85.6 | (91.0)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:20
Sample ID: MW33102023	Date Analyzed: 10/17/23 06:32
Lab Samp ID: J115-06	Dilution Factor: 1
Lab File ID: WJ16022A	Matrix : WATER
Ext Btch ID: HEJ007W	% Moisture : NA
Calib. Ref.: WJ16013A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.12J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	78 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	5.195 | (5.498)	10.00	51.9 | (55.0)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/19/23 11:00
Sample ID: MW31102023	Date Analyzed: 10/27/23 00:33
Lab Samp ID: J115-07R	Dilution Factor: 1
Lab File ID: WJ26009A	Matrix : WATER
Ext Btch ID: HEJ013W	% Moisture : NA
Calib. Ref.: WJ26002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.14J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	57 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(8.880) | 8.853	10.00	(88.8) | 88.5	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/19/23 11:00
Sample ID: TMW57102023	Date Analyzed: 10/27/23 01:02
Lab Samp ID: J115-08R	Dilution Factor: 1
Lab File ID: WJ26010A	Matrix : WATER
Ext Btch ID: HEJ013W	% Moisture : NA
Calib. Ref.: WJ26002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.11J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 0.60J	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	32J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.518 | (8.699)	10.00	85.2 | (87.0)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/19/23 11:00
Sample ID: MW27102023	Date Analyzed: 10/27/23 01:30
Lab Samp ID: J115-09R	Dilution Factor: 1
Lab File ID: WJ26011A	Matrix : WATER
Ext Btch ID: HEJ013W	% Moisture : NA
Calib. Ref.: WJ26002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | ND	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 0.21J	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	32J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.843 | (9.111)	10.00	88.4 | (91.1)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/19/23 11:00
Sample ID: TMW61102023	Date Analyzed: 10/27/23 01:59
Lab Samp ID: J115-10R	Dilution Factor: 1
Lab File ID: WJ26012A	Matrix : WATER
Ext Btch ID: HEJ013W	% Moisture : NA
Calib. Ref.: WJ26002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.16J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	37J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.536 | (8.799)	10.00	85.4 | (88.0)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 12:30
Sample ID:	MW39102023	Date Analyzed:	10/18/23 03:22
Lab Samp ID:	J115-11	Dilution Factor:	1
Lab File ID:	WJ17018A	Matrix	: WATER
Ext Btch ID:	HEJ008W	% Moisture	: NA
Calib. Ref.:	WJ17013A	Instrument ID	: GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.13J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	51 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	5.074 | (5.268)	10.00	50.7 | (52.7)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/19/23 11:00
Sample ID: MW38102023	Date Analyzed: 10/27/23 03:24
Lab Samp ID: J115-12R	Dilution Factor: 1
Lab File ID: WJ26015A	Matrix : WATER
Ext Btch ID: HEJ013W	% Moisture : NA
Calib. Ref.: WJ26014A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.14J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | 0.21J	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	34J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.224 | (8.660)	10.00	82.2 | (86.6)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/19/23 11:00
Sample ID: TMW59102023	Date Analyzed: 10/27/23 03:52
Lab Samp ID: J115-15R	Dilution Factor: 1
Lab File ID: WJ26016A	Matrix : WATER
Ext Btch ID: HEJ013W	% Moisture : NA
Calib. Ref.: WJ26014A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | 0.17J	1.0	0.10	0.20
2,4-DB	(0.70J) | 0.50J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	110 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.584 | (10.61)	10.00	85.8 | (106)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 12:30
Sample ID: MW35102023	Date Analyzed: 10/18/23 04:47
Lab Samp ID: J115-18	Dilution Factor: 1
Lab File ID: WJ17021A	Matrix : WATER
Ext Btch ID: HEJ008W	% Moisture : NA
Calib. Ref.: WJ17013A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.14J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	56 | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.907 | (9.219)	10.00	89.1 | (92.2)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW8330B
EXPLOSIVES

A total of seventeen(17) water samples were received on 10/11/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. EXJ012WB and EXJ014WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- EXJ012WL/EXJ012WC were within LCS limits.
- EXJ014WL/EXJ014WC were within LCS limits.

Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW8330B
EXPLOSIVES

A total of seventeen(17) water samples were received on 10/11/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. EXJ012WB and EXJ014WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- 35J012WL/35J012WC were within LCS limits.
- 35J014WL/35J014WC were within LCS limits.

Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ012WB	1	NA	10/14/2306:31	10/12/2312:00	XJ10106A	XJ10102A	EXJ012W	Method Blank
LCS1W	EXJ012WL	1	NA	10/14/2307:27	10/12/2312:00	XJ10107A	XJ10102A	EXJ012W	Lab Control Sample (LCS)
LCD1W	EXJ012WC	1	NA	10/14/2308:16	10/12/2312:00	XJ10108A	XJ10102A	EXJ012W	LCS Duplicate
MBLK2W	EXJ014WB	1	NA	10/15/2301:45	10/13/2311:45	XJ10128A	XJ10126A	EXJ014W	Method Blank
LCS2W	EXJ014WL	1	NA	10/15/2302:42	10/13/2311:45	XJ10129A	XJ10126A	EXJ014W	Lab Control Sample (LCS)
LCD2W	EXJ014WC	1	NA	10/15/2303:30	10/13/2311:45	XJ10130A	XJ10126A	EXJ014W	LCS Duplicate
MW30102023	J115-01	1	NA	10/14/2310:57	10/12/2312:00	XJ10111A	XJ10102A	EXJ012W	Field Sample
MW26102023	J115-02	1	NA	10/14/2311:46	10/12/2312:00	XJ10112A	XJ10102A	EXJ012W	Field Sample
MW34102023	J115-03	1	NA	10/14/2312:42	10/12/2312:00	XJ10113A	XJ10102A	EXJ012W	Field Sample
TMW53102023	J115-05	1	NA	10/14/2313:31	10/12/2312:00	XJ10114A	XJ10102A	EXJ012W	Field Sample
MW33102023	J115-06	1	NA	10/14/2316:12	10/12/2312:00	XJ10117A	XJ10115A	EXJ012W	Field Sample
MW31102023	J115-07	1	NA	10/14/2317:00	10/12/2312:00	XJ10118A	XJ10115A	EXJ012W	Field Sample
TMW57102023	J115-08	1	NA	10/14/2317:57	10/12/2312:00	XJ10119A	XJ10115A	EXJ012W	Field Sample
MW27102023	J115-09	1	NA	10/14/2318:45	10/12/2312:00	XJ10120A	XJ10115A	EXJ012W	Field Sample
TMW61102023	J115-10	1	NA	10/14/2319:42	10/12/2312:00	XJ10121A	XJ10115A	EXJ012W	Field Sample
MW39102023	J115-11	1	NA	10/14/2320:30	10/12/2312:00	XJ10122A	XJ10115A	EXJ012W	Field Sample
MW38102023	J115-12	1	NA	10/14/2321:27	10/12/2312:00	XJ10123A	XJ10115A	EXJ012W	Field Sample
TMW24102023	J115-13	1	NA	10/14/2322:15	10/12/2312:00	XJ10124A	XJ10115A	EXJ012W	Field Sample
FW31102023	J115-14	1	NA	10/14/2323:12	10/12/2312:00	XJ10125A	XJ10115A	EXJ012W	Field Sample
TMW59102023	J115-15	1	NA	10/15/2314:57	10/13/2311:45	XJ10143A	XJ10138A	EXJ014W	Field Sample
TMW59102023DL	J115-15I	5	NA	10/17/2308:52	10/13/2311:45	XJ16019A	XJ16014A	EXJ014W	Diluted Sample
TMW39D102023	J115-16	1	NA	10/15/2315:45	10/13/2311:45	XJ10144A	XJ10138A	EXJ014W	Field Sample
TMW49102023	J115-17	1	NA	10/15/2316:42	10/13/2311:45	XJ10145A	XJ10138A	EXJ014W	Field Sample
MW35102023	J115-18	1	NA	10/15/2317:30	10/13/2311:45	XJ10146A	XJ10138A	EXJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ012WB	1	NA	10/14/2306:31	10/12 2312:00	XJ10106A	XJ10103A	EXJ012W	Method Blank
LCS1W	35J012WL	1	NA	10/14/2309:12	10/12 2312:00	XJ10109A	XJ10103A	EXJ012W	Lab Control Sample (LCS)
LCD1W	35J012WC	1	NA	10/14/2310:01	10/12 2312:00	XJ10110A	XJ10103A	EXJ012W	LCS Duplicate
MBLK2W	EXJ014WB	1	NA	10/15/2301:45	10/13/2311:45	XJ10128A	XJ10127A	EXJ014W	Method Blank
LCS2W	35J014WL	1	NA	10/15/2304:27	10/13/2311:45	XJ10131A	XJ10127A	EXJ014W	Lab Control Sample (LCS)
LCD2W	35J014WC	1	NA	10/15/2305:15	10/13/2311:45	XJ10132A	XJ10127A	EXJ014W	LCS Duplicate
MW30102023	J115-01	1	NA	10/14/2310:57	10/12 2312:00	XJ10111A	XJ10103A	EXJ012W	Field Sample
MW26102023	J115-02	1	NA	10/14/2311:46	10/12 2312:00	XJ10112A	XJ10103A	EXJ012W	Field Sample
MW34102023	J115-03	1	NA	10/14/2312:42	10/12 2312:00	XJ10113A	XJ10103A	EXJ012W	Field Sample
TMW53102023	J115-05	1	NA	10/14/2313:31	10/12 2312:00	XJ10114A	XJ10103A	EXJ012W	Field Sample
MW33102023	J115-06	1	NA	10/14/2316:12	10/12 2312:00	XJ10117A	XJ10116A	EXJ012W	Field Sample
MW31102023	J115-07	1	NA	10/14/2317:00	10/12 2312:00	XJ10118A	XJ10116A	EXJ012W	Field Sample
TMW57102023	J115-08	1	NA	10/14/2317:57	10/12 2312:00	XJ10119A	XJ10116A	EXJ012W	Field Sample
MW27102023	J115-09	1	NA	10/14/2318:45	10/12 2312:00	XJ10120A	XJ10116A	EXJ012W	Field Sample
TMW61102023	J115-10	1	NA	10/14/2319:42	10/12 2312:00	XJ10121A	XJ10116A	EXJ012W	Field Sample
MW39102023	J115-11	1	NA	10/14/2320:30	10/12 2312:00	XJ10122A	XJ10116A	EXJ012W	Field Sample
MW38102023	J115-12	1	NA	10/14/2321:27	10/12 2312:00	XJ10123A	XJ10116A	EXJ012W	Field Sample
TMW24102023	J115-13	1	NA	10/14/2322:15	10/12 2312:00	XJ10124A	XJ10116A	EXJ012W	Field Sample
FW31102023	J115-14	1	NA	10/14/2323:12	10/12 2312:00	XJ10125A	XJ10116A	EXJ012W	Field Sample
TMW59102023	J115-15	1	NA	10/15/2314:57	10/13/2311:45	XJ10143A	XJ10139A	EXJ014W	Field Sample
TMW39D102023	J115-16	1	NA	10/15/2315:45	10/13/2311:45	XJ10144A	XJ10139A	EXJ014W	Field Sample
TMW49102023	J115-17	1	NA	10/15/2316:42	10/13/2311:45	XJ10145A	XJ10139A	EXJ014W	Field Sample
MW35102023	J115-18	1	NA	10/15/2317:30	10/13/2311:45	XJ10146A	XJ10139A	EXJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: MW30102023	Date Analyzed: 10/14/23 10:57
Lab Samp ID: J115-01	Dilution Factor: 1
Lab File ID: XJ10111A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10102A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.47	4.000	86.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12 23 12:00
Sample ID: MW30102023	Date Analyzed: 10/14/23 10:57
Lab Samp ID: J115-01	Dilution Factor: 1
Lab File ID: XJ10111A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10103A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.47	4.000	86.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: MW26102023	Date Analyzed: 10/14/23 11:46
Lab Samp ID: J115-02	Dilution Factor: 1
Lab File ID: XJ10112A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10102A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.64	4.000	91.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12 23 12:00
Sample ID:	MW26102023	Date Analyzed:	10/14/23 11:46
Lab Samp ID:	J115-02	Dilution Factor:	1
Lab File ID:	XJ10112A	Matrix :	WATER
Ext Btch ID:	EXJ012W	% Moisture :	NA
Calib. Ref.:	XJ10103A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.64	4.000	91.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: MW34102023	Date Analyzed: 10/14/23 12:42
Lab Samp ID: J115-03	Dilution Factor: 1
Lab File ID: XJ10113A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10102A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.00	4.000	100	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12 23 12:00
Sample ID:	MW34102023	Date Analyzed:	10/14/23 12:42
Lab Samp ID:	J115-03	Dilution Factor:	1
Lab File ID:	XJ10113A	Matrix :	WATER
Ext Btch ID:	EXJ012W	% Moisture :	NA
Calib. Ref.:	XJ10103A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.00	4.000	100	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: TMW53102023	Date Analyzed: 10/14/23 13:31
Lab Samp ID: J115-05	Dilution Factor: 1
Lab File ID: XJ10114A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10102A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	93.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12 23 12:00
Sample ID: TMW53102023	Date Analyzed: 10/14/23 13:31
Lab Samp ID: J115-05	Dilution Factor: 1
Lab File ID: XJ10114A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10103A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.76	4.000	93.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: MW33102023	Date Analyzed: 10/14/23 16:12
Lab Samp ID: J115-06	Dilution Factor: 1
Lab File ID: XJ10117A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.70	4.000	92.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12 23 12:00
Sample ID: MW33102023	Date Analyzed: 10/14/23 16:12
Lab Samp ID: J115-06	Dilution Factor: 1
Lab File ID: XJ10117A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10116A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.70	4.000	92.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: MW31102023	Date Analyzed: 10/14/23 17:00
Lab Samp ID: J115-07	Dilution Factor: 1
Lab File ID: XJ10118A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.60	4.000	90.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12 23 12:00
Sample ID:	MW31102023	Date Analyzed:	10/14/23 17:00
Lab Samp ID:	J115-07	Dilution Factor:	1
Lab File ID:	XJ10118A	Matrix :	WATER
Ext Btch ID:	EXJ012W	% Moisture :	NA
Calib. Ref.:	XJ10116A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.60	4.000	90.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: TMW57102023	Date Analyzed: 10/14/23 17:57
Lab Samp ID: J115-08	Dilution Factor: 1
Lab File ID: XJ10119A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.61	4.000	90.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12 23 12:00
Sample ID: TMW57102023	Date Analyzed: 10/14/23 17:57
Lab Samp ID: J115-08	Dilution Factor: 1
Lab File ID: XJ10119A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10116A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.61	4.000	90.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: MW27102023	Date Analyzed: 10/14/23 18:45
Lab Samp ID: J115-09	Dilution Factor: 1
Lab File ID: XJ10120A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12 23 12:00
Sample ID:	MW27102023	Date Analyzed:	10/14/23 18:45
Lab Samp ID:	J115-09	Dilution Factor:	1
Lab File ID:	XJ10120A	Matrix :	WATER
Ext Btch ID:	EXJ012W	% Moisture :	NA
Calib. Ref.:	XJ10116A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: TMW61102023	Date Analyzed: 10/14/23 19:42
Lab Samp ID: J115-10	Dilution Factor: 1
Lab File ID: XJ10121A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.97	4.000	99.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12 23 12:00
Sample ID: TMW61102023	Date Analyzed: 10/14/23 19:42
Lab Samp ID: J115-10	Dilution Factor: 1
Lab File ID: XJ10121A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10116A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.97	4.000	99.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: MW39102023	Date Analyzed: 10/14/23 20:30
Lab Samp ID: J115-11	Dilution Factor: 1
Lab File ID: XJ10122A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.62	4.000	90.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12 23 12:00
Sample ID: MW39102023	Date Analyzed: 10/14/23 20:30
Lab Samp ID: J115-11	Dilution Factor: 1
Lab File ID: XJ10122A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10116A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.62	4.000	90.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: MW38102023	Date Analyzed: 10/14/23 21:27
Lab Samp ID: J115-12	Dilution Factor: 1
Lab File ID: XJ10123A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.50	4.000	87.6	60-140

Note: All positive results are confirmed by Biphenyl column.

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/09/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J115	Date Extracted	: 10/12 23 12:00
Sample ID	: MW38102023	Date Analyzed	: 10/14/23 21:27
Lab Samp ID	: J115-12	Dilution Factor	: 1
Lab File ID	: XJ10123A	Matrix	: WATER
Ext Btch ID	: EXJ012W	% Moisture	: NA
Calib. Ref.	: XJ10116A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.50	4.000	87.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: TMW24102023	Date Analyzed: 10/14/23 22:15
Lab Samp ID: J115-13	Dilution Factor: 1
Lab File ID: XJ10124A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.72	4.000	93.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12 23 12:00
Sample ID: TMW24102023	Date Analyzed: 10/14/23 22:15
Lab Samp ID: J115-13	Dilution Factor: 1
Lab File ID: XJ10124A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10116A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.72	4.000	93.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 12:00
Sample ID: FW31102023	Date Analyzed: 10/14/23 23:12
Lab Samp ID: J115-14	Dilution Factor: 1
Lab File ID: XJ10125A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10115A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.72	4.000	93.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12 23 12:00
Sample ID: FW31102023	Date Analyzed: 10/14/23 23:12
Lab Samp ID: J115-14	Dilution Factor: 1
Lab File ID: XJ10125A	Matrix : WATER
Ext Btch ID: EXJ012W	% Moisture : NA
Calib. Ref.: XJ10116A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.72	4.000	93.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Sample ID: TMW59102023
Lab Samp ID: J115-15 #J115-15I
Lab File ID: XJ10143A #XJ16019A
Ext Btch ID: EXJ014W
Calib. Ref.: XJ10138A #XJ16014A

Date Collected: 10/09/23
Date Received: 10/11/23
Date Extracted: 10/13/23 11:45
Date Analyzed: 10/15/23 14:57 # 10/17/23 08:52
Dilution Factor: 1 # 5
Matrix : WATER
% Moisture : NA
Instrument ID : T-081

	PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
	HMX	ND	1.0	0.10	0.20
#	RDX	53	5.0	0.50	1.0
	1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
	1,3-DINITROBENZENE	ND	1.0	0.10	0.20
	TETRYL	ND	1.0	0.10	0.20
	NITROBENZENE	ND	1.0	0.10	0.20
	2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
	4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
	2-NITROTOLUENE	ND	1.0	0.10	0.20
	3-NITROTOLUENE	ND	1.0	0.10	0.20
	4-NITROTOLUENE	ND	1.0	0.10	0.20

	SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
	3,4-DINITROTOLUENE	3.65	4.000	91.2	60-140
#	3,4-DINITROTOLUENE	3.81	4.000	95.3	60-140

Members of the Associated File

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 11:45
Sample ID: TMW59102023	Date Analyzed: 10/15/23 14:57
Lab Samp ID: J115-15	Dilution Factor: 1
Lab File ID: XJ10143A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10138A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	56E	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.65	4.000	91.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 11:45
Sample ID: TMW59102023	Date Analyzed: 10/15/23 14:57
Lab Samp ID: J115-15	Dilution Factor: 1
Lab File ID: XJ10143A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10139A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.65	4.000	91.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/09/23
Project	: USACE WINGATE	Date Received	: 10/11/23
Batch No.	: 23J115	Date Extracted	: 10/13/23 11:45
Sample ID	: TMW59102023DL	Date Analyzed	: 10/17/23 08:52
Lab Samp ID	: J115-15I	Dilution Factor	: 5
Lab File ID	: XJ16019A	Matrix	: WATER
Ext Btch ID	: EXJ014W	% Moisture	: NA
Calib. Ref.	: XJ16014A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	5.0	0.50	1.0
RDX	53	5.0	0.50	1.0
1,3,5-TRINITROBENZENE	ND	5.0	0.50	1.0
1,3-DINITROBENZENE	ND	5.0	0.50	1.0
TETRYL	ND	5.0	0.50	1.0
NITROBENZENE	ND	5.0	0.50	1.0
2,4,6-TRINITROTOLUENE	ND	5.0	0.50	1.0
4-AMINO-2,6-DINITROTOLUENE	ND	5.0	0.50	1.0
2-AMINO-4,6-DINITROTOLUENE	ND	5.0	0.50	1.0
2,6-DINITROTOLUENE	ND	5.0	0.50	1.0
2,4-DINITROTOLUENE	ND	5.0	0.50	1.0
2-NITROTOLUENE	ND	5.0	0.50	1.0
3-NITROTOLUENE	ND	5.0	0.50	1.0
4-NITROTOLUENE	ND	5.0	0.50	1.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.81	4.00	95.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 11:45
Sample ID: TMW39D102023	Date Analyzed: 10/15/23 15:45
Lab Samp ID: J115-16	Dilution Factor: 1
Lab File ID: XJ10144A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10138A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.54	4.000	88.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 11:45
Sample ID:	TMW39D102023	Date Analyzed:	10/15/23 15:45
Lab Samp ID:	J115-16	Dilution Factor:	1
Lab File ID:	XJ10144A	Matrix :	WATER
Ext Btch ID:	EXJ014W	% Moisture :	NA
Calib. Ref.:	XJ10139A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.54	4.000	88.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 11:45
Sample ID: TMW49102023	Date Analyzed: 10/15/23 16:42
Lab Samp ID: J115-17	Dilution Factor: 1
Lab File ID: XJ10145A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10138A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.55	4.000	88.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 11:45
Sample ID: TMW49102023	Date Analyzed: 10/15/23 16:42
Lab Samp ID: J115-17	Dilution Factor: 1
Lab File ID: XJ10145A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10139A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.55	4.000	88.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 11:45
Sample ID: MW35102023	Date Analyzed: 10/15/23 17:30
Lab Samp ID: J115-18	Dilution Factor: 1
Lab File ID: XJ10146A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10138A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.27	4.000	81.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 11:45
Sample ID: MW35102023	Date Analyzed: 10/15/23 17:30
Lab Samp ID: J115-18	Dilution Factor: 1
Lab File ID: XJ10146A	Matrix : WATER
Ext Btch ID: EXJ014W	% Moisture : NA
Calib. Ref.: XJ10139A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.27	4.000	81.8	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW8332
NITROGLYCERIN AND PETN

A total of seventeen(17) water samples were received on 10/11/23 to be analyzed for Nitroglycerin and PETN in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. EXJ011WB and EXJ013WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- EXJ011WL/EXJ011WC were within LCS limits.
- EXJ013WL/EXJ013WC were within LCS limits.

Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ011WB	1	NA	10/13/2312:49	10/12/2315:45	NJ13023A	NJ13022A	EXJ011W	Method Blank
LCS1W	EXJ011WL	1	NA	10/13/2313:25	10/12/2315:45	NJ13024A	NJ13022A	EXJ011W	Lab Control Sample (LCS)
LCD1W	EXJ011WC	1	NA	10/13/2313:34	10/12/2315:45	NJ13025A	NJ13022A	EXJ011W	LCS Duplicate
MBLK2W	EXJ013WB	1	NA	10/17/2308:54	10/13/2316:30	NJ17003A	NJ17002A	EXJ013W	Method Blank
LCS2W	EXJ013WL	1	NA	10/17/2309:03	10/13/2316:30	NJ17004A	NJ17002A	EXJ013W	Lab Control Sample (LCS)
LCD2W	EXJ013WC	1	NA	10/17/2309:12	10/13/2316:30	NJ17005A	NJ17002A	EXJ013W	LCS Duplicate
MW30102023	J115-01	1	NA	10/13/2313:43	10/12/2315:45	NJ13026A	NJ13022A	EXJ011W	Field Sample
MW26102023	J115-02	1	NA	10/13/2313:52	10/12/2315:45	NJ13027A	NJ13022A	EXJ011W	Field Sample
MW34102023	J115-03	1	NA	10/13/2314:01	10/12/2315:45	NJ13028A	NJ13022A	EXJ011W	Field Sample
TMW53102023	J115-05	1	NA	10/13/2314:10	10/12/2315:45	NJ13029A	NJ13022A	EXJ011W	Field Sample
MW33102023	J115-06	1	NA	10/13/2314:19	10/12/2315:45	NJ13030A	NJ13022A	EXJ011W	Field Sample
MW31102023	J115-07	1	NA	10/13/2314:28	10/12/2315:45	NJ13031A	NJ13022A	EXJ011W	Field Sample
TMW57102023	J115-08	1	NA	10/13/2314:37	10/12/2315:45	NJ13032A	NJ13022A	EXJ011W	Field Sample
MW27102023	J115-09	1	NA	10/13/2314:55	10/12/2315:45	NJ13034A	NJ13033A	EXJ011W	Field Sample
TMW61102023	J115-10	1	NA	10/13/2315:05	10/12/2315:45	NJ13035A	NJ13033A	EXJ011W	Field Sample
MW39102023	J115-11	1	NA	10/13/2315:14	10/12/2315:45	NJ13036A	NJ13033A	EXJ011W	Field Sample
MW38102023	J115-12	1	NA	10/13/2315:23	10/12/2315:45	NJ13037A	NJ13033A	EXJ011W	Field Sample
TMW24102023	J115-13	1	NA	10/13/2315:32	10/12/2315:45	NJ13038A	NJ13033A	EXJ011W	Field Sample
FW31102023	J115-14	1	NA	10/13/2315:41	10/12/2315:45	NJ13039A	NJ13033A	EXJ011W	Field Sample
TMW59102023	J115-15	1	NA	10/17/2310:43	10/13/2316:30	NJ17015A	NJ17013A	EXJ013W	Field Sample
TMW39D102023	J115-16	1	NA	10/17/2310:52	10/13/2316:30	NJ17016A	NJ17013A	EXJ013W	Field Sample
TMW49102023	J115-17	1	NA	10/17/2311:01	10/13/2316:30	NJ17017A	NJ17013A	EXJ013W	Field Sample
MW35102023	J115-18	1	NA	10/17/2311:10	10/13/2316:30	NJ17018A	NJ17013A	EXJ013W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12/23 15:45
Sample ID:	MW30102023	Date Analyzed:	10/13/23 13:43
Lab Samp ID:	J115-01	Dilution Factor:	1
Lab File ID:	NJ13026A	Matrix :	WATER
Ext Btch ID:	EXJ011W	% Moisture :	NA
Calib. Ref.:	NJ13022A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	560	500.0	112	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: MW26102023	Date Analyzed: 10/13/23 13:52
Lab Samp ID: J115-02	Dilution Factor: 1
Lab File ID: NJ13027A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13022A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	546	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12/23 15:45
Sample ID:	MW34102023	Date Analyzed:	10/13/23 14:01
Lab Samp ID:	J115-03	Dilution Factor:	1
Lab File ID:	NJ13028A	Matrix :	WATER
Ext Btch ID:	EXJ011W	% Moisture :	NA
Calib. Ref.:	NJ13022A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	554	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: TMW53102023	Date Analyzed: 10/13/23 14:10
Lab Samp ID: J115-05	Dilution Factor: 1
Lab File ID: NJ13029A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13022A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	492	500.0	98.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12/23 15:45
Sample ID:	MW33102023	Date Analyzed:	10/13/23 14:19
Lab Samp ID:	J115-06	Dilution Factor:	1
Lab File ID:	NJ13030A	Matrix :	WATER
Ext Btch ID:	EXJ011W	% Moisture :	NA
Calib. Ref.:	NJ13022A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	552	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: MW31102023	Date Analyzed: 10/13/23 14:28
Lab Samp ID: J115-07	Dilution Factor: 1
Lab File ID: NJ13031A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13022A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	537	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: TMW57102023	Date Analyzed: 10/13/23 14:37
Lab Samp ID: J115-08	Dilution Factor: 1
Lab File ID: NJ13032A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13022A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	553	500.0	111	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: MW27102023	Date Analyzed: 10/13/23 14:55
Lab Samp ID: J115-09	Dilution Factor: 1
Lab File ID: NJ13034A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13033A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	539	500.0	108	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: TMW61102023	Date Analyzed: 10/13/23 15:05
Lab Samp ID: J115-10	Dilution Factor: 1
Lab File ID: NJ13035A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13033A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	524	500.0	105	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/12/23 15:45
Sample ID	: MW39102023	Date Analyzed:	10/13/23 15:14
Lab Samp ID	: J115-11	Dilution Factor:	1
Lab File ID	: NJ13036A	Matrix :	WATER
Ext Btch ID	: EXJ011W	% Moisture :	NA
Calib. Ref.	: NJ13033A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	528	500.0	106	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: MW38102023	Date Analyzed: 10/13/23 15:23
Lab Samp ID: J115-12	Dilution Factor: 1
Lab File ID: NJ13037A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13033A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	547	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: TMW24102023	Date Analyzed: 10/13/23 15:32
Lab Samp ID: J115-13	Dilution Factor: 1
Lab File ID: NJ13038A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13033A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	547	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/12/23 15:45
Sample ID: FW31102023	Date Analyzed: 10/13/23 15:41
Lab Samp ID: J115-14	Dilution Factor: 1
Lab File ID: NJ13039A	Matrix : WATER
Ext Btch ID: EXJ011W	% Moisture : NA
Calib. Ref.: NJ13033A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	544	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 16:30
Sample ID:	TMW59102023	Date Analyzed:	10/17/23 10:43
Lab Samp ID:	J115-15	Dilution Factor:	1
Lab File ID:	NJ17015A	Matrix :	WATER
Ext Btch ID:	EXJ013W	% Moisture :	NA
Calib. Ref.:	NJ17013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	543	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 16:30
Sample ID:	TMW39D102023	Date Analyzed:	10/17/23 10:52
Lab Samp ID:	J115-16	Dilution Factor:	1
Lab File ID:	NJ17016A	Matrix :	WATER
Ext Btch ID:	EXJ013W	% Moisture :	NA
Calib. Ref.:	NJ17013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	547	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23
Project	: USACE WINGATE	Date Received:	10/11/23
Batch No.	: 23J115	Date Extracted:	10/13/23 16:30
Sample ID:	TMW49102023	Date Analyzed:	10/17/23 11:01
Lab Samp ID:	J115-17	Dilution Factor:	1
Lab File ID:	NJ17017A	Matrix :	WATER
Ext Btch ID:	EXJ013W	% Moisture :	NA
Calib. Ref.:	NJ17013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	550	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23
Project : USACE WINGATE	Date Received: 10/11/23
Batch No. : 23J115	Date Extracted: 10/13/23 16:30
Sample ID: MW35102023	Date Analyzed: 10/17/23 11:10
Lab Samp ID: J115-18	Dilution Factor: 1
Lab File ID: NJ17018A	Matrix : WATER
Ext Btch ID: EXJ013W	% Moisture : NA
Calib. Ref.: NJ17013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	547	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW6020A
METALS BY ICP-MS

A total of eighteen(18) water samples were received on 10/11/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ033WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ033WL/IMJ033WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J115-04M/J115-04S - Percent recovery for Sodium(158X) was not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ033WB	1	NA	10/27/2313:58	10/25/2314:01	H6J21024	H6J21022	IMJ033W	Method Blank
LCS1W	IMJ033WL	1	NA	10/27/2314:01	10/25/2314:01	H6J21025	H6J21022	IMJ033W	Lab Control Sample (LCS)
LCD1W	IMJ033WC	1	NA	10/27/2314:04	10/25/2314:01	H6J21026	H6J21022	IMJ033W	LCS Duplicate
MW30102023	J115-01G	5	NA	10/27/2314:21	10/25/2314:01	H6J21032	H6J21030	IMJ033W	Diluted Sample
MW26102023	J115-02G	5	NA	10/27/2314:24	10/25/2314:01	H6J21033	H6J21030	IMJ033W	Diluted Sample
MW34102023	J115-03I	10	NA	10/27/2314:27	10/25/2314:01	H6J21034	H6J21030	IMJ033W	Diluted Sample
TMW17102023	J115-04A	5	NA	10/27/2314:30	10/25/2314:01	H6J21035	H6J21030	IMJ033W	Analytical Spike Sample
TMW17102023	J115-04G	5	NA	10/27/2314:33	10/25/2314:01	H6J21036	H6J21030	IMJ033W	Diluted Sample
TMW17102023	J115-04J	25	NA	10/27/2314:36	10/25/2314:01	H6J21037	H6J21030	IMJ033W	Diluted Sample
TMW17102023MS	J115-04M	5	NA	10/27/2314:38	10/25/2314:01	H6J21038	H6J21030	IMJ033W	Matrix Spike Sample (MS)
TMW17102023MSD	J115-04S	5	NA	10/27/2314:41	10/25/2314:01	H6J21039	H6J21030	IMJ033W	MS Duplicate (MSD)
TMW53102023	J115-05G	5	NA	10/27/2314:44	10/25/2314:01	H6J21040	H6J21030	IMJ033W	Diluted Sample
MW33102023	J115-06G	5	NA	10/27/2314:47	10/25/2314:01	H6J21041	H6J21030	IMJ033W	Diluted Sample
MW31102023	J115-07I	10	NA	10/27/2314:56	10/25/2314:01	H6J21044	H6J21042	IMJ033W	Diluted Sample
TMW57102023	J115-08G	5	NA	10/27/2314:59	10/25/2314:01	H6J21045	H6J21042	IMJ033W	Diluted Sample
MW27102023	J115-09G	5	NA	10/27/2315:02	10/25/2314:01	H6J21046	H6J21042	IMJ033W	Diluted Sample
TMW61102023	J115-10I	10	NA	10/27/2315:05	10/25/2314:01	H6J21047	H6J21042	IMJ033W	Diluted Sample
MW39102023	J115-11I	10	NA	10/27/2315:08	10/25/2314:01	H6J21048	H6J21042	IMJ033W	Diluted Sample
MW38102023	J115-12G	5	NA	10/27/2315:10	10/25/2314:01	H6J21049	H6J21042	IMJ033W	Diluted Sample
TMW24102023	J115-13G	5	NA	10/27/2315:13	10/25/2314:01	H6J21050	H6J21042	IMJ033W	Diluted Sample
FW31102023	J115-14G	5	NA	10/27/2315:16	10/25/2314:01	H6J21051	H6J21042	IMJ033W	Diluted Sample
TMW59102023	J115-15G	5	NA	10/27/2315:19	10/25/2314:01	H6J21052	H6J21042	IMJ033W	Diluted Sample
TMW39D102023	J115-16G	5	NA	10/27/2315:22	10/25/2314:01	H6J21053	H6J21042	IMJ033W	Diluted Sample
TMW49102023	J115-17G	5	NA	10/27/2315:31	10/25/2314:01	H6J21056	H6J21054	IMJ033W	Diluted Sample
MW35102023	J115-18G	5	NA	10/27/2315:34	10/25/2314:01	H6J21057	H6J21054	IMJ033W	Diluted Sample
MW30102023	J115-01T	50	NA	10/27/2315:37	10/25/2314:01	H6J21058	H6J21054	IMJ033W	Diluted Sample
MW26102023	J115-02T	50	NA	10/27/2315:40	10/25/2314:01	H6J21059	H6J21054	IMJ033W	Diluted Sample
MW34102023	J115-03T	50	NA	10/27/2315:43	10/25/2314:01	H6J21060	H6J21054	IMJ033W	Diluted Sample
TMW17102023	J115-04A	50	NA	10/27/2315:45	10/25/2314:01	H6J21061	H6J21054	IMJ033W	Analytical Spike Sample
TMW17102023	J115-04T	50	NA	10/27/2315:48	10/25/2314:01	H6J21062	H6J21054	IMJ033W	Diluted Sample
TMW17102023	J115-04J	250	NA	10/27/2315:51	10/25/2314:01	H6J21063	H6J21054	IMJ033W	Diluted Sample
TMW17102023MS	J115-04M	50	NA	10/27/2315:54	10/25/2314:01	H6J21064	H6J21054	IMJ033W	Matrix Spike Sample (MS)
TMW17102023MSD	J115-04S	50	NA	10/27/2315:57	10/25/2314:01	H6J21065	H6J21054	IMJ033W	MS Duplicate (MSD)
TMW53102023	J115-05T	50	NA	10/27/2316:06	10/25/2314:01	H6J21068	H6J21066	IMJ033W	Diluted Sample
MW31102023	J115-07T	50	NA	10/27/2316:12	10/25/2314:01	H6J21070	H6J21066	IMJ033W	Diluted Sample
TMW57102023	J115-08T	50	NA	10/27/2316:15	10/25/2314:01	H6J21071	H6J21066	IMJ033W	Diluted Sample
MW27102023	J115-09T	50	NA	10/27/2316:20	10/25/2314:01	H6J21072	H6J21066	IMJ033W	Diluted Sample
TMW61102023	J115-10T	50	NA	10/27/2316:22	10/25/2314:01	H6J21073	H6J21066	IMJ033W	Diluted Sample
MW39102023	J115-11T	50	NA	10/27/2316:25	10/25/2314:01	H6J21074	H6J21066	IMJ033W	Diluted Sample
MW38102023	J115-12T	50	NA	10/27/2316:28	10/25/2314:01	H6J21075	H6J21066	IMJ033W	Diluted Sample
TMW24102023	J115-13T	50	NA	10/27/2316:31	10/25/2314:01	H6J21076	H6J21066	IMJ033W	Diluted Sample
FW31102023	J115-14T	50	NA	10/27/2316:34	10/25/2314:01	H6J21077	H6J21066	IMJ033W	Diluted Sample
TMW59102023	J115-15T	50	NA	10/27/2316:43	10/25/2314:01	H6J21080	H6J21078	IMJ033W	Diluted Sample
TMW39D102023	J115-16T	50	NA	10/27/2316:46	10/25/2314:01	H6J21081	H6J21078	IMJ033W	Diluted Sample
TMW49102023	J115-17T	50	NA	10/27/2316:49	10/25/2314:01	H6J21082	H6J21078	IMJ033W	Diluted Sample
MW35102023	J115-18T	50	NA	10/27/2316:52	10/25/2314:01	H6J21083	H6J21078	IMJ033W	Diluted Sample
MW33102023	J115-06T	50	NA	10/27/2317:17	10/25/2314:01	H6J21084	H6J21078	IMJ033W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW30102023	Date Analyzed:	10/27/23 14:21
Lab Samp ID:	J115-01G	Dilution Factor:	5
Lab File ID:	H6J21032	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	4.1J	5.0	0.62	1.2
Barium	180	5.0	1.2	2.5
Beryllium	0.60J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	6.8	5.0	0.50	1.0
Cobalt	4.3	3.7	0.50	1.0
Copper	110	10	2.5	5.0
Iron	5000	1000	120	250
Lead	4.1J	5.0	0.25	0.50
Magnesium	7300	500	100	250
Manganese	590	5.0	1.2	2.5
Nickel	8.4	5.0	1.2	2.5
Potassium	1600	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	15	5.0	1.2	2.5
Zinc	41J	100	25	50

Sample ID:	MW30102023	Date Analyzed:	10/27/23 15:37
Lab Samp ID:	J115-01T	Dilution Factor:	50
Lab File ID:	H6J21058	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	950000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW30102023	Date Analyzed:	10/27/23 14:21
Lab Samp ID:	J115-01G	Dilution Factor:	5
Lab File ID:	H6J21032	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	4.1J	5.0	0.62	1.2
Barium	180	5.0	1.2	2.5
Beryllium	0.60J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	6.8	5.0	0.50	1.0
Cobalt	4.3	3.7	0.50	1.0
Copper	110	10	2.5	5.0
Iron	5000	1000	120	250
Lead	4.1J	5.0	0.25	0.50
Magnesium	7300	500	100	250
Manganese	590	5.0	1.2	2.5
Nickel	8.4	5.0	1.2	2.5
Potassium	1600	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	950000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	15	5.0	1.2	2.5
Zinc	41J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW30102023
Lab Samp ID: J115-01T
Lab File ID: H6J21058
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21054

Date Collected: 10/09/23 07:35
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5600	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	170	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	36000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	97J	100	25	50
Iron	4900J	10000	1200	2500
Lead	2.7J	50	2.5	5.0
Magnesium	7600	5000	1000	2500
Manganese	620	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	950000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW26102023	Date Analyzed:	10/27/23 14:24
Lab Samp ID:	J115-02G	Dilution Factor:	5
Lab File ID:	H6J21033	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	110000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	19000	500	100	250
Manganese	1200	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	580J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	MW26102023	Date Analyzed:	10/27/23 15:40
Lab Samp ID:	J115-02T	Dilution Factor:	50
Lab File ID:	H6J21059	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1000000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW26102023	Date Analyzed:	10/27/23 14:24
Lab Samp ID:	J115-02G	Dilution Factor:	5
Lab File ID:	H6J21033	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	110000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	19000	500	100	250
Manganese	1200	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	580J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW26102023	Date Analyzed:	10/27/23 15:40
Lab Samp ID:	J115-02T	Dilution Factor:	50
Lab File ID:	H6J21059	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	100000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	19000	5000	1000	2500
Manganese	1200	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1000000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW34102023	Date Analyzed:	10/27/23 14:27
Lab Samp ID:	J115-03I	Dilution Factor:	10
Lab File ID:	H6J21034	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	26	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	70000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	16000	1000	200	500
Manganese	56	10	2.5	5.0
Nickel	3.2J	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	1.9J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	MW34102023	Date Analyzed:	10/27/23 15:43
Lab Samp ID:	J115-03T	Dilution Factor:	50
Lab File ID:	H6J21060	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1700000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW34102023	Date Analyzed:	10/27/23 14:27
Lab Samp ID:	J115-03I	Dilution Factor:	10
Lab File ID:	H6J21034	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	26	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	70000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	16000	1000	200	500
Manganese	56	10	2.5	5.0
Nickel	3.2J	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	1.9J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1600000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW34102023	Date Analyzed:	10/27/23 15:43
Lab Samp ID:	J115-03T	Dilution Factor:	50
Lab File ID:	H6J21060	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	26J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	70000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	16000	5000	1000	2500
Manganese	55	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1700000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW17102023	Date Analyzed:	10/27/23 14:33
Lab Samp ID:	J115-04G	Dilution Factor:	5
Lab File ID:	H6J21036	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	110J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3900	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	0.27J	5.0	0.25	0.50
Magnesium	550	500	100	250
Manganese	15	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW17102023	Date Analyzed:	10/27/23 15:48
Lab Samp ID:	J115-04T	Dilution Factor:	50
Lab File ID:	H6J21062	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	470000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 08:20
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J115	Date Extracted: 10/25/23 14:01
Sample ID: TMW17102023	Date Analyzed: 10/27/23 14:33
Lab Samp ID: J115-04G	Dilution Factor: 5
Lab File ID: H6J21036	Matrix: WATER
Ext Btch ID: IMJ033W	% Moisture: NA
Calib. Ref.: H6J21030	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	110J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3900	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	0.27J	5.0	0.25	0.50
Magnesium	550	500	100	250
Manganese	15	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	660J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	460000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW17102023	Date Analyzed:	10/27/23 15:48
Lab Samp ID:	J115-04T	Dilution Factor:	50
Lab File ID:	H6J21062	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	4700J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	15J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	470000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW53102023
Lab Samp ID: J115-05G
Lab File ID: H6J21040
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21030

Date Collected: 10/09/23 08:20
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 14:44
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.1J	5.0	0.62	1.2
Barium	250	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6600	1000	250	500
Chromium	9.8	5.0	0.50	1.0
Cobalt	1.8J	3.7	0.50	1.0
Copper	4.2J	10	2.5	5.0
Iron	3200	1000	120	250
Lead	2.4J	5.0	0.25	0.50
Magnesium	2100	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	6.4	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW53102023
Lab Samp ID: J115-05T
Lab File ID: H6J21068
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Analyzed: 10/27/23 16:06
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	380000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW53102023	Date Analyzed:	10/27/23 14:44
Lab Samp ID:	J115-05G	Dilution Factor:	5
Lab File ID:	H6J21040	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6400	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.1J	5.0	0.62	1.2
Barium	250	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6600	1000	250	500
Chromium	9.8	5.0	0.50	1.0
Cobalt	1.8J	3.7	0.50	1.0
Copper	4.2J	10	2.5	5.0
Iron	3200	1000	120	250
Lead	2.4J	5.0	0.25	0.50
Magnesium	2100	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	6.4	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	370000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW53102023	Date Analyzed:	10/27/23 16:06
Lab Samp ID:	J115-05T	Dilution Factor:	50
Lab File ID:	H6J21068	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6600	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	250	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7300J	10000	2500	5000
Chromium	8.5J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	3300J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2300J	5000	1000	2500
Manganese	150	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	380000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW33102023	Date Analyzed:	10/27/23 14:47
Lab Samp ID:	J115-06G	Dilution Factor:	5
Lab File ID:	H6J21041	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	570	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.9J	5.0	0.62	1.2
Barium	43	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	10000	1000	250	500
Chromium	0.68J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	260J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	1.4J	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	MW33102023	Date Analyzed:	10/27/23 17:17
Lab Samp ID:	J115-06T	Dilution Factor:	50
Lab File ID:	H6J21084	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	700000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW33102023	Date Analyzed:	10/27/23 14:47
Lab Samp ID:	J115-06G	Dilution Factor:	5
Lab File ID:	H6J21041	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21030	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	570	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.9J	5.0	0.62	1.2
Barium	43	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	10000	1000	250	500
Chromium	0.68J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	260J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	1.4J	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	680000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW33102023	Date Analyzed:	10/27/23 17:17
Lab Samp ID:	J115-06T	Dilution Factor:	50
Lab File ID:	H6J21084	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	42J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	11000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3100J	5000	1000	2500
Manganese	29J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	700000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW31102023
Lab Samp ID: J115-07I
Lab File ID: H6J21044
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 09:10
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 14:56
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	230J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	19	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	150000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	13J	20	5.0	10
Iron	ND	2000	250	500
Lead	3.5J	10	0.50	1.0
Magnesium	32000	1000	200	500
Manganese	110	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	540J	2000	500	1000
Selenium	31	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW31102023
Lab Samp ID: J115-07T
Lab File ID: H6J21070
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Analyzed: 10/27/23 16:12
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1800000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 09:10
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J115	Date Extracted: 10/25/23 14:01
Sample ID: MW31102023	Date Analyzed: 10/27/23 14:56
Lab Samp ID: J115-07I	Dilution Factor: 10
Lab File ID: H6J21044	Matrix: WATER
Ext Btch ID: IMJ033W	% Moisture: NA
Calib. Ref.: H6J21042	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	230J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	19	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	150000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	13J	20	5.0	10
Iron	ND	2000	250	500
Lead	3.5J	10	0.50	1.0
Magnesium	32000	1000	200	500
Manganese	110	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	540J	2000	500	1000
Selenium	31	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1900000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW31102023	Date Analyzed:	10/27/23 16:12
Lab Samp ID:	J115-07T	Dilution Factor:	50
Lab File ID:	H6J21070	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	16J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	150000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	32000	5000	1000	2500
Manganese	110	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	29J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1800000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW57102023
Lab Samp ID: J115-08G
Lab File ID: H6J21045
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 09:10
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 14:59
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	18000	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.5	5.0	0.62	1.2
Barium	930	5.0	1.2	2.5
Beryllium	2.2J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	72000	1000	250	500
Chromium	27	5.0	0.50	1.0
Cobalt	15	3.7	0.50	1.0
Copper	54	10	2.5	5.0
Iron	16000	1000	120	250
Lead	12	5.0	0.25	0.50
Magnesium	9100	500	100	250
Manganese	2100	5.0	1.2	2.5
Nickel	23	5.0	1.2	2.5
Potassium	2700	1000	250	500
Selenium	11	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	31	5.0	1.2	2.5
Zinc	47J	100	25	50

Sample ID: TMW57102023
Lab Samp ID: J115-08T
Lab File ID: H6J21071
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Analyzed: 10/27/23 16:15
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	590000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW57102023	Date Analyzed:	10/27/23 14:59
Lab Samp ID:	J115-08G	Dilution Factor:	5
Lab File ID:	H6J21045	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	18000	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.5	5.0	0.62	1.2
Barium	930	5.0	1.2	2.5
Beryllium	2.2J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	72000	1000	250	500
Chromium	27	5.0	0.50	1.0
Cobalt	15	3.7	0.50	1.0
Copper	54	10	2.5	5.0
Iron	16000	1000	120	250
Lead	12	5.0	0.25	0.50
Magnesium	9100	500	100	250
Manganese	2100	5.0	1.2	2.5
Nickel	23	5.0	1.2	2.5
Potassium	2700	1000	250	500
Selenium	11	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	570000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	31	5.0	1.2	2.5
Zinc	47J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 09:10
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J115	Date Extracted: 10/25/23 14:01
Sample ID: TMW57102023	Date Analyzed: 10/27/23 16:15
Lab Samp ID: J115-08T	Dilution Factor: 50
Lab File ID: H6J21071	Matrix: WATER
Ext Btch ID: IMJ033W	% Moisture: NA
Calib. Ref.: H6J21066	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	18000	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	910	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	71000	10000	2500	5000
Chromium	24J	50	5.0	10
Cobalt	14J	37	5.0	10
Copper	48J	100	25	50
Iron	16000	10000	1200	2500
Lead	11J	50	2.5	5.0
Magnesium	9500	5000	1000	2500
Manganese	2200	50	12	25
Nickel	24J	50	12	25
Potassium	2900J	10000	2500	5000
Selenium	12J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	590000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	23J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW27102023
Lab Samp ID: J115-09G
Lab File ID: H6J21046
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 09:40
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:02
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3200	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	170	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	76000	1000	250	500
Chromium	5.9	5.0	0.50	1.0
Cobalt	1.7J	3.7	0.50	1.0
Copper	13	10	2.5	5.0
Iron	2700	1000	120	250
Lead	1.8J	5.0	0.25	0.50
Magnesium	15000	500	100	250
Manganese	140	5.0	1.2	2.5
Nickel	4.8J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	31	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW27102023
Lab Samp ID: J115-09T
Lab File ID: H6J21072
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Analyzed: 10/27/23 16:20
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	980000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW27102023
Lab Samp ID: J115-09G
Lab File ID: H6J21046
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 09:40
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:02
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3200	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	170	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	76000	1000	250	500
Chromium	5.9	5.0	0.50	1.0
Cobalt	1.7J	3.7	0.50	1.0
Copper	13	10	2.5	5.0
Iron	2700	1000	120	250
Lead	1.8J	5.0	0.25	0.50
Magnesium	15000	500	100	250
Manganese	140	5.0	1.2	2.5
Nickel	4.8J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	31	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	960000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW27102023	Date Analyzed:	10/27/23 16:20
Lab Samp ID:	J115-09T	Dilution Factor:	50
Lab File ID:	H6J21072	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3200J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	160	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	77000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	2700J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	15000	5000	1000	2500
Manganese	150	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	26J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	980000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW61102023
Lab Samp ID: J115-10I
Lab File ID: H6J21047
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 10:15
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:05
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1100	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	57	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	69000	2000	500	1000
Chromium	1.1J	10	1.0	2.0
Cobalt	1.7J	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	700J	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	18000	1000	200	500
Manganese	1800	10	2.5	5.0
Nickel	4.7J	10	2.5	5.0
Potassium	580J	2000	500	1000
Selenium	2.1J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	3.9J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW61102023
Lab Samp ID: J115-10T
Lab File ID: H6J21073
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Analyzed: 10/27/23 16:22
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1500000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW61102023	Date Analyzed:	10/27/23 15:05
Lab Samp ID:	J115-10I	Dilution Factor:	10
Lab File ID:	H6J21047	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1100	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	57	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	69000	2000	500	1000
Chromium	1.1J	10	1.0	2.0
Cobalt	1.7J	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	700J	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	18000	1000	200	500
Manganese	1800	10	2.5	5.0
Nickel	4.7J	10	2.5	5.0
Potassium	580J	2000	500	1000
Selenium	2.1J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1500000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	3.9J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW61102023	Date Analyzed:	10/27/23 16:22
Lab Samp ID:	J115-10T	Dilution Factor:	50
Lab File ID:	H6J21073	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1000J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	55	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	68000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	17000	5000	1000	2500
Manganese	1800	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1500000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW39102023
Lab Samp ID: J115-11I
Lab File ID: H6J21048
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 10:15
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:08
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5700	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	3.9J	10	1.2	2.5
Barium	140	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	53000	2000	500	1000
Chromium	4.0J	10	1.0	2.0
Cobalt	2.9J	7.5	1.0	2.0
Copper	7.0J	20	5.0	10
Iron	3400	2000	250	500
Lead	2.7J	10	0.50	1.0
Magnesium	19000	1000	200	500
Manganese	220	10	2.5	5.0
Nickel	7.3J	10	2.5	5.0
Potassium	1300J	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	13	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW39102023
Lab Samp ID: J115-11T
Lab File ID: H6J21074
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Analyzed: 10/27/23 16:25
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW39102023	Date Analyzed:	10/27/23 15:08
Lab Samp ID:	J115-11I	Dilution Factor:	10
Lab File ID:	H6J21048	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5700	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	3.9J	10	1.2	2.5
Barium	140	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	53000	2000	500	1000
Chromium	4.0J	10	1.0	2.0
Cobalt	2.9J	7.5	1.0	2.0
Copper	7.0J	20	5.0	10
Iron	3400	2000	250	500
Lead	2.7J	10	0.50	1.0
Magnesium	19000	1000	200	500
Manganese	220	10	2.5	5.0
Nickel	7.3J	10	2.5	5.0
Potassium	1300J	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1500000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	13	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW39102023
Lab Samp ID: J115-11T
Lab File ID: H6J21074
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Collected: 10/09/23 10:15
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 16:25
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5900	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	140	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	54000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	3600J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	19000	5000	1000	2500
Manganese	220	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1600000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW38102023
Lab Samp ID: J115-12G
Lab File ID: H6J21049
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 10:45
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:10
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6700	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.2J	5.0	0.62	1.2
Barium	180	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	44000	1000	250	500
Chromium	5.1	5.0	0.50	1.0
Cobalt	6.3	3.7	0.50	1.0
Copper	9.1J	10	2.5	5.0
Iron	4200	1000	120	250
Lead	4.3J	5.0	0.25	0.50
Magnesium	9400	500	100	250
Manganese	2200	5.0	1.2	2.5
Nickel	11	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	15	5.0	1.2	2.5
Zinc	31J	100	25	50

Sample ID: MW38102023
Lab Samp ID: J115-12T
Lab File ID: H6J21075
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Analyzed: 10/27/23 16:28
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW38102023	Date Analyzed:	10/27/23 15:10
Lab Samp ID:	J115-12G	Dilution Factor:	5
Lab File ID:	H6J21049	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6700	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.2J	5.0	0.62	1.2
Barium	180	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	44000	1000	250	500
Chromium	5.1	5.0	0.50	1.0
Cobalt	6.3	3.7	0.50	1.0
Copper	9.1J	10	2.5	5.0
Iron	4200	1000	120	250
Lead	4.3J	5.0	0.25	0.50
Magnesium	9400	500	100	250
Manganese	2200	5.0	1.2	2.5
Nickel	11	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	750000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	15	5.0	1.2	2.5
Zinc	31J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW38102023	Date Analyzed:	10/27/23 16:28
Lab Samp ID:	J115-12T	Dilution Factor:	50
Lab File ID:	H6J21075	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	6900	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	180	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	43000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	6.2J	37	5.0	10
Copper	ND	100	25	50
Iron	4400J	10000	1200	2500
Lead	3.1J	50	2.5	5.0
Magnesium	9700	5000	1000	2500
Manganese	2300	50	12	25
Nickel	13J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	760000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW24102023	Date Analyzed:	10/27/23 15:13
Lab Samp ID:	J115-13G	Dilution Factor:	5
Lab File ID:	H6J21050	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.99J	5.0	0.62	1.2
Barium	37	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	42000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	140	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	290J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW24102023	Date Analyzed:	10/27/23 16:31
Lab Samp ID:	J115-13T	Dilution Factor:	50
Lab File ID:	H6J21076	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW24102023	Date Analyzed:	10/27/23 15:13
Lab Samp ID:	J115-13G	Dilution Factor:	5
Lab File ID:	H6J21050	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.99J	5.0	0.62	1.2
Barium	37	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	42000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	140	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	290J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW24102023	Date Analyzed:	10/27/23 16:31
Lab Samp ID:	J115-13T	Dilution Factor:	50
Lab File ID:	H6J21076	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	39J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	43000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	140	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: FW31102023
Lab Samp ID: J115-14G
Lab File ID: H6J21051
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 11:15
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:16
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	220J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.1	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6100	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2600	500	100	250
Manganese	4.3J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FW31102023
Lab Samp ID: J115-14T
Lab File ID: H6J21077
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21066

Date Analyzed: 10/27/23 16:34
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	530000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	FW31102023	Date Analyzed:	10/27/23 15:16
Lab Samp ID:	J115-14G	Dilution Factor:	5
Lab File ID:	H6J21051	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	220J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.1	5.0	0.62	1.2
Barium	14	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6100	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2600	500	100	250
Manganese	4.3J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	520000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	FW31102023	Date Analyzed:	10/27/23 16:34
Lab Samp ID:	J115-14T	Dilution Factor:	50
Lab File ID:	H6J21077	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21066	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7400J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2600J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	530000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW59102023
Lab Samp ID: J115-15G
Lab File ID: H6J21052
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 11:30
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:19
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3900	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.8J	5.0	0.62	1.2
Barium	84	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	42000	1000	250	500
Chromium	8.7	5.0	0.50	1.0
Cobalt	2.1J	3.7	0.50	1.0
Copper	6.9J	10	2.5	5.0
Iron	3300	1000	120	250
Lead	2.3J	5.0	0.25	0.50
Magnesium	10000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	6.5	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	1.8J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	12	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW59102023
Lab Samp ID: J115-15T
Lab File ID: H6J21080
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21078

Date Analyzed: 10/27/23 16:43
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	780000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW59102023	Date Analyzed:	10/27/23 15:19
Lab Samp ID:	J115-15G	Dilution Factor:	5
Lab File ID:	H6J21052	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3900	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.8J	5.0	0.62	1.2
Barium	84	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	42000	1000	250	500
Chromium	8.7	5.0	0.50	1.0
Cobalt	2.1J	3.7	0.50	1.0
Copper	6.9J	10	2.5	5.0
Iron	3300	1000	120	250
Lead	2.3J	5.0	0.25	0.50
Magnesium	10000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	6.5	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	1.8J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	790000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	12	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW59102023	Date Analyzed:	10/27/23 16:43
Lab Samp ID:	J115-15T	Dilution Factor:	50
Lab File ID:	H6J21080	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	4000J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	86	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	41000	10000	2500	5000
Chromium	7.5J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	3300J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	110	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	780000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW39D102023
Lab Samp ID: J115-16G
Lab File ID: H6J21053
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21042

Date Collected: 10/09/23 13:30
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:22
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	32000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4700	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	1.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW39D102023
Lab Samp ID: J115-16T
Lab File ID: H6J21081
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21078

Date Analyzed: 10/27/23 16:46
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:30
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW39D102023	Date Analyzed:	10/27/23 15:22
Lab Samp ID:	J115-16G	Dilution Factor:	5
Lab File ID:	H6J21053	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21042	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	32000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4700	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	1.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	740000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:30
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW39D102023	Date Analyzed:	10/27/23 16:46
Lab Samp ID:	J115-16T	Dilution Factor:	50
Lab File ID:	H6J21081	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	33000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4900J	5000	1000	2500
Manganese	51	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	760000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW49102023
Lab Samp ID: J115-17G
Lab File ID: H6J21056
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21054

Date Collected: 10/09/23 13:55
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:31
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	74000	1000	250	500
Chromium	1.2J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	29	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	23	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW49102023
Lab Samp ID: J115-17T
Lab File ID: H6J21082
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21078

Date Analyzed: 10/27/23 16:49
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	770000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW49102023	Date Analyzed:	10/27/23 15:31
Lab Samp ID:	J115-17G	Dilution Factor:	5
Lab File ID:	H6J21056	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	74000	1000	250	500
Chromium	1.2J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	13000	500	100	250
Manganese	29	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	23	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	770000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW49102023	Date Analyzed:	10/27/23 16:49
Lab Samp ID:	J115-17T	Dilution Factor:	50
Lab File ID:	H6J21082	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	74000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	13000	5000	1000	2500
Manganese	30J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	24J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	770000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW35102023
Lab Samp ID: J115-18G
Lab File ID: H6J21057
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21054

Date Collected: 10/09/23 13:55
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 15:34
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	19000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	34	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW35102023
Lab Samp ID: J115-18T
Lab File ID: H6J21083
Ext Btch ID: IMJ033W
Calib. Ref.: H6J21078

Date Analyzed: 10/27/23 16:52
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	790000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW35102023	Date Analyzed:	10/27/23 15:34
Lab Samp ID:	J115-18G	Dilution Factor:	5
Lab File ID:	H6J21057	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21054	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	19000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	34	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	760000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW35102023	Date Analyzed:	10/27/23 16:52
Lab Samp ID:	J115-18T	Dilution Factor:	50
Lab File ID:	H6J21083	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21078	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	21000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2900J	5000	1000	2500
Manganese	35J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	790000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MBLK1W	Date Analyzed:	10/27/23 13:58
Lab Samp ID:	IMJ033WB	Dilution Factor:	1
Lab File ID:	H6J21024	Matrix:	WATER
Ext Btch ID:	IMJ033W	% Moisture:	NA
Calib. Ref.:	H6J21022	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of eighteen(18) water samples were received on 10/11/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ034WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ034WL/IMJ034WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J115-04M/J115-04S - Percent recovery for Sodium(156X) was not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ034WB	1	NA	10/27/2314:06	10/25/2314:01	H6J21027	H6J21022	IMJ034W	Method Blank
LCS1W	IMJ034WL	1	NA	10/27/2314:09	10/25/2314:01	H6J21028	H6J21022	IMJ034W	Lab Control Sample (LCS)
LCD1W	IMJ034WC	1	NA	10/27/2314:12	10/25/2314:01	H6J21029	H6J21022	IMJ034W	LCS Duplicate
MW30102023	J115-01G	5	NA	10/27/2317:26	10/25/2314:01	H6J21087	H6J21085	IMJ034W	Diluted Sample
MW26102023	J115-02G	5	NA	10/27/2317:29	10/25/2314:01	H6J21088	H6J21085	IMJ034W	Diluted Sample
MW34102023	J115-03I	10	NA	10/27/2317:32	10/25/2314:01	H6J21089	H6J21085	IMJ034W	Diluted Sample
TMW17102023	J115-04A	5	NA	10/27/2317:35	10/25/2314:01	H6J21090	H6J21085	IMJ034W	Analytical Spike Sample
TMW17102023	J115-04G	5	NA	10/27/2317:38	10/25/2314:01	H6J21091	H6J21085	IMJ034W	Diluted Sample
TMW17102023	J115-04J	25	NA	10/27/2317:41	10/25/2314:01	H6J21092	H6J21085	IMJ034W	Diluted Sample
TMW17102023MS	J115-04M	5	NA	10/27/2317:43	10/25/2314:01	H6J21093	H6J21085	IMJ034W	Matrix Spike Sample (MS)
TMW17102023MSD	J115-04S	5	NA	10/27/2317:46	10/25/2314:01	H6J21094	H6J21085	IMJ034W	MS Duplicate (MSD)
TMW53102023	J115-05G	5	NA	10/27/2317:49	10/25/2314:01	H6J21095	H6J21085	IMJ034W	Diluted Sample
MW33102023	J115-06G	5	NA	10/27/2317:52	10/25/2314:01	H6J21096	H6J21085	IMJ034W	Diluted Sample
MW31102023	J115-07I	10	NA	10/27/2318:01	10/25/2314:01	H6J21099	H6J21097	IMJ034W	Diluted Sample
TMW57102023	J115-08G	5	NA	10/27/2318:04	10/25/2314:01	H6J21100	H6J21097	IMJ034W	Diluted Sample
MW27102023	J115-09G	5	NA	10/27/2318:07	10/25/2314:01	H6J21101	H6J21097	IMJ034W	Diluted Sample
TMW61102023	J115-10I	10	NA	10/27/2318:10	10/25/2314:01	H6J21102	H6J21097	IMJ034W	Diluted Sample
MW39102023	J115-11I	10	NA	10/27/2318:13	10/25/2314:01	H6J21103	H6J21097	IMJ034W	Diluted Sample
MW38102023	J115-12G	5	NA	10/27/2318:16	10/25/2314:01	H6J21104	H6J21097	IMJ034W	Diluted Sample
TMW24102023	J115-13G	5	NA	10/27/2318:19	10/25/2314:01	H6J21105	H6J21097	IMJ034W	Diluted Sample
FW31102023	J115-14G	5	NA	10/27/2318:21	10/25/2314:01	H6J21106	H6J21097	IMJ034W	Diluted Sample
TMW59102023	J115-15G	5	NA	10/27/2318:24	10/25/2314:01	H6J21107	H6J21097	IMJ034W	Diluted Sample
TMW39D102023	J115-16G	5	NA	10/27/2318:27	10/25/2314:01	H6J21108	H6J21097	IMJ034W	Diluted Sample
TMW49102023	J115-17G	5	NA	10/27/2318:36	10/25/2314:01	H6J21111	H6J21109	IMJ034W	Diluted Sample
MW35102023	J115-18G	5	NA	10/27/2318:39	10/25/2314:01	H6J21112	H6J21109	IMJ034W	Diluted Sample
MW30102023	J115-01T	50	NA	10/27/2318:42	10/25/2314:01	H6J21113	H6J21109	IMJ034W	Diluted Sample
MW26102023	J115-02T	50	NA	10/27/2318:45	10/25/2314:01	H6J21114	H6J21109	IMJ034W	Diluted Sample
MW34102023	J115-03T	50	NA	10/27/2318:48	10/25/2314:01	H6J21115	H6J21109	IMJ034W	Diluted Sample
TMW17102023	J115-04A	50	NA	10/27/2318:51	10/25/2314:01	H6J21116	H6J21109	IMJ034W	Analytical Spike Sample
TMW17102023	J115-04T	50	NA	10/27/2318:54	10/25/2314:01	H6J21117	H6J21109	IMJ034W	Diluted Sample
TMW17102023	J115-04J	250	NA	10/27/2318:57	10/25/2314:01	H6J21118	H6J21109	IMJ034W	Diluted Sample
TMW17102023MS	J115-04M	50	NA	10/27/2318:59	10/25/2314:01	H6J21119	H6J21109	IMJ034W	Matrix Spike Sample (MS)
TMW17102023MSD	J115-04S	50	NA	10/27/2319:02	10/25/2314:01	H6J21120	H6J21109	IMJ034W	MS Duplicate (MSD)
TMW53102023	J115-05T	50	NA	10/27/2319:11	10/25/2314:01	H6J21123	H6J21121	IMJ034W	Diluted Sample
MW33102023	J115-06T	50	NA	10/27/2319:14	10/25/2314:01	H6J21124	H6J21121	IMJ034W	Diluted Sample
MW31102023	J115-07T	50	NA	10/27/2319:17	10/25/2314:01	H6J21125	H6J21121	IMJ034W	Diluted Sample
TMW57102023	J115-08T	50	NA	10/27/2319:20	10/25/2314:01	H6J21126	H6J21121	IMJ034W	Diluted Sample
MW27102023	J115-09T	50	NA	10/27/2319:23	10/25/2314:01	H6J21127	H6J21121	IMJ034W	Diluted Sample
TMW61102023	J115-10T	50	NA	10/27/2319:26	10/25/2314:01	H6J21128	H6J21121	IMJ034W	Diluted Sample
MW39102023	J115-11T	50	NA	10/27/2319:29	10/25/2314:01	H6J21129	H6J21121	IMJ034W	Diluted Sample
MW38102023	J115-12T	50	NA	10/27/2319:32	10/25/2314:01	H6J21130	H6J21121	IMJ034W	Diluted Sample
TMW24102023	J115-13T	50	NA	10/27/2319:34	10/25/2314:01	H6J21131	H6J21121	IMJ034W	Diluted Sample
FW31102023	J115-14T	50	NA	10/27/2319:37	10/25/2314:01	H6J21132	H6J21121	IMJ034W	Diluted Sample
TMW59102023	J115-15T	50	NA	10/27/2319:46	10/25/2314:01	H6J21135	H6J21133	IMJ034W	Diluted Sample
TMW39D102023	J115-16T	50	NA	10/27/2319:49	10/25/2314:01	H6J21136	H6J21133	IMJ034W	Diluted Sample
TMW49102023	J115-17T	50	NA	10/27/2319:52	10/25/2314:01	H6J21137	H6J21133	IMJ034W	Diluted Sample
MW35102023	J115-18T	50	NA	10/27/2319:55	10/25/2314:01	H6J21138	H6J21133	IMJ034W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW30102023
Lab Samp ID: J115-01G
Lab File ID: H6J21087
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21085

Date Collected: 10/09/23 07:35
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 17:26
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	35	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	25000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	5.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5500	500	100	250
Manganese	6.9	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	530J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW30102023
Lab Samp ID: J115-01T
Lab File ID: H6J21113
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21109

Date Analyzed: 10/27/23 18:42
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1000000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW30102023	Date Analyzed:	10/27/23 17:26
Lab Samp ID:	J115-01G	Dilution Factor:	5
Lab File ID:	H6J21087	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	35	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	25000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	5.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5500	500	100	250
Manganese	6.9	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	530J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	990000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:35
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW30102023	Date Analyzed:	10/27/23 18:42
Lab Samp ID:	J115-01T	Dilution Factor:	50
Lab File ID:	H6J21113	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21109	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	33J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	25000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5800	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1000000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW26102023
Lab Samp ID: J115-02G
Lab File ID: H6J21088
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21085

Date Collected: 10/09/23 07:40
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 17:29
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	100000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	19000	500	100	250
Manganese	1100	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	640J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW26102023
Lab Samp ID: J115-02T
Lab File ID: H6J21114
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21109

Date Analyzed: 10/27/23 18:45
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1000000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW26102023	Date Analyzed:	10/27/23 17:29
Lab Samp ID:	J115-02G	Dilution Factor:	5
Lab File ID:	H6J21088	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	100000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	19000	500	100	250
Manganese	1100	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	640J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1000000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 07:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW26102023	Date Analyzed:	10/27/23 18:45
Lab Samp ID:	J115-02T	Dilution Factor:	50
Lab File ID:	H6J21114	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21109	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	100000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	19000	5000	1000	2500
Manganese	1100	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1000000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW34102023
Lab Samp ID: J115-03I
Lab File ID: H6J21089
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21085

Date Collected: 10/09/23 08:15
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 17:32
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	25	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	71000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	16000	1000	200	500
Manganese	33	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	510J	2000	500	1000
Selenium	2.3J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW34102023
Lab Samp ID: J115-03T
Lab File ID: H6J21115
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21109

Date Analyzed: 10/27/23 18:48
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW34102023	Date Analyzed:	10/27/23 17:32
Lab Samp ID:	J115-03I	Dilution Factor:	10
Lab File ID:	H6J21089	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	25	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	71000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	16000	1000	200	500
Manganese	33	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	510J	2000	500	1000
Selenium	2.3J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1600000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW34102023	Date Analyzed:	10/27/23 18:48
Lab Samp ID:	J115-03T	Dilution Factor:	50
Lab File ID:	H6J21115	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21109	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	22J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	68000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	16000	5000	1000	2500
Manganese	31J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1600000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW17102023
Lab Samp ID: J115-04G
Lab File ID: H6J21091
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21085

Date Collected: 10/09/23 08:20
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 17:38
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3900	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	570	500	100	250
Manganese	13	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	710J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW17102023
Lab Samp ID: J115-04T
Lab File ID: H6J21117
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21109

Date Analyzed: 10/27/23 18:54
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	470000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW17102023	Date Analyzed:	10/27/23 17:38
Lab Samp ID:	J115-04G	Dilution Factor:	5
Lab File ID:	H6J21091	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3900	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	570	500	100	250
Manganese	13	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	710J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	470000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW17102023	Date Analyzed:	10/27/23 18:54
Lab Samp ID:	J115-04T	Dilution Factor:	50
Lab File ID:	H6J21117	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21109	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	14J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	3900J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	470000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW53102023
Lab Samp ID: J115-05G
Lab File ID: H6J21095
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21085

Date Collected: 10/09/23 08:20
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 17:49
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	110	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	2600	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	380J	500	100	250
Manganese	30	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	450J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW53102023
Lab Samp ID: J115-05T
Lab File ID: H6J21123
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21121

Date Analyzed: 10/27/23 19:11
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	380000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:20
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW53102023	Date Analyzed:	10/27/23 17:49
Lab Samp ID:	J115-05G	Dilution Factor:	5
Lab File ID:	H6J21095	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	110	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	2600	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	380J	500	100	250
Manganese	30	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	450J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	360000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 08:20
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J115	Date Extracted: 10/25/23 14:01
Sample ID: TMW53102023	Date Analyzed: 10/27/23 19:11
Lab Samp ID: J115-05T	Dilution Factor: 50
Lab File ID: H6J21123	Matrix: WATER
Ext Btch ID: IMJ034W	% Moisture: NA
Calib. Ref.: H6J21121	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	110	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	2700J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	30J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	380000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW33102023
Lab Samp ID: J115-06G
Lab File ID: H6J21096
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21085

Date Collected: 10/09/23 08:40
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 17:52
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.9J	5.0	0.62	1.2
Barium	30	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	9400	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2700	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.9	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW33102023
Lab Samp ID: J115-06T
Lab File ID: H6J21124
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21121

Date Analyzed: 10/27/23 19:14
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	680000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW33102023	Date Analyzed:	10/27/23 17:52
Lab Samp ID:	J115-06G	Dilution Factor:	5
Lab File ID:	H6J21096	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21085	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.9J	5.0	0.62	1.2
Barium	30	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	9400	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2700	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	680000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.9	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 08:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW33102023	Date Analyzed:	10/27/23 19:14
Lab Samp ID:	J115-06T	Dilution Factor:	50
Lab File ID:	H6J21124	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	27J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	9200J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2800J	5000	1000	2500
Manganese	18J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	680000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW31102023	Date Analyzed:	10/27/23 18:01
Lab Samp ID:	J115-07I	Dilution Factor:	10
Lab File ID:	H6J21099	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	16	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	160000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	10J	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	33000	1000	200	500
Manganese	110	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	540J	2000	500	1000
Selenium	32	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	MW31102023	Date Analyzed:	10/27/23 19:17
Lab Samp ID:	J115-07T	Dilution Factor:	50
Lab File ID:	H6J21125	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1900000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW31102023	Date Analyzed:	10/27/23 18:01
Lab Samp ID:	J115-07I	Dilution Factor:	10
Lab File ID:	H6J21099	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	16	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	160000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	10J	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	33000	1000	200	500
Manganese	110	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	540J	2000	500	1000
Selenium	32	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1900000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW31102023	Date Analyzed:	10/27/23 19:17
Lab Samp ID:	J115-07T	Dilution Factor:	50
Lab File ID:	H6J21125	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	150000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	33000	5000	1000	2500
Manganese	110	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	29J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1900000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW57102023
Lab Samp ID: J115-08G
Lab File ID: H6J21100
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21097

Date Collected: 10/09/23 09:10
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:04
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.86J	5.0	0.62	1.2
Barium	33	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	12000	1000	250	500
Chromium	1.1J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	64	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	610J	1000	250	500
Selenium	10	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW57102023
Lab Samp ID: J115-08T
Lab File ID: H6J21126
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21121

Date Analyzed: 10/27/23 19:20
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW57102023
Lab Samp ID: J115-08G
Lab File ID: H6J21100
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21097

Date Collected: 10/09/23 09:10
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:04
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.86J	5.0	0.62	1.2
Barium	33	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	12000	1000	250	500
Chromium	1.1J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	64	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	610J	1000	250	500
Selenium	10	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	570000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:10
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW57102023	Date Analyzed:	10/27/23 19:20
Lab Samp ID:	J115-08T	Dilution Factor:	50
Lab File ID:	H6J21126	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	31J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	12000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2900J	5000	1000	2500
Manganese	64	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	9.9J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	570000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW27102023
Lab Samp ID: J115-09G
Lab File ID: H6J21101
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21097

Date Collected: 10/09/23 09:40
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:07
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	24	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	68000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.2J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	9.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	750J	1000	250	500
Selenium	32	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW27102023
Lab Samp ID: J115-09T
Lab File ID: H6J21127
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21121

Date Analyzed: 10/27/23 19:23
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	930000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 09:40
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J115	Date Extracted: 10/25/23 14:01
Sample ID: MW27102023	Date Analyzed: 10/27/23 18:07
Lab Samp ID: J115-09G	Dilution Factor: 5
Lab File ID: H6J21101	Matrix: WATER
Ext Btch ID: IMJ034W	% Moisture: NA
Calib. Ref.: H6J21097	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	24	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	68000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.2J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	9.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	750J	1000	250	500
Selenium	32	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	970000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 09:40
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW27102023	Date Analyzed:	10/27/23 19:23
Lab Samp ID:	J115-09T	Dilution Factor:	50
Lab File ID:	H6J21127	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	20J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	65000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	13000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	31J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	930000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	480J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW61102023
Lab Samp ID: J115-10I
Lab File ID: H6J21102
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21097

Date Collected: 10/09/23 10:15
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:10
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	33	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	68000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	18000	1000	200	500
Manganese	54	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	530J	2000	500	1000
Selenium	2.1J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW61102023
Lab Samp ID: J115-10T
Lab File ID: H6J21128
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21121

Date Analyzed: 10/27/23 19:26
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1500000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW61102023	Date Analyzed:	10/27/23 18:10
Lab Samp ID:	J115-10I	Dilution Factor:	10
Lab File ID:	H6J21102	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	33	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	68000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	18000	1000	200	500
Manganese	54	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	530J	2000	500	1000
Selenium	2.1J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1600000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW61102023	Date Analyzed:	10/27/23 19:26
Lab Samp ID:	J115-10T	Dilution Factor:	50
Lab File ID:	H6J21128	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	32J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	63000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	17000	5000	1000	2500
Manganese	53	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1500000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW39102023
Lab Samp ID: J115-11I
Lab File ID: H6J21103
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21097

Date Collected: 10/09/23 10:15
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:13
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.9J	10	1.2	2.5
Barium	40	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	62000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	22000	1000	200	500
Manganese	290	10	2.5	5.0
Nickel	3.1J	10	2.5	5.0
Potassium	510J	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	3.7J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW39102023
Lab Samp ID: J115-11T
Lab File ID: H6J21129
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21121

Date Analyzed: 10/27/23 19:29
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 10:15
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J115	Date Extracted: 10/25/23 14:01
Sample ID: MW39102023	Date Analyzed: 10/27/23 18:13
Lab Samp ID: J115-11I	Dilution Factor: 10
Lab File ID: H6J21103	Matrix: WATER
Ext Btch ID: IMJ034W	% Moisture: NA
Calib. Ref.: H6J21097	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.9J	10	1.2	2.5
Barium	40	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	62000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	22000	1000	200	500
Manganese	290	10	2.5	5.0
Nickel	3.1J	10	2.5	5.0
Potassium	510J	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1700000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	3.7J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW39102023	Date Analyzed:	10/27/23 19:29
Lab Samp ID:	J115-11T	Dilution Factor:	50
Lab File ID:	H6J21129	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	37J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	56000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	20000	5000	1000	2500
Manganese	260	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1600000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW38102023	Date Analyzed:	10/27/23 18:16
Lab Samp ID:	J115-12G	Dilution Factor:	5
Lab File ID:	H6J21104	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	32000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7300	500	100	250
Manganese	91	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	320J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	MW38102023	Date Analyzed:	10/27/23 19:32
Lab Samp ID:	J115-12T	Dilution Factor:	50
Lab File ID:	H6J21130	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	770000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW38102023	Date Analyzed:	10/27/23 18:16
Lab Samp ID:	J115-12G	Dilution Factor:	5
Lab File ID:	H6J21104	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	32000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7300	500	100	250
Manganese	91	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	320J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	750000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:45
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW38102023	Date Analyzed:	10/27/23 19:32
Lab Samp ID:	J115-12T	Dilution Factor:	50
Lab File ID:	H6J21130	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	16J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	32000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7400	5000	1000	2500
Manganese	92	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	770000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 10:55
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J115	Date Extracted: 10/25/23 14:01
Sample ID: TMW24102023	Date Analyzed: 10/27/23 18:19
Lab Samp ID: J115-13G	Dilution Factor: 5
Lab File ID: H6J21105	Matrix: WATER
Ext Btch ID: IMJ034W	% Moisture: NA
Calib. Ref.: H6J21097	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	37	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	43000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	140	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	350J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW24102023	Date Analyzed: 10/27/23 19:34
Lab Samp ID: J115-13T	Dilution Factor: 50
Lab File ID: H6J21131	Matrix: WATER
Ext Btch ID: IMJ034W	% Moisture: NA
Calib. Ref.: H6J21121	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1000000	10000	2500	5000

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 10:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID	: TMW24102023	Date Analyzed:	10/27/23 18:19
Lab Samp ID	: J115-13G	Dilution Factor:	5
Lab File ID	: H6J21105	Matrix:	WATER
Ext Btch ID	: IMJ034W	% Moisture:	NA
Calib. Ref.	: H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	37	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	43000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	140	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	350J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/09/23 10:55
Project : USACE WINGATE	Date Received: 10/11/23
SDG NO. : 23J115	Date Extracted: 10/25/23 14:01
Sample ID: TMW24102023	Date Analyzed: 10/27/23 19:34
Lab Samp ID: J115-13T	Dilution Factor: 50
Lab File ID: H6J21131	Matrix: WATER
Ext Btch ID: IMJ034W	% Moisture: NA
Calib. Ref.: H6J21121	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	34J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	39000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	11000	5000	1000	2500
Manganese	130	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1000000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: FW31102023
Lab Samp ID: J115-14G
Lab File ID: H6J21106
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21097

Date Collected: 10/09/23 11:15
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:21
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.2	5.0	0.62	1.2
Barium	9.4	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6200	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2600	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	9.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FW31102023
Lab Samp ID: J115-14T
Lab File ID: H6J21132
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21121

Date Analyzed: 10/27/23 19:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	540000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	FW31102023	Date Analyzed:	10/27/23 18:21
Lab Samp ID:	J115-14G	Dilution Factor:	5
Lab File ID:	H6J21106	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.2	5.0	0.62	1.2
Barium	9.4	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6200	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2600	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	530000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	9.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:15
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	FW31102023	Date Analyzed:	10/27/23 19:37
Lab Samp ID:	J115-14T	Dilution Factor:	50
Lab File ID:	H6J21132	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21121	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	6300J	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2600J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	540000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW59102023
Lab Samp ID: J115-15G
Lab File ID: H6J21107
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21097

Date Collected: 10/09/23 11:30
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:24
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	5.0	0.62	1.2
Barium	24	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	38000	1000	250	500
Chromium	3.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.8J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	9700	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	6.9	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	1.8J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW59102023
Lab Samp ID: J115-15T
Lab File ID: H6J21135
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21133

Date Analyzed: 10/27/23 19:46
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	830000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW59102023	Date Analyzed:	10/27/23 18:24
Lab Samp ID:	J115-15G	Dilution Factor:	5
Lab File ID:	H6J21107	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	5.0	0.62	1.2
Barium	24	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	38000	1000	250	500
Chromium	3.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.8J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	9700	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	6.9	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	1.8J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	820000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 11:30
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW59102023	Date Analyzed:	10/27/23 19:46
Lab Samp ID:	J115-15T	Dilution Factor:	50
Lab File ID:	H6J21135	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21133	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	24J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	38000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	10000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	830000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW602CA (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: TMW39D102023
Lab Samp ID: J115-16G
Lab File ID: H6J21108
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21097

Date Collected: 10/09/23 13:30
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:27
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.9	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	33000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4800	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	1.0J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW39D102023
Lab Samp ID: J115-16T
Lab File ID: H6J21136
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21133

Date Analyzed: 10/27/23 19:49
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	800000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:30
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW39D102023	Date Analyzed:	10/27/23 18:27
Lab Samp ID:	J115-16G	Dilution Factor:	5
Lab File ID:	H6J21108	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21097	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	8.9	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	33000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4800	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	1.0J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	760000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:30
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW39D102023	Date Analyzed:	10/27/23 19:49
Lab Samp ID:	J115-16T	Dilution Factor:	50
Lab File ID:	H6J21136	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21133	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	33000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5200	5000	1000	2500
Manganese	53	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	800000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW49102023	Date Analyzed:	10/27/23 18:36
Lab Samp ID:	J115-17G	Dilution Factor:	5
Lab File ID:	H6J21111	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21109	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.9	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	79000	1000	250	500
Chromium	1.1J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	35	5.0	1.2	2.5
Nickel	2.8J	5.0	1.2	2.5
Potassium	1700	1000	250	500
Selenium	21	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	12	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW49102023	Date Analyzed:	10/27/23 19:52
Lab Samp ID:	J115-17T	Dilution Factor:	50
Lab File ID:	H6J21137	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21133	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	880000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW49102023	Date Analyzed:	10/27/23 18:36
Lab Samp ID:	J115-17G	Dilution Factor:	5
Lab File ID:	H6J21111	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21109	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.9	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	79000	1000	250	500
Chromium	1.1J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	35	5.0	1.2	2.5
Nickel	2.8J	5.0	1.2	2.5
Potassium	1700	1000	250	500
Selenium	21	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	850000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	12	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	TMW49102023	Date Analyzed:	10/27/23 19:52
Lab Samp ID:	J115-17T	Dilution Factor:	50
Lab File ID:	H6J21137	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21133	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	81000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	15000	5000	1000	2500
Manganese	37J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	24J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	880000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J115
Sample ID: MW35102023
Lab Samp ID: J115-18G
Lab File ID: H6J21112
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21109

Date Collected: 10/09/23 13:55
Date Received: 10/11/23
Date Extracted: 10/25/23 14:01
Date Analyzed: 10/27/23 18:39
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	10	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	19000	1000	250	500
Chromium	0.69J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW35102023
Lab Samp ID: J115-18T
Lab File ID: H6J21138
Ext Btch ID: IMJ034W
Calib. Ref.: H6J21133

Date Analyzed: 10/27/23 19:55
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	770000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW35102023	Date Analyzed:	10/27/23 18:39
Lab Samp ID:	J115-18G	Dilution Factor:	5
Lab File ID:	H6J21112	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21109	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	10	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	19000	1000	250	500
Chromium	0.69J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	780000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/09/23 13:55
Project	: USACE WINGATE	Date Received:	10/11/23
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MW35102023	Date Analyzed:	10/27/23 19:55
Lab Samp ID:	J115-18T	Dilution Factor:	50
Lab File ID:	H6J21138	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21133	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	19000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3100J	5000	1000	2500
Manganese	40J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	770000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J115	Date Extracted:	10/25/23 14:01
Sample ID:	MBLK1W	Date Analyzed:	10/27/23 14:06
Lab Samp ID:	IMJ034WB	Dilution Factor:	1
Lab File ID:	H6J21027	Matrix:	WATER
Ext Btch ID:	IMJ034W	% Moisture:	NA
Calib. Ref.:	H6J21022	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of eighteen(18) water samples were received on 10/11/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGK001WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGK001WL/HGK001WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J115-03M/J115-03S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGK001WB	1	NA	11/01/2315:28	11/01/2311:09	M47K001012	M47K001	23HGK001W	Method Blank
LCS1W	HGK001WL	1	NA	11/01/2315:30	11/01/2311:09	M47K001013	M47K001	23HGK001W	Lab Control Sample (LCS)
LCD1W	HGK001WC	1	NA	11/01/2315:32	11/01/2311:09	M47K001014	M47K001	23HGK001W	LCS Duplicate
MW30102023	J115-01	1	NA	11/01/2315:34	11/01/2311:09	M47K001015	M47K001	23HGK001W	Field Sample
MW26102023	J115-02	1	NA	11/01/2315:36	11/01/2311:09	M47K001016	M47K001	23HGK001W	Field Sample
MW34102023MS	J115-03M	1	NA	11/01/2315:38	11/01/2311:09	M47K001017	M47K001	23HGK001W	Matrix Spike Sample (MS)
MW34102023MSD	J115-03S	1	NA	11/01/2315:40	11/01/2311:09	M47K001018	M47K001	23HGK001W	MS Duplicate (MSD)
MW34102023	J115-03	1	NA	11/01/2315:43	11/01/2311:09	M47K001020	M47K001	23HGK001W	Field Sample
TMW17102023	J115-04	1	NA	11/01/2315:50	11/01/2311:09	M47K001024	M47K001	23HGK001W	Field Sample
TMW53102023	J115-05	1	NA	11/01/2315:52	11/01/2311:09	M47K001025	M47K001	23HGK001W	Field Sample
MW33102023	J115-06	1	NA	11/01/2315:54	11/01/2311:09	M47K001026	M47K001	23HGK001W	Field Sample
MW31102023	J115-07	1	NA	11/01/2315:56	11/01/2311:09	M47K001027	M47K001	23HGK001W	Field Sample
TMW57102023	J115-08	1	NA	11/01/2315:57	11/01/2311:09	M47K001028	M47K001	23HGK001W	Field Sample
MW27102023	J115-09	1	NA	11/01/2315:59	11/01/2311:09	M47K001029	M47K001	23HGK001W	Field Sample
TMW61102023	J115-10	1	NA	11/01/2316:01	11/01/2311:09	M47K001030	M47K001	23HGK001W	Field Sample
MW39102023	J115-11	1	NA	11/01/2316:03	11/01/2311:09	M47K001031	M47K001	23HGK001W	Field Sample
MW38102023	J115-12	1	NA	11/01/2316:05	11/01/2311:09	M47K001032	M47K001	23HGK001W	Field Sample
TMW24102023	J115-13	1	NA	11/01/2316:06	11/01/2311:09	M47K001033	M47K001	23HGK001W	Field Sample
FW31102023	J115-14	1	NA	11/01/2316:12	11/01/2311:09	M47K001036	M47K001	23HGK001W	Field Sample
TMW59102023	J115-15	1	NA	11/01/2316:14	11/01/2311:09	M47K001037	M47K001	23HGK001W	Field Sample
TMW39D102023	J115-16	1	NA	11/01/2316:16	11/01/2311:09	M47K001038	M47K001	23HGK001W	Field Sample
TMW49102023	J115-17	1	NA	11/01/2316:18	11/01/2311:09	M47K001039	M47K001	23HGK001W	Field Sample
MW35102023	J115-18	1	NA	11/01/2316:20	11/01/2311:09	M47K001040	M47K001	23HGK001W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGK001WB	ND	1	NA	0.50	0.10	0.20	11/01/2315:28	11/01/2311:09	M47K001012	M47K001	23HGK001W	NA	NA
LCS1W	HGK001WL	2.6	1	NA	0.50	0.10	0.20	11/01/2315:30	11/01/2311:09	M47K001013	M47K001	23HGK001W	NA	NA
LCD1W	HGK001WC	2.6	1	NA	0.50	0.10	0.20	11/01/2315:32	11/01/2311:09	M47K001014	M47K001	23HGK001W	NA	NA
MW30102023	J115-01	ND	1	NA	0.50	0.10	0.20	11/01/2315:34	11/01/2311:09	M47K001015	M47K001	23HGK001W	10/09/2307:35	10/11/23
MW26102023	J115-02	ND	1	NA	0.50	0.10	0.20	11/01/2315:36	11/01/2311:09	M47K001016	M47K001	23HGK001W	10/09/2307:40	10/11/23
MW34102023MS	J115-03M	2.9	1	NA	0.50	0.10	0.20	11/01/2315:38	11/01/2311:09	M47K001017	M47K001	23HGK001W	10/09/2308:15	10/11/23
MW34102023MSD	J115-03S	2.6	1	NA	0.50	0.10	0.20	11/01/2315:40	11/01/2311:09	M47K001018	M47K001	23HGK001W	10/09/2308:15	10/11/23
MW34102023	J115-03	ND	1	NA	0.50	0.10	0.20	11/01/2315:43	11/01/2311:09	M47K001020	M47K001	23HGK001W	10/09/2308:15	10/11/23
TMW17102023	J115-04	ND	1	NA	0.50	0.10	0.20	11/01/2315:50	11/01/2311:09	M47K001024	M47K001	23HGK001W	10/09/2308:20	10/11/23
TMW53102023	J115-05	ND	1	NA	0.50	0.10	0.20	11/01/2315:52	11/01/2311:09	M47K001025	M47K001	23HGK001W	10/09/2308:20	10/11/23
MW33102023	J115-06	ND	1	NA	0.50	0.10	0.20	11/01/2315:54	11/01/2311:09	M47K001026	M47K001	23HGK001W	10/09/2308:40	10/11/23
MW31102023	J115-07	ND	1	NA	0.50	0.10	0.20	11/01/2315:56	11/01/2311:09	M47K001027	M47K001	23HGK001W	10/09/2309:10	10/11/23
TMW57102023	J115-08	ND	1	NA	0.50	0.10	0.20	11/01/2315:57	11/01/2311:09	M47K001028	M47K001	23HGK001W	10/09/2309:10	10/11/23
MW27102023	J115-09	ND	1	NA	0.50	0.10	0.20	11/01/2315:59	11/01/2311:09	M47K001029	M47K001	23HGK001W	10/09/2309:40	10/11/23
TMW61102023	J115-10	ND	1	NA	0.50	0.10	0.20	11/01/2316:01	11/01/2311:09	M47K001030	M47K001	23HGK001W	10/09/2310:15	10/11/23
MW39102023	J115-11	ND	1	NA	0.50	0.10	0.20	11/01/2316:03	11/01/2311:09	M47K001031	M47K001	23HGK001W	10/09/2310:15	10/11/23
MW38102023	J115-12	ND	1	NA	0.50	0.10	0.20	11/01/2316:05	11/01/2311:09	M47K001032	M47K001	23HGK001W	10/09/2310:45	10/11/23
TMW24102023	J115-13	ND	1	NA	0.50	0.10	0.20	11/01/2316:06	11/01/2311:09	M47K001033	M47K001	23HGK001W	10/09/2310:55	10/11/23
FW31102023	J115-14	ND	1	NA	0.50	0.10	0.20	11/01/2316:12	11/01/2311:09	M47K001036	M47K001	23HGK001W	10/09/2311:15	10/11/23
TMW59102023	J115-15	ND	1	NA	0.50	0.10	0.20	11/01/2316:14	11/01/2311:09	M47K001037	M47K001	23HGK001W	10/09/2311:30	10/11/23
TMW39D102023	J115-16	ND	1	NA	0.50	0.10	0.20	11/01/2316:16	11/01/2311:09	M47K001038	M47K001	23HGK001W	10/09/2313:30	10/11/23
TMW49102023	J115-17	ND	1	NA	0.50	0.10	0.20	11/01/2316:18	11/01/2311:09	M47K001039	M47K001	23HGK001W	10/09/2313:55	10/11/23
MW35102023	J115-18	ND	1	NA	0.50	0.10	0.20	11/01/2316:20	11/01/2311:09	M47K001040	M47K001	23HGK001W	10/09/2313:55	10/11/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of eighteen(18) water samples were received on 10/11/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGK002WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGK002WL/HGK002WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J115-03M/J115-03S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J115
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGK002WB	1	NA	11/01/2316:22	11/01/2311:54	M47K001041	M47K001	23HGK002W	Method Blank
LCS1W	HGK002WL	1	NA	11/01/2316:24	11/01/2311:54	M47K001042	M47K001	23HGK002W	Lab Control Sample (LCS)
LCD1W	HGK002WC	1	NA	11/01/2316:26	11/01/2311:54	M47K001043	M47K001	23HGK002W	LCS Duplicate
MW30102023	J115-01	1	NA	11/01/2316:27	11/01/2311:54	M47K001044	M47K001	23HGK002W	Field Sample
MW26102023	J115-02	1	NA	11/01/2316:29	11/01/2311:54	M47K001045	M47K001	23HGK002W	Field Sample
MW34102023MS	J115-03M	1	NA	11/01/2316:34	11/01/2311:54	M47K001048	M47K001	23HGK002W	Matrix Spike Sample (MS)
MW34102023MSD	J115-03S	1	NA	11/01/2316:37	11/01/2311:54	M47K001049	M47K001	23HGK002W	MS Duplicate (MSD)
MW34102023	J115-03	1	NA	11/01/2316:40	11/01/2311:54	M47K001051	M47K001	23HGK002W	Field Sample
TMW17102023	J115-04	1	NA	11/01/2316:44	11/01/2311:54	M47K001053	M47K001	23HGK002W	Field Sample
TMW53102023	J115-05	1	NA	11/01/2316:45	11/01/2311:54	M47K001054	M47K001	23HGK002W	Field Sample
MW33102023	J115-06	1	NA	11/01/2316:48	11/01/2311:54	M47K001055	M47K001	23HGK002W	Field Sample
MW31102023	J115-07	1	NA	11/01/2316:50	11/01/2311:54	M47K001056	M47K001	23HGK002W	Field Sample
TMW57102023	J115-08	1	NA	11/01/2316:51	11/01/2311:54	M47K001057	M47K001	23HGK002W	Field Sample
MW27102023	J115-09	1	NA	11/01/2316:57	11/01/2311:54	M47K001060	M47K001	23HGK002W	Field Sample
TMW61102023	J115-10	1	NA	11/01/2316:59	11/01/2311:54	M47K001061	M47K001	23HGK002W	Field Sample
MW39102023	J115-11	1	NA	11/01/2317:01	11/01/2311:54	M47K001062	M47K001	23HGK002W	Field Sample
MW38102023	J115-12	1	NA	11/01/2317:02	11/01/2311:54	M47K001063	M47K001	23HGK002W	Field Sample
TMW24102023	J115-13	1	NA	11/01/2317:04	11/01/2311:54	M47K001064	M47K001	23HGK002W	Field Sample
FW31102023	J115-14	1	NA	11/01/2317:06	11/01/2311:54	M47K001065	M47K001	23HGK002W	Field Sample
TMW59102023	J115-15	1	NA	11/01/2317:08	11/01/2311:54	M47K001066	M47K001	23HGK002W	Field Sample
TMW39D102023	J115-16	1	NA	11/01/2317:09	11/01/2311:54	M47K001067	M47K001	23HGK002W	Field Sample
TMW49102023	J115-17	1	NA	11/01/2317:11	11/01/2311:54	M47K001068	M47K001	23HGK002W	Field Sample
MW35102023	J115-18	1	NA	11/01/2317:13	11/01/2311:54	M47K001069	M47K001	23HGK002W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGK002WB	ND	1	NA	0.50	0.10	0.20	11/01/2316:22	11/01/2311:54	M47K001041	M47K001	23HGK002W	NA	NA
LCS1W	HGK002WL	2.6	1	NA	0.50	0.10	0.20	11/01/2316:24	11/01/2311:54	M47K001042	M47K001	23HGK002W	NA	NA
LCD1W	HGK002WC	2.7	1	NA	0.50	0.10	0.20	11/01/2316:26	11/01/2311:54	M47K001043	M47K001	23HGK002W	NA	NA
MW30102023	J115-01	ND	1	NA	0.50	0.10	0.20	11/01/2316:27	11/01/2311:54	M47K001044	M47K001	23HGK002W	10/09/2307:35	10/11/23
MW26102023	J115-02	ND	1	NA	0.50	0.10	0.20	11/01/2316:29	11/01/2311:54	M47K001045	M47K001	23HGK002W	10/09/2307:40	10/11/23
MW34102023MS	J115-03M	2.6	1	NA	0.50	0.10	0.20	11/01/2316:34	11/01/2311:54	M47K001048	M47K001	23HGK002W	10/09/2308:15	10/11/23
MW34102023MSD	J115-03S	2.6	1	NA	0.50	0.10	0.20	11/01/2316:37	11/01/2311:54	M47K001049	M47K001	23HGK002W	10/09/2308:15	10/11/23
MW34102023	J115-03	ND	1	NA	0.50	0.10	0.20	11/01/2316:40	11/01/2311:54	M47K001051	M47K001	23HGK002W	10/09/2308:15	10/11/23
TMW17102023	J115-04	ND	1	NA	0.50	0.10	0.20	11/01/2316:44	11/01/2311:54	M47K001053	M47K001	23HGK002W	10/09/2308:20	10/11/23
TMW53102023	J115-05	ND	1	NA	0.50	0.10	0.20	11/01/2316:45	11/01/2311:54	M47K001054	M47K001	23HGK002W	10/09/2308:20	10/11/23
MW33102023	J115-06	ND	1	NA	0.50	0.10	0.20	11/01/2316:48	11/01/2311:54	M47K001055	M47K001	23HGK002W	10/09/2308:40	10/11/23
MW31102023	J115-07	ND	1	NA	0.50	0.10	0.20	11/01/2316:50	11/01/2311:54	M47K001056	M47K001	23HGK002W	10/09/2309:10	10/11/23
TMW57102023	J115-08	ND	1	NA	0.50	0.10	0.20	11/01/2316:51	11/01/2311:54	M47K001057	M47K001	23HGK002W	10/09/2309:10	10/11/23
MW27102023	J115-09	ND	1	NA	0.50	0.10	0.20	11/01/2316:57	11/01/2311:54	M47K001060	M47K001	23HGK002W	10/09/2309:40	10/11/23
TMW61102023	J115-10	ND	1	NA	0.50	0.10	0.20	11/01/2316:59	11/01/2311:54	M47K001061	M47K001	23HGK002W	10/09/2310:15	10/11/23
MW39102023	J115-11	ND	1	NA	0.50	0.10	0.20	11/01/2317:01	11/01/2311:54	M47K001062	M47K001	23HGK002W	10/09/2310:15	10/11/23
MW38102023	J115-12	ND	1	NA	0.50	0.10	0.20	11/01/2317:02	11/01/2311:54	M47K001063	M47K001	23HGK002W	10/09/2310:45	10/11/23
TMW24102023	J115-13	ND	1	NA	0.50	0.10	0.20	11/01/2317:04	11/01/2311:54	M47K001064	M47K001	23HGK002W	10/09/2310:55	10/11/23
FW31102023	J115-14	ND	1	NA	0.50	0.10	0.20	11/01/2317:06	11/01/2311:54	M47K001065	M47K001	23HGK002W	10/09/2311:15	10/11/23
TMW59102023	J115-15	ND	1	NA	0.50	0.10	0.20	11/01/2317:08	11/01/2311:54	M47K001066	M47K001	23HGK002W	10/09/2311:30	10/11/23
TMW39D102023	J115-16	ND	1	NA	0.50	0.10	0.20	11/01/2317:09	11/01/2311:54	M47K001067	M47K001	23HGK002W	10/09/2313:30	10/11/23
TMW49102023	J115-17	ND	1	NA	0.50	0.10	0.20	11/01/2317:11	11/01/2311:54	M47K001068	M47K001	23HGK002W	10/09/2313:55	10/11/23
MW35102023	J115-18	ND	1	NA	0.50	0.10	0.20	11/01/2317:13	11/01/2311:54	M47K001069	M47K001	23HGK002W	10/09/2313:55	10/11/23

Note: Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW6850
PERCHLORATE BY HPLC/MS

SDG#: 23J115

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J115

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of seventeen(17) water samples were received on 10/11/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. PLJ012WB and PLJ013WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
-PLJ012WL/PLJ012WC were within LCS limits.
-PLJ013WL/PLJ013WC were within LCS limits.
Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Perchlorate was within MS QC limits in J115-01M/J115-01S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J115-01I, -02I, -03I, -04I, -05I, -06I, -07I, -08I, -09I, -10I, -11I, -12I, -13I, and -15I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J115

Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ012WB	ND	1	NA	0.20	0.050	0.10	10/19/2311:25	NA	23MJ19007	MJ19004	PLJ012W	NA	NA
LCS1W	PLJ012WL	0.21	1	NA	0.20	0.050	0.10	10/19/2311:40	NA	23MJ19008	MJ19004	PLJ012W	NA	NA
LCD1W	PLJ012WC	0.22	1	NA	0.20	0.050	0.10	10/19/2311:55	NA	23MJ19009	MJ19004	PLJ012W	NA	NA
MW35102023	J115-18	ND	1	NA	0.20	0.050	0.10	10/19/2317:40	NA	23MJ19031	MJ19028	PLJ012W	10/09/2313:55	10/11/23
MBLK2W	PLJ013WB	ND	1	NA	0.20	0.050	0.10	10/20/2311:46	NA	23MJ20007	MJ20004	PLJ013W	NA	NA
LCS2W	PLJ013WL	0.20	1	NA	0.20	0.050	0.10	10/20/2312:01	NA	23MJ20008	MJ20004	PLJ013W	NA	NA
LCD2W	PLJ013WC	0.21	1	NA	0.20	0.050	0.10	10/20/2312:16	NA	23MJ20009	MJ20004	PLJ013W	NA	NA
MW30102023	J115-01I	ND	5	NA	1.0	0.25	0.50	10/20/2312:36	NA	23MJ20010	MJ20004	PLJ013W	10/09/2307:35	10/11/23
MW30102023MS	J115-01M	1.1	5	NA	1.0	0.25	0.50	10/20/2312:53	NA	23MJ20011	MJ20004	PLJ013W	10/09/2307:35	10/11/23
MW30102023MSD	J115-01S	1.1	5	NA	1.0	0.25	0.50	10/20/2313:08	NA	23MJ20012	MJ20004	PLJ013W	10/09/2307:35	10/11/23
MW26102023	J115-02I	ND	5	NA	1.0	0.25	0.50	10/20/2313:22	NA	23MJ20013	MJ20004	PLJ013W	10/09/2307:40	10/11/23
MW34102023	J115-03I	ND	5	NA	1.0	0.25	0.50	10/20/2313:37	NA	23MJ20014	MJ20004	PLJ013W	10/09/2308:15	10/11/23
TMW17102023	J115-04I	ND	5	NA	1.0	0.25	0.50	10/20/2313:52	NA	23MJ20015	MJ20004	PLJ013W	10/09/2308:20	10/11/23
TMW53102023	J115-05I	ND	5	NA	1.0	0.25	0.50	10/20/2314:06	NA	23MJ20016	MJ20004	PLJ013W	10/09/2308:20	10/11/23
MW33102023	J115-06I	ND	5	NA	1.0	0.25	0.50	10/20/2314:36	NA	23MJ20018	MJ20017	PLJ013W	10/09/2308:40	10/11/23
MW31102023	J115-07I	ND	5	NA	1.0	0.25	0.50	10/20/2314:50	NA	23MJ20019	MJ20017	PLJ013W	10/09/2309:10	10/11/23
TMW57102023	J115-08I	ND	5	NA	1.0	0.25	0.50	10/20/2315:05	NA	23MJ20020	MJ20017	PLJ013W	10/09/2309:10	10/11/23
MW27102023	J115-09I	ND	5	NA	1.0	0.25	0.50	10/20/2315:20	NA	23MJ20021	MJ20017	PLJ013W	10/09/2309:40	10/11/23
TMW61102023	J115-10I	ND	5	NA	1.0	0.25	0.50	10/20/2315:34	NA	23MJ20022	MJ20017	PLJ013W	10/09/2310:15	10/11/23
MW39102023	J115-11I	ND	5	NA	1.0	0.25	0.50	10/20/2315:49	NA	23MJ20023	MJ20017	PLJ013W	10/09/2310:15	10/11/23
MW38102023	J115-12I	ND	5	NA	1.0	0.25	0.50	10/20/2316:03	NA	23MJ20024	MJ20017	PLJ013W	10/09/2310:45	10/11/23
TMW24102023	J115-13I	ND	5	NA	1.0	0.25	0.50	10/20/2316:18	NA	23MJ20025	MJ20017	PLJ013W	10/09/2310:55	10/11/23
TMW59102023	J115-15I	ND	5	NA	1.0	0.25	0.50	10/20/2316:33	NA	23MJ20026	MJ20017	PLJ013W	10/09/2311:30	10/11/23
TMW39D102023	J115-16I	100	30	NA	6.0	1.5	3.0	10/20/2316:47	NA	23MJ20027	MJ20017	PLJ013W	10/09/2313:30	10/11/23
TMW49102023	J115-17I	370	100	NA	20	5.0	10	10/20/2317:17	NA	23MJ20029	MJ20028	PLJ013W	10/09/2313:55	10/11/23

Note: Detection limits are reported relative to sample result significant figures.

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 12-05-2023
EMAX Batch No.: 23J128_R1

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Revised Laboratory Report
Project: USACE WINGATE

Enclosed is the Revised Laboratory report for samples received on 10/12/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW37102023	J128-01	10/11/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
TMW15102023	J128-02	10/11/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				SEMIVOLATILES + APP 9
				ANIONS BY IC
TMW52102023	J128-03	10/11/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
TMW13102023	J128-04	10/11/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				ANIONS BY IC
FDUP09-102023	J128-05	10/11/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				ANIONS BY IC
TMW35102023	J128-06	10/11/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				ANIONS BY IC
TMW45102023	J128-07	10/11/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				ANIONS BY IC
TMW64102023	J128-08	10/11/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				CHLORINATED HERBICIDES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				POLYCHLORINATED BIPHENYLS (PCBS)
				ANIONS BY IC
MW25102023	J128-09	10/11/23	WATER	ANIONS BY IC
MW20102023	J128-10	10/11/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				ANIONS BY IC

EMAX
LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
MW18D102023	J128-11	10/11/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS TPH-DRO ANIONS BY IC
QC11102023EB	J128-12	10/11/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES CHLORINATED HERBICIDES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 TPH-DRO POLYCHLORINATED BIPHENYLS (PCBS) ANIONS BY IC
TMW06102023	J128-13	10/11/23	WATER	VOCS BY 8260C TPH GASOLINE NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 TPH-DRO ANIONS BY IC
QC11102023TB	J128-14	10/11/23	WATER	VOCS BY 8260C TPH GASOLINE
TMW15102023MS	J128-02M	10/11/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 ANIONS BY IC
TMW15102023MSD	J128-02S	10/11/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 ANIONS BY IC

The results are summarized on the following pages.

This report was revised to include printed runlogs for Method 8270D.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of thirteen(13) water samples were received on 10/12/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied except for Bromomethane was detected biased low in ending CCV(data file ID RJG368). However, the following two consecutive CCV'S(Data file ID:RJG369) and (Data file ID:RJG370) were within calibration acceptance criteria..Note that" Minimum Response Factor" for all analytes were within method recommended response factors with the exception of 2-Butanone However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VOE2J15B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control
All analytes were within LCS limits in VOE2J15L/VOE2J15C, except for percent recoveries for 2-Hexanone and 4-Methyl-2-Pentanone in LCD and RPDs were greater than RPD QC limit for few analytes. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD (23J128-02M/23J128-02S) was analyzed. All analytes were in control, except for Percent recovery for Carbon Disulfide was not within MS. Percent recovery for 1,3-Dichlorobenzene was not within MSD QC limit. presence of matrix interference was suspected. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : E2

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOE2J15L	1	NA	10/23/2314:03	10/23/2314:03	RJG342	RJG046	VOE2J15	Lab Control Sample (LCS)
LCD1W	VOE2J15C	1	NA	10/23/2314:28	10/23/2314:28	RJG343	RJG046	VOE2J15	LCS Duplicate
MBLK1W	VOE2J15B	1	NA	10/23/2315:16	10/23/2315:16	RJG345	RJG046	VOE2J15	Method Blank
MW37102023	23J128-01	1	NA	10/23/2315:41	10/23/2315:41	RJG346	RJG046	VOE2J15	Field Sample
TMW15102023	23J128-02	1	NA	10/23/2316:05	10/23/2316:05	RJG347	RJG046	VOE2J15	Field Sample
TMW15102023MS	23J128-02M	1	NA	10/23/2316:29	10/23/2316:29	RJG348	RJG046	VOE2J15	Matrix Spike Sample (MS)
TMW52102023	23J128-03	1	NA	10/23/2317:43	10/23/2317:43	RJG351	RJG046	VOE2J15	Field Sample
TMW13102023	23J128-04	1	NA	10/23/2318:07	10/23/2318:07	RJG352	RJG046	VOE2J15	Field Sample
TMW15102023MSD	23J128-02S	1	NA	10/23/2318:31	10/23/2318:31	RJG353	RJG046	VOE2J15	MS Duplicate (MSD)
FDUP09-102023	23J128-05	1	NA	10/23/2319:20	10/23/2319:20	RJG355	RJG046	VOE2J15	Field Sample
TMW35102023	23J128-06	1	NA	10/23/2319:44	10/23/2319:44	RJG356	RJG046	VOE2J15	Field Sample
TMW45102023	23J128-07	1	NA	10/23/2320:09	10/23/2320:09	RJG357	RJG046	VOE2J15	Field Sample
TMW64102023	23J128-08	1	NA	10/23/2320:33	10/23/2320:33	RJG358	RJG046	VOE2J15	Field Sample
MW20102023	23J128-10	1	NA	10/23/2320:58	10/23/2320:58	RJG359	RJG046	VOE2J15	Field Sample
MW18D102023	23J128-11	1	NA	10/23/2321:22	10/23/2321:22	RJG360	RJG046	VOE2J15	Field Sample
QC11102023EB	23J128-12	1	NA	10/23/2321:47	10/23/2321:47	RJG361	RJG046	VOE2J15	Field Sample
TMW06102023	23J128-13	1	NA	10/23/2322:11	10/23/2322:11	RJG362	RJG046	VOE2J15	Field Sample
QC11102023TB	23J128-14	1	NA	10/23/2322:36	10/23/2322:36	RJG363	RJG046	VOE2J15	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 15:41
Sample ID	: MW37102023	Date Analyzed:	10/23/23 15:41
Lab Samp ID:	23J128-01	Dilution Factor:	1
Lab File ID:	RJG346	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.1	10.0	111	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	10.3	10.0	103	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 16:05
Sample ID	: TMW15102023	Date Analyzed:	10/23/23 16:05
Lab Samp ID:	23J128-02	Dilution Factor:	1
Lab File ID:	RJG347	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.2	10.0	112	81-118
4-Bromofluorobenzene	9.86	10.0	99	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 17:43
Sample ID	: TMW52102023	Date Analyzed:	10/23/23 17:43
Lab Samp ID:	23J128-03	Dilution Factor:	1
Lab File ID:	RJG351	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.0	10.0	110	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:05
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 18:07
Sample ID	: TMW13102023	Date Analyzed:	10/23/23 18:07
Lab Samp ID:	23J128-04	Dilution Factor:	1
Lab File ID:	RJG352	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.2	10.0	112	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:15
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 19:20
Sample ID	: FDUP09-102023	Date Analyzed:	10/23/23 19:20
Lab Samp ID:	23J128-05	Dilution Factor:	1
Lab File ID:	RJG355	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.1	10.0	111	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 19:44
Sample ID	: TMW35102023	Date Analyzed:	10/23/23 19:44
Lab Samp ID:	23J128-06	Dilution Factor:	1
Lab File ID:	RJG356	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	0.44J	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.4	10.0	114	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	10.0	10.0	100	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 20:09
Sample ID	: TMW45102023	Date Analyzed:	10/23/23 20:09
Lab Samp ID:	23J128-07	Dilution Factor:	1
Lab File ID:	RJG357	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.3	10.0	113	81-118
4-Bromofluorobenzene	9.76	10.0	98	85-114
Toluene-d8	10.0	10.0	100	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 20:33
Sample ID	: TMW64102023	Date Analyzed:	10/23/23 20:33
Lab Samp ID:	23J128-08	Dilution Factor:	1
Lab File ID:	RJG358	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.5	10.0	115	81-118
4-Bromofluorobenzene	9.90	10.0	99	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 20:58
Sample ID	: MW20102023	Date Analyzed:	10/23/23 20:58
Lab Samp ID:	23J128-10	Dilution Factor:	1
Lab File ID:	RJG359	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	0.90J	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.5	10.0	115	81-118
4-Bromofluorobenzene	9.94	10.0	99	85-114
Toluene-d8	9.98	10.0	100	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 13:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 21:22
Sample ID	: MW18D102023	Date Analyzed:	10/23/23 21:22
Lab Samp ID:	23J128-11	Dilution Factor:	1
Lab File ID:	RJG360	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	81	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.8	10.0	108	81-118
4-Bromofluorobenzene	9.94	10.0	99	85-114
Toluene-d8	10.2	10.0	102	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:00
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 21:47
Sample ID	: QC11102023EB	Date Analyzed:	10/23/23 21:47
Lab Samp ID:	23J128-12	Dilution Factor:	1
Lab File ID:	RJG361	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	0.13J	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	1.8	1.0	0.10	0.20
Bromoform	0.18J	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	2.4	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	0.90J	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.3	10.0	113	81-118
4-Bromofluorobenzene	10.2	10.0	102	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 22:11
Sample ID	: TMW06102023	Date Analyzed:	10/23/23 22:11
Lab Samp ID:	23J128-13	Dilution Factor:	1
Lab File ID:	RJG362	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.5	10.0	115	81-118
4-Bromofluorobenzene	9.48	10.0	95	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Prepared by : DNguye
Final Volume : 10ml
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:00
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/23/23 22:36
Sample ID	: QC11102023TB	Date Analyzed:	10/23/23 22:36
Lab Samp ID:	23J128-14	Dilution Factor:	1
Lab File ID:	RJG363	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.7	10.0	117	81-118
4-Bromofluorobenzene	9.95	10.0	99	85-114
Toluene-d8	10.0	10.0	100	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS + APPENDIX 9

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of nine(9) water samples were received on 10/12/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. For this SDG, the following were noted: 2,4-Dinitrophenol and 4,6-Dinitro-2-Methylphenol were detected biased high(%D=38.0) and (%D=32.3) respectively in CCV(Data File ID: RJJ528). However, these analytes were not detected in any of the associated field samples. Target analytes in CCVs(Data File IDs: RJJ529, RJJ563 and RJJ564) were within calibration acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ040WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: SVJ040WL/SVJ040WC - Percent recoveries for several analytes in LCS and/or LCD were biased high. However, all analytes were not detected in the associated samples. The rest of the analytes were in control. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: 23J128-02M/23J128-02S - Percent recoveries for several analytes were not within MS and/or QC limits. RPD for Hexachlorocyclopentadiene, (RPD=23*), was >RPD limit. The rest of the analytes were in control. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. For this SDG, all surrogate recoveries were within QC limits except for Terphenyl-D14 in J128-02S; most likely due to matrix interference. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of nine(9) water samples were received on 10/12/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data File IDs: RJJ530 and RJJ562) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ040WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. The target analyte was within LCS limits except for: CLJ040WL/CLJ040WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=31*) was >RPD limit. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 1,2,4,5-Tetrachlorobenzene was within MS QC limits in 23J128-02M/23J128-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ040WB	1	NA	10/23/2313:04	10/18/2315:30	RJJ531	RGJ087	23SVJ040W	Method Blank
LCS1W	SVJ040WL	1	NA	10/23/2313:22	10/18/2315:30	RJJ532	RGJ087	23SVJ040W	Lab Control Sample (LCS)
LCD1W	SVJ040WC	1	NA	10/23/2313:41	10/18/2315:30	RJJ533	RGJ087	23SVJ040W	LCS Duplicate
TMW15102023MS	23J128-02M	1	NA	10/23/2314:37	10/18/2315:30	RJJ536	RGJ087	23SVJ040W	Matrix Spike Sample (MS)
TMW15102023MSD	23J128-02S	1	NA	10/23/2314:56	10/18/2315:30	RJJ537	RGJ087	23SVJ040W	MS Duplicate (MSD)
MW37102023	23J128-01	1	NA	10/23/2316:30	10/18/2315:30	RJJ542	RGJ087	23SVJ040W	Field Sample
TMW15102023	23J128-02	1	NA	10/23/2316:49	10/18/2315:30	RJJ543	RGJ087	23SVJ040W	Field Sample
TMW52102023	23J128-03	1	NA	10/23/2317:08	10/18/2315:30	RJJ544	RGJ087	23SVJ040W	Field Sample
TMW35102023	23J128-06	1	NA	10/23/2317:26	10/18/2315:30	RJJ545	RGJ087	23SVJ040W	Field Sample
TMW45102023	23J128-07	1	NA	10/23/2317:45	10/18/2315:30	RJJ546	RGJ087	23SVJ040W	Field Sample
TMW64102023	23J128-08	1	NA	10/23/2318:04	10/18/2315:30	RJJ547	RGJ087	23SVJ040W	Field Sample
MW20102023	23J128-10	1	NA	10/23/2318:23	10/18/2315:30	RJJ548	RGJ087	23SVJ040W	Field Sample
QC11102023EB	23J128-12	1	NA	10/23/2318:41	10/18/2315:30	RJJ549	RGJ087	23SVJ040W	Field Sample
TMW06102023	23J128-13	1	NA	10/23/2319:00	10/18/2315:30	RJJ550	RGJ087	23SVJ040W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ040WB	1	NA	10/23/2313:04	10/18/2315:30	RJJ531	RGJ100	23SVJ040W	Method Blank
LCS1W	CLJ040WL	1	NA	10/23/2314:00	10/18/2315:30	RJJ534	RGJ100	23SVJ040W	Lab Control Sample (LCS)
LCD1W	CLJ040WC	1	NA	10/23/2314:19	10/18/2315:30	RJJ535	RGJ100	23SVJ040W	LCS Duplicate
TMW15102023MS	23J128-02M	1	NA	10/23/2315:15	10/18/2315:30	RJJ538	RGJ100	23SVJ040W	Matrix Spike Sample (MS)
TMW15102023MSD	23J128-02S	1	NA	10/23/2315:34	10/18/2315:30	RJJ539	RGJ100	23SVJ040W	MS Duplicate (MSD)
MW37102023	23J128-01	1	NA	10/23/2316:30	10/18/2315:30	RJJ542	RGJ100	23SVJ040W	Field Sample
TMW15102023	23J128-02	1	NA	10/23/2316:49	10/18/2315:30	RJJ543	RGJ100	23SVJ040W	Field Sample
TMW52102023	23J128-03	1	NA	10/23/2317:08	10/18/2315:30	RJJ544	RGJ100	23SVJ040W	Field Sample
TMW35102023	23J128-06	1	NA	10/23/2317:26	10/18/2315:30	RJJ545	RGJ100	23SVJ040W	Field Sample
TMW45102023	23J128-07	1	NA	10/23/2317:45	10/18/2315:30	RJJ546	RGJ100	23SVJ040W	Field Sample
TMW64102023	23J128-08	1	NA	10/23/2318:04	10/18/2315:30	RJJ547	RGJ100	23SVJ040W	Field Sample
MW20102023	23J128-10	1	NA	10/23/2318:23	10/18/2315:30	RJJ548	RGJ100	23SVJ040W	Field Sample
QC11102023EB	23J128-12	1	NA	10/23/2318:41	10/18/2315:30	RJJ549	RGJ100	23SVJ040W	Field Sample
TMW06102023	23J128-13	1	NA	10/23/2319:00	10/18/2315:30	RJJ550	RGJ100	23SVJ040W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ040WB	1	NA	10/23/2313:04	10/18/2315:30	RJJ531	RGJ079	23SVJ040W	Method Blank
LCS1W	CLJ040WL	1	NA	10/23/2314:00	10/18/2315:30	RJJ534	RGJ079	23SVJ040W	Lab Control Sample (LCS)
LCD1W	CLJ040WC	1	NA	10/23/2314:19	10/18/2315:30	RJJ535	RGJ079	23SVJ040W	LCS Duplicate
TMW15102023MS	23J128-02M	1	NA	10/23/2315:15	10/18/2315:30	RJJ538	RGJ079	23SVJ040W	Matrix Spike Sample (MS)
TMW15102023MSD	23J128-02S	1	NA	10/23/2315:34	10/18/2315:30	RJJ539	RGJ079	23SVJ040W	MS Duplicate (MSD)
MW37102023	23J128-01	1	NA	10/23/2316:30	10/18/2315:30	RJJ542	RGJ079	23SVJ040W	Field Sample
TMW15102023	23J128-02	1	NA	10/23/2316:49	10/18/2315:30	RJJ543	RGJ079	23SVJ040W	Field Sample
TMW52102023	23J128-03	1	NA	10/23/2317:08	10/18/2315:30	RJJ544	RGJ079	23SVJ040W	Field Sample
TMW35102023	23J128-06	1	NA	10/23/2317:26	10/18/2315:30	RJJ545	RGJ079	23SVJ040W	Field Sample
TMW45102023	23J128-07	1	NA	10/23/2317:45	10/18/2315:30	RJJ546	RGJ079	23SVJ040W	Field Sample
TMW64102023	23J128-08	1	NA	10/23/2318:04	10/18/2315:30	RJJ547	RGJ079	23SVJ040W	Field Sample
MW20102023	23J128-10	1	NA	10/23/2318:23	10/18/2315:30	RJJ548	RGJ079	23SVJ040W	Field Sample
QC11102023EB	23J128-12	1	NA	10/23/2318:41	10/18/2315:30	RJJ549	RGJ079	23SVJ040W	Field Sample
TMW06102023	23J128-13	1	NA	10/23/2319:00	10/18/2315:30	RJJ550	RGJ079	23SVJ040W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: MW37102023	Date Analyzed:	10/23/23 16:30
Lab Samp ID:	23J128-01	Dilution Factor:	1
Lab File ID:	RJJ542	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	47.5	72.0	66	43-140
2-Fluorobiphenyl	17.5	24.0	73	44-119
2-Fluorophenol	30.3	72.0	42	19-119
Nitrobenzene-d5	15.8	24.0	66	44-120
Phenol-d5	35.4	72.0	49	40-130
Terphenyl-d14	22.5	24.0	94	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: MW37102023	Date Analyzed:	10/23/23 16:30
Lab Samp ID:	23J128-01	Dilution Factor:	1
Lab File ID:	RJJ542	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: MW37102023	Date Analyzed:	10/23/23 16:30
Lab Samp ID:	23J128-01	Dilution Factor:	1
Lab File ID:	RJJ542	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 830ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW15102023	Date Analyzed:	10/23/23 16:49
Lab Samp ID:	23J128-02	Dilution Factor:	1
Lab File ID:	RJJ543	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	45
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	45	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	60.0	67.2	89	43-140
2-Fluorobiphenyl	18.8	22.4	84	44-119
2-Fluorophenol	36.3	67.2	54	19-119
Nitrobenzene-d5	18.3	22.4	82	44-120
Phenol-d5	41.0	67.2	61	40-130
Terphenyl-d14	29.2	22.4	130	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW15102023	Date Analyzed:	10/23/23 16:49
Lab Samp ID:	23J128-02	Dilution Factor:	1
Lab File ID:	RJJ543	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW15102023	Date Analyzed:	10/23/23 16:49
Lab Samp ID:	23J128-02	Dilution Factor:	1
Lab File ID:	RJJ543	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW52102023	Date Analyzed:	10/23/23 17:08
Lab Samp ID:	23J128-03	Dilution Factor:	1
Lab File ID:	RJJ544	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.8	5.7
1,2-Diphenylhydrazine	ND	11	2.8	5.7
1,3-Dichlorobenzene	ND	11	2.8	5.7
1,4-Dichlorobenzene	ND	11	2.8	5.7
2,4,5-Trichlorophenol	ND	11	2.8	5.7
2,4,6-Trichlorophenol	ND	11	2.8	5.7
2,4-Dichlorophenol	ND	11	2.8	5.7
2,4-Dimethylphenol	ND	11	2.8	5.7
2,4-Dinitrophenol	ND	23	2.8	5.7
2,4-Dinitrotoluene	ND	11	2.8	5.7
2,6-Dinitrotoluene	ND	11	2.8	5.7
2-Chloronaphthalene	ND	11	2.8	5.7
2-Chlorophenol	ND	11	2.8	5.7
2-Methylnaphthalene	ND	11	2.8	5.7
2-Methylphenol	ND	11	2.8	5.7
2-Nitroaniline	ND	11	2.8	5.7
2-Nitrophenol	ND	11	2.8	5.7
3,3'-Dichlorobenzidine	ND	11	2.8	5.7
3/4-Methylphenol	ND	11	2.8	5.7
3-Nitroaniline	ND	11	2.8	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.8	5.7
4-Bromophenyl phenyl ether	ND	11	2.8	5.7
4-Chloro-3-methylphenol	ND	11	2.8	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.7
4-Nitroaniline	ND	11	2.8	5.7
4-Nitrophenol	ND	23	2.8	5.7
Acenaphthene	ND	11	2.8	5.7
Acenaphthylene	ND	11	2.8	5.7
Anthracene	ND	11	2.8	5.7
Benzo(a)anthracene	ND	11	2.8	5.7
Benzo(a)pyrene	ND	11	2.8	5.7
Benzo(b)fluoranthene	ND	11	2.8	5.7
Benzo(g,h,i)perylene	ND	11	2.8	5.7
Benzo(k)fluoranthene	ND	11	2.8	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.8	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.7
bis(2-Chloroethoxy)methane	ND	11	2.8	5.7
bis(2-Chloroethyl) ether	ND	11	2.8	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.8	5.7
Carbazole	ND	11	2.8	5.7
Chrysene	ND	11	2.8	5.7
Dibenzo(a,h)anthracene	ND	11	2.8	5.7
Dibenzofuran	ND	11	2.8	5.7
Diethylphthalate	ND	11	2.8	5.7
Dimethylphthalate	ND	11	2.8	5.7
Di-n-butyl phthalate	ND	11	2.8	5.7
Di-n-octyl phthalate	ND	11	2.8	5.7
Fluoranthene	ND	11	2.8	5.7
Fluorene	ND	11	2.8	5.7
Hexachlorobenzene	ND	11	2.8	5.7
Hexachlorobutadiene	ND	11	2.8	5.7
Hexachloroethane	ND	11	2.8	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.7
Isophorone	ND	11	2.8	5.7
Naphthalene	ND	11	2.8	5.7
Nitrobenzene	ND	11	2.8	5.7
N-Nitrosodimethylamine	ND	11	2.8	5.7
n-Nitroso-di-n-propylamine	ND	11	2.8	5.7
n-Nitrosodiphenylamine	ND	11	2.8	5.7
Pentachlorophenol	ND	23	2.8	5.7
Phenanthrene	ND	11	2.8	5.7
Phenol	ND	11	2.8	5.7
Pyrene	ND	11	2.8	5.7
Hexachlorocyclopentadiene	ND	11	2.8	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.7
2,6-Dichlorophenol	ND	11	2.8	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	47.0	68.4	69	43-140
2-Fluorobiphenyl	15.5	22.8	68	44-119
2-Fluorophenol	25.5	68.4	37	19-119
Nitrobenzene-d5	14.7	22.8	65	44-120
Phenol-d5	32.0	68.4	47	40-130
Terphenyl-d14	24.3	22.8	107	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW52102023	Date Analyzed:	10/23/23 17:08
Lab Samp ID:	23J128-03	Dilution Factor:	1
Lab File ID:	RJJ544	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.7

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW52102023	Date Analyzed:	10/23/23 17:08
Lab Samp ID:	23J128-03	Dilution Factor:	1
Lab File ID:	RJJ544	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW35102023	Date Analyzed:	10/23/23 17:26
Lab Samp ID:	23J128-06	Dilution Factor:	1
Lab File ID:	RJJ545	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	61.3	71.4	86	43-140
2-Fluorobiphenyl	22.0	23.8	92	44-119
2-Fluorophenol	33.0	71.4	46	19-119
Nitrobenzene-d5	17.9	23.8	75	44-120
Phenol-d5	44.6	71.4	62	40-130
Terphenyl-d14	31.2	23.8	131	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW35102023	Date Analyzed:	10/23/23 17:26
Lab Samp ID:	23J128-06	Dilution Factor:	1
Lab File ID:	RJJ545	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW35102023	Date Analyzed:	10/23/23 17:26
Lab Samp ID:	23J128-06	Dilution Factor:	1
Lab File ID:	RJJ545	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW45102023	Date Analyzed:	10/23/23 17:45
Lab Samp ID:	23J128-07	Dilution Factor:	1
Lab File ID:	RJJ546	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	59.8	72.0	83	43-140
2-Fluorobiphenyl	18.6	24.0	77	44-119
2-Fluorophenol	34.3	72.0	48	19-119
Nitrobenzene-d5	17.3	24.0	72	44-120
Phenol-d5	43.2	72.0	60	40-130
Terphenyl-d14	25.4	24.0	106	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW45102023	Date Analyzed:	10/23/23 17:45
Lab Samp ID:	23J128-07	Dilution Factor:	1
Lab File ID:	RJJ546	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW45102023	Date Analyzed:	10/23/23 17:45
Lab Samp ID:	23J128-07	Dilution Factor:	1
Lab File ID:	RJJ546	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW64102023	Date Analyzed:	10/23/23 18:04
Lab Samp ID:	23J128-08	Dilution Factor:	1
Lab File ID:	RJJ547	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	25	6.2	12
1,2-Dichlorobenzene	ND	12	3.1	6.2
1,2-Diphenylhydrazine	ND	12	3.1	6.2
1,3-Dichlorobenzene	ND	12	3.1	6.2
1,4-Dichlorobenzene	ND	12	3.1	6.2
2,4,5-Trichlorophenol	ND	12	3.1	6.2
2,4,6-Trichlorophenol	ND	12	3.1	6.2
2,4-Dichlorophenol	ND	12	3.1	6.2
2,4-Dimethylphenol	ND	12	3.1	6.2
2,4-Dinitrophenol	ND	25	3.1	6.2
2,4-Dinitrotoluene	ND	12	3.1	6.2
2,6-Dinitrotoluene	ND	12	3.1	6.2
2-Chloronaphthalene	ND	12	3.1	6.2
2-Chlorophenol	ND	12	3.1	6.2
2-Methylnaphthalene	ND	12	3.1	6.2
2-Methylphenol	ND	12	3.1	6.2
2-Nitroaniline	ND	12	3.1	6.2
2-Nitrophenol	ND	12	3.1	6.2
3,3'-Dichlorobenzidine	ND	12	3.1	6.2
3/4-Methylphenol	ND	12	3.1	6.2
3-Nitroaniline	ND	12	3.1	6.2
4,6-Dinitro-2-methylphenol	ND	25	3.1	6.2
4-Bromophenyl phenyl ether	ND	12	3.1	6.2
4-Chloro-3-methylphenol	ND	12	3.1	6.2
4-Chloroaniline	ND	25	6.2	12
4-Chlorophenyl-phenyl ether	ND	12	3.1	6.2
4-Nitroaniline	ND	12	3.1	6.2
4-Nitrophenol	ND	25	3.1	6.2
Acenaphthene	ND	12	3.1	6.2
Acenaphthylene	ND	12	3.1	6.2
Anthracene	ND	12	3.1	6.2
Benzo(a)anthracene	ND	12	3.1	6.2
Benzo(a)pyrene	ND	12	3.1	6.2
Benzo(b)fluoranthene	ND	12	3.1	6.2
Benzo(g,h,i)perylene	ND	12	3.1	6.2
Benzo(k)fluoranthene	ND	12	3.1	6.2
Benzoic Acid	ND	120	25	50
Benzyl Alcohol	ND	12	3.1	6.2
bis(2-Chloroisopropyl) ether	ND	12	3.1	6.2
bis(2-Chloroethoxy)methane	ND	12	3.1	6.2
bis(2-Chloroethyl) ether	ND	12	3.1	6.2
bis(2-Ethylhexyl) phthalate	ND	25	6.2	12
Butylbenzylphthalate	ND	12	3.1	6.2
Carbazole	ND	12	3.1	6.2
Chrysene	ND	12	3.1	6.2
Dibenzo(a,h)anthracene	ND	12	3.1	6.2
Dibenzofuran	ND	12	3.1	6.2
Diethylphthalate	ND	12	3.1	6.2
Dimethylphthalate	ND	12	3.1	6.2
Di-n-butyl phthalate	ND	12	3.1	6.2
Di-n-octyl phthalate	ND	12	3.1	6.2
Fluoranthene	ND	12	3.1	6.2
Fluorene	ND	12	3.1	6.2
Hexachlorobenzene	ND	12	3.1	6.2
Hexachlorobutadiene	ND	12	3.1	6.2
Hexachloroethane	ND	12	3.1	6.2
Indeno(1,2,3-cd)pyrene	ND	12	3.1	6.2
Isophorone	ND	12	3.1	6.2
Naphthalene	ND	12	3.1	6.2
Nitrobenzene	ND	12	3.1	6.2
N-Nitrosodimethylamine	ND	12	3.1	6.2
n-Nitroso-di-n-propylamine	ND	12	3.1	6.2
n-Nitrosodiphenylamine	ND	12	3.1	6.2
Pentachlorophenol	ND	25	3.1	6.2
Phenanthrene	ND	12	3.1	6.2
Phenol	ND	12	3.1	6.2
Pyrene	ND	12	3.1	6.2
Hexachlorocyclopentadiene	ND	12	3.1	6.2
Benzidine	ND	50	12	25
2,3,4,6-Tetrachlorophenol	ND	12	3.1	6.2
2,6-Dichlorophenol	ND	12	3.1	6.2

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	58.6	75.0	78	43-140
2-Fluorobiphenyl	20.4	25.0	81	44-119
2-Fluorophenol	40.6	75.0	54	19-119
Nitrobenzene-d5	19.3	25.0	77	44-120
Phenol-d5	50.4	75.0	67	40-130
Terphenyl-d14	32.9	25.0	132	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 800ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW64102023	Date Analyzed:	10/23/23 18:04
Lab Samp ID:	23J128-08	Dilution Factor:	1
Lab File ID:	RJJ547	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.1	6.2

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 800ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW64102023	Date Analyzed:	10/23/23 18:04
Lab Samp ID:	23J128-08	Dilution Factor:	1
Lab File ID:	RJJ547	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	25	6.2	12
Benzaldehyde	ND	25	6.2	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 800ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: MW20102023	Date Analyzed:	10/23/23 18:23
Lab Samp ID:	23J128-10	Dilution Factor:	1
Lab File ID:	RJJ548	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.9	5.7
1,2-Diphenylhydrazine	ND	11	2.9	5.7
1,3-Dichlorobenzene	ND	11	2.9	5.7
1,4-Dichlorobenzene	ND	11	2.9	5.7
2,4,5-Trichlorophenol	ND	11	2.9	5.7
2,4,6-Trichlorophenol	ND	11	2.9	5.7
2,4-Dichlorophenol	ND	11	2.9	5.7
2,4-Dimethylphenol	ND	11	2.9	5.7
2,4-Dinitrophenol	ND	23	2.9	5.7
2,4-Dinitrotoluene	ND	11	2.9	5.7
2,6-Dinitrotoluene	ND	11	2.9	5.7
2-Chloronaphthalene	ND	11	2.9	5.7
2-Chlorophenol	ND	11	2.9	5.7
2-Methylnaphthalene	ND	11	2.9	5.7
2-Methylphenol	ND	11	2.9	5.7
2-Nitroaniline	ND	11	2.9	5.7
2-Nitrophenol	ND	11	2.9	5.7
3,3'-Dichlorobenzidine	ND	11	2.9	5.7
3/4-Methylphenol	ND	11	2.9	5.7
3-Nitroaniline	ND	11	2.9	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.7
4-Bromophenyl phenyl ether	ND	11	2.9	5.7
4-Chloro-3-methylphenol	ND	11	2.9	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.9	5.7
4-Nitroaniline	ND	11	2.9	5.7
4-Nitrophenol	ND	23	2.9	5.7
Acenaphthene	ND	11	2.9	5.7
Acenaphthylene	ND	11	2.9	5.7
Anthracene	ND	11	2.9	5.7
Benzo(a)anthracene	ND	11	2.9	5.7
Benzo(a)pyrene	ND	11	2.9	5.7
Benzo(b)fluoranthene	ND	11	2.9	5.7
Benzo(g,h,i)perylene	ND	11	2.9	5.7
Benzo(k)fluoranthene	ND	11	2.9	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.9	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.9	5.7
bis(2-Chloroethoxy)methane	ND	11	2.9	5.7
bis(2-Chloroethyl) ether	ND	11	2.9	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.9	5.7
Carbazole	ND	11	2.9	5.7
Chrysene	ND	11	2.9	5.7
Dibenzo(a,h)anthracene	ND	11	2.9	5.7
Dibenzofuran	ND	11	2.9	5.7
Diethylphthalate	ND	11	2.9	5.7
Dimethylphthalate	ND	11	2.9	5.7
Di-n-butyl phthalate	ND	11	2.9	5.7
Di-n-octyl phthalate	ND	11	2.9	5.7
Fluoranthene	ND	11	2.9	5.7
Fluorene	ND	11	2.9	5.7
Hexachlorobenzene	ND	11	2.9	5.7
Hexachlorobutadiene	ND	11	2.9	5.7
Hexachloroethane	ND	11	2.9	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.9	5.7
Isophorone	ND	11	2.9	5.7
Naphthalene	ND	11	2.9	5.7
Nitrobenzene	ND	11	2.9	5.7
N-Nitrosodimethylamine	ND	11	2.9	5.7
n-Nitroso-di-n-propylamine	ND	11	2.9	5.7
n-Nitrosodiphenylamine	ND	11	2.9	5.7
Pentachlorophenol	ND	23	2.9	5.7
Phenanthrene	ND	11	2.9	5.7
Phenol	ND	11	2.9	5.7
Pyrene	ND	11	2.9	5.7
Hexachlorocyclopentadiene	ND	11	2.9	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.9	5.7
2,6-Dichlorophenol	ND	11	2.9	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	53.4	69.0	77	43-140
2-Fluorobiphenyl	20.5	23.0	89	44-119
2-Fluorophenol	39.7	69.0	58	19-119
Nitrobenzene-d5	20.8	23.0	90	44-120
Phenol-d5	52.0	69.0	75	40-130
Terphenyl-d14	24.5	23.0	107	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: MW20102023	Date Analyzed:	10/23/23 18:23
Lab Samp ID:	23J128-10	Dilution Factor:	1
Lab File ID:	RJJ548	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.9	5.7

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: MW20102023	Date Analyzed:	10/23/23 18:23
Lab Samp ID:	23J128-10	Dilution Factor:	1
Lab File ID:	RJJ548	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:00
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: QC11102023EB	Date Analyzed:	10/23/23 18:41
Lab Samp ID:	23J128-12	Dilution Factor:	1
Lab File ID:	RJJ549	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	23	5.7	11
1,2-Dichlorobenzene	ND	11	2.9	5.7
1,2-Diphenylhydrazine	ND	11	2.9	5.7
1,3-Dichlorobenzene	ND	11	2.9	5.7
1,4-Dichlorobenzene	ND	11	2.9	5.7
2,4,5-Trichlorophenol	ND	11	2.9	5.7
2,4,6-Trichlorophenol	ND	11	2.9	5.7
2,4-Dichlorophenol	ND	11	2.9	5.7
2,4-Dimethylphenol	ND	11	2.9	5.7
2,4-Dinitrophenol	ND	23	2.9	5.7
2,4-Dinitrotoluene	ND	11	2.9	5.7
2,6-Dinitrotoluene	ND	11	2.9	5.7
2-Chloronaphthalene	ND	11	2.9	5.7
2-Chlorophenol	ND	11	2.9	5.7
2-Methylnaphthalene	ND	11	2.9	5.7
2-Methylphenol	ND	11	2.9	5.7
2-Nitroaniline	ND	11	2.9	5.7
2-Nitrophenol	ND	11	2.9	5.7
3,3'-Dichlorobenzidine	ND	11	2.9	5.7
3/4-Methylphenol	ND	11	2.9	5.7
3-Nitroaniline	ND	11	2.9	5.7
4,6-Dinitro-2-methylphenol	ND	23	2.9	5.7
4-Bromophenyl phenyl ether	ND	11	2.9	5.7
4-Chloro-3-methylphenol	ND	11	2.9	5.7
4-Chloroaniline	ND	23	5.7	11
4-Chlorophenyl-phenyl ether	ND	11	2.9	5.7
4-Nitroaniline	ND	11	2.9	5.7
4-Nitrophenol	ND	23	2.9	5.7
Acenaphthene	ND	11	2.9	5.7
Acenaphthylene	ND	11	2.9	5.7
Anthracene	ND	11	2.9	5.7
Benzo(a)anthracene	ND	11	2.9	5.7
Benzo(a)pyrene	ND	11	2.9	5.7
Benzo(b)fluoranthene	ND	11	2.9	5.7
Benzo(g,h,i)perylene	ND	11	2.9	5.7
Benzo(k)fluoranthene	ND	11	2.9	5.7
Benzoic Acid	ND	110	23	46
Benzyl Alcohol	ND	11	2.9	5.7
bis(2-Chloroisopropyl) ether	ND	11	2.9	5.7
bis(2-Chloroethoxy)methane	ND	11	2.9	5.7
bis(2-Chloroethyl) ether	ND	11	2.9	5.7
bis(2-Ethylhexyl) phthalate	ND	23	5.7	11
Butylbenzylphthalate	ND	11	2.9	5.7
Carbazole	ND	11	2.9	5.7
Chrysene	ND	11	2.9	5.7
Dibenzo(a,h)anthracene	ND	11	2.9	5.7
Dibenzofuran	ND	11	2.9	5.7
Diethylphthalate	ND	11	2.9	5.7
Dimethylphthalate	ND	11	2.9	5.7
Di-n-butyl phthalate	ND	11	2.9	5.7
Di-n-octyl phthalate	ND	11	2.9	5.7
Fluoranthene	ND	11	2.9	5.7
Fluorene	ND	11	2.9	5.7
Hexachlorobenzene	ND	11	2.9	5.7
Hexachlorobutadiene	ND	11	2.9	5.7
Hexachloroethane	ND	11	2.9	5.7
Indeno(1,2,3-cd)pyrene	ND	11	2.9	5.7
Isophorone	ND	11	2.9	5.7
Naphthalene	ND	11	2.9	5.7
Nitrobenzene	ND	11	2.9	5.7
N-Nitrosodimethylamine	ND	11	2.9	5.7
n-Nitroso-di-n-propylamine	ND	11	2.9	5.7
n-Nitrosodiphenylamine	ND	11	2.9	5.7
Pentachlorophenol	ND	23	2.9	5.7
Phenanthrene	ND	11	2.9	5.7
Phenol	ND	11	2.9	5.7
Pyrene	ND	11	2.9	5.7
Hexachlorocyclopentadiene	ND	11	2.9	5.7
Benzidine	ND	46	11	23
2,3,4,6-Tetrachlorophenol	ND	11	2.9	5.7
2,6-Dichlorophenol	ND	11	2.9	5.7

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	58.2	69.0	84	43-140
2-Fluorobiphenyl	21.0	23.0	91	44-119
2-Fluorophenol	39.4	69.0	57	19-119
Nitrobenzene-d5	19.6	23.0	85	44-120
Phenol-d5	46.9	69.0	68	40-130
Terphenyl-d14	28.8	23.0	125	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:00
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: QC11102023EB	Date Analyzed:	10/23/23 18:41
Lab Samp ID:	23J128-12	Dilution Factor:	1
Lab File ID:	RJJ549	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.9	5.7

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:00
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: QC11102023EB	Date Analyzed:	10/23/23 18:41
Lab Samp ID:	23J128-12	Dilution Factor:	1
Lab File ID:	RJJ549	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	23	5.7	11
Benzaldehyde	ND	23	5.7	11

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW06102023	Date Analyzed:	10/23/23 19:00
Lab Samp ID:	23J128-13	Dilution Factor:	1
Lab File ID:	RJJ550	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	65.3	71.4	91	43-140
2-Fluorobiphenyl	23.3	23.8	98	44-119
2-Fluorophenol	38.3	71.4	54	19-119
Nitrobenzene-d5	20.4	23.8	86	44-120
Phenol-d5	46.6	71.4	65	40-130
Terphenyl-d14	28.0	23.8	118	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW06102023	Date Analyzed:	10/23/23 19:00
Lab Samp ID:	23J128-13	Dilution Factor:	1
Lab File ID:	RJJ550	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume :	2ml
Prepared by	: JMuert	Analyzed by :	KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/18/23 15:30
Sample ID	: TMW06102023	Date Analyzed:	10/23/23 19:00
Lab Samp ID:	23J128-13	Dilution Factor:	1
Lab File ID:	RJJ550	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of nine(9) water samples were received on 10/12/23 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7J04B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VGH7J04L/VGH7J04C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. TPH-Gasoline was within MS QC limits in J128-03M/J128-03S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7J04B	1	NA	10/14/2300:44	10/14/2300:44	AJ13022A	AJ13021A	23VGH7J04	Method Blank
LCS1W	VGH7J04L	1	NA	10/14/2301:23	10/14/2301:23	AJ13023A	AJ13021A	23VGH7J04	Lab Control Sample (LCS)
LCD1W	VGH7J04C	1	NA	10/14/2302:03	10/14/2302:03	AJ13024A	AJ13021A	23VGH7J04	LCS Duplicate
MW37102023	J128-01	1	NA	10/14/2304:40	10/14/2304:40	AJ13028A	AJ13021A	23VGH7J04	Field Sample
TMW52102023	J128-03	1	NA	10/14/2305:19	10/14/2305:19	AJ13029A	AJ13021A	23VGH7J04	Field Sample
TMW52102023MS	J128-03M	1	NA	10/14/2305:58	10/14/2305:58	AJ13030A	AJ13021A	23VGH7J04	Matrix Spike Sample (MS)
TMW52102023MSD	J128-03S	1	NA	10/14/2306:37	10/14/2306:37	AJ13031A	AJ13021A	23VGH7J04	MS Duplicate (MSD)
TMW35102023	J128-06	1	NA	10/14/2307:56	10/14/2307:56	AJ13033A	AJ13032A	23VGH7J04	Field Sample
TMW64102023	J128-08	1	NA	10/14/2308:35	10/14/2308:35	AJ13034A	AJ13032A	23VGH7J04	Field Sample
MW20102023	J128-10	1	NA	10/14/2309:14	10/14/2309:14	AJ13035A	AJ13032A	23VGH7J04	Field Sample
MW18D102023	J128-11	1	NA	10/14/2309:54	10/14/2309:54	AJ13036A	AJ13032A	23VGH7J04	Field Sample
QC11102023EB	J128-12	1	NA	10/14/2310:33	10/14/2310:33	AJ13037A	AJ13032A	23VGH7J04	Field Sample
TMW06102023	J128-13	1	NA	10/14/2311:12	10/14/2311:12	AJ13038A	AJ13032A	23VGH7J04	Field Sample
QC11102023TB	J128-14	1	NA	10/14/2311:52	10/14/2311:52	AJ13039A	AJ13032A	23VGH7J04	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 04:40
Sample ID	: MW37102023	Date Analyzed:	10/14/23 04:40
Lab Samp ID:	J128-01	Dilution Factor:	1
Lab File ID:	AJ13028A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13021A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	22J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.5	40.0	91	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 05:19
Sample ID	: TMW52102023	Date Analyzed:	10/14/23 05:19
Lab Samp ID:	J128-03	Dilution Factor:	1
Lab File ID:	AJ13029A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13021A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	20J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.6	40.0	94	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 07:56
Sample ID	: TMW35102023	Date Analyzed:	10/14/23 07:56
Lab Samp ID:	J128-06	Dilution Factor:	1
Lab File ID:	AJ13033A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13032A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.7	40.0	94	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 08:35
Sample ID	: TMW64102023	Date Analyzed:	10/14/23 08:35
Lab Samp ID:	J128-08	Dilution Factor:	1
Lab File ID:	AJ13034A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13032A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	38J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.6	40.0	92	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 09:14
Sample ID	: MW20102023	Date Analyzed:	10/14/23 09:14
Lab Samp ID:	J128-10	Dilution Factor:	1
Lab File ID:	AJ13035A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13032A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	39.1	40.0	98	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 13:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 09:54
Sample ID	: MW18D102023	Date Analyzed:	10/14/23 09:54
Lab Samp ID:	J128-11	Dilution Factor:	1
Lab File ID:	AJ13036A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13032A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	28J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	34.6	40.0	87	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:00
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 10:33
Sample ID	: QC11102023EB	Date Analyzed:	10/14/23 10:33
Lab Samp ID:	J128-12	Dilution Factor:	1
Lab File ID:	AJ13037A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13032A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	38J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	36.0	40.0	90	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 11:12
Sample ID	: TMW06102023	Date Analyzed:	10/14/23 11:12
Lab Samp ID:	J128-13	Dilution Factor:	1
Lab File ID:	AJ13038A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13032A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	18J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	37.1	40.0	93	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:00
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/14/23 11:52
Sample ID	: QC11102023TB	Date Analyzed:	10/14/23 11:52
Lab Samp ID:	J128-14	Dilution Factor:	1
Lab File ID:	AJ13039A	Matrix:	WATER
Ext Btch ID:	23VGH7J04	% Moisture:	NA
Calib. Ref.:	AJ13032A	Instrument ID:	H7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	15J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	34.5	40.0	86	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of eight(8) water samples were received on 10/12/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ020WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSJ020WL/DSJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met. Sample J128-10 displayed a heavier fuel pattern.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ020WB	1	NA	10/18/2314:10	10/17/2311:30	LJ18005A	LJ18003A	23DSJ020W	Method Blank
LCS1W	DSJ020WL	1	NA	10/18/2314:29	10/17/2311:30	LJ18006A	LJ18003A	23DSJ020W	Lab Control Sample (LCS)
LCD1W	DSJ020WC	1	NA	10/18/2314:48	10/17/2311:30	LJ18007A	LJ18003A	23DSJ020W	LCS Duplicate
MW37102023	J128-01	1	NA	10/18/2315:44	10/17/2311:30	LJ18010A	LJ18003A	23DSJ020W	Field Sample
TMW52102023	J128-03	1	NA	10/18/2316:03	10/17/2311:30	LJ18011A	LJ18003A	23DSJ020W	Field Sample
TMW35102023	J128-06	1	NA	10/18/2316:21	10/17/2311:30	LJ18012A	LJ18003A	23DSJ020W	Field Sample
TMW64102023	J128-08	1	NA	10/18/2316:40	10/17/2311:30	LJ18013A	LJ18003A	23DSJ020W	Field Sample
MW20102023	J128-10	1	NA	10/18/2316:59	10/17/2311:30	LJ18014A	LJ18003A	23DSJ020W	Field Sample
MW18D102023	J128-11	1	NA	10/18/2317:18	10/17/2311:30	LJ18015A	LJ18003A	23DSJ020W	Field Sample
QC11102023EB	J128-12	1	NA	10/18/2317:36	10/17/2311:30	LJ18016A	LJ18003A	23DSJ020W	Field Sample
TMW06102023	J128-13	1	NA	10/18/2317:55	10/17/2311:30	LJ18017A	LJ18003A	23DSJ020W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID	: MW37102023	Date Analyzed:	10/18/23 15:44
Lab Samp ID:	23J128-01	Dilution Factor:	1
Lab File ID:	LJ18010A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.741	1.09	68	60-130
Hexacosane	0.241	0.273	89	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 920ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID	: TMW52102023	Date Analyzed:	10/18/23 16:03
Lab Samp ID:	23J128-03	Dilution Factor:	1
Lab File ID:	LJ18011A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.772	1.09	71	60-130
Hexacosane	0.251	0.273	92	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID	: TMW35102023	Date Analyzed:	10/18/23 16:21
Lab Samp ID:	23J128-06	Dilution Factor:	1
Lab File ID:	LJ18012A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.56	0.056	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.838	1.12	75	60-130
Hexacosane	0.261	0.280	93	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID	: TMW64102023	Date Analyzed:	10/18/23 16:40
Lab Samp ID:	23J128-08	Dilution Factor:	1
Lab File ID:	LJ18013A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.52	0.052	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.762	1.03	74	60-130
Hexacosane	0.237	0.257	92	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID	: MW20102023	Date Analyzed:	10/18/23 16:59
Lab Samp ID:	23J128-10	Dilution Factor:	1
Lab File ID:	LJ18014A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.13J	0.51	0.051	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.709	1.01	70	60-130
Hexacosane	0.233	0.253	92	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 990ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 13:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID	: MW18D102023	Date Analyzed:	10/18/23 17:18
Lab Samp ID:	23J128-11	Dilution Factor:	1
Lab File ID:	LJ18015A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.846	1.10	77	60-130
Hexacosane	0.293	0.275	106	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:00
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID	: QC11102023EB	Date Analyzed:	10/18/23 17:36
Lab Samp ID:	23J128-12	Dilution Factor:	1
Lab File ID:	LJ18016A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.59	0.059	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.943	1.18	80	60-130
Hexacosane	0.296	0.295	100	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 850ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID	: TMW06102023	Date Analyzed:	10/18/23 17:55
Lab Samp ID:	23J128-13	Dilution Factor:	1
Lab File ID:	LJ18017A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18003A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.819	1.10	74	60-130
Hexacosane	0.254	0.275	92	60-140

Notes:

Parameter	H-C Range
Diesel Range	C10-C28

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 910ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW3520C/8081B
PESTICIDES

A total of seven(7) water samples were received on 10/12/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ024WL/CPJ024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J128
Project : USACE WINGATE Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ024WB	1	NA	11/18/2306:07	10/17/2312:15	RK17040	RK17038	23CPJ024W	Method Blank
LCS1W	CPJ024WL	1	NA	11/18/2306:28	10/17/2312:15	RK17041	RK17038	23CPJ024W	Lab Control Sample (LCS)
LCD1W	CPJ024WC	1	NA	11/18/2306:48	10/17/2312:15	RK17042	RK17038	23CPJ024W	LCS Duplicate
MW37102023	J128-01	1	NA	11/18/2310:55	10/17/2312:15	RK17054	RK17051	23CPJ024W	Field Sample
TMW52102023	J128-03	1	NA	11/18/2311:15	10/17/2312:15	RK17055	RK17051	23CPJ024W	Field Sample
TMW35102023	J128-06	1	NA	11/18/2311:36	10/17/2312:15	RK17056	RK17051	23CPJ024W	Field Sample
TMW45102023	J128-07	1	NA	11/18/2311:56	10/17/2312:15	RK17057	RK17051	23CPJ024W	Field Sample
TMW64102023	J128-08	1	NA	11/18/2312:17	10/17/2312:15	RK17058	RK17051	23CPJ024W	Field Sample
MW20102023	J128-10	1	NA	11/18/2312:37	10/17/2312:15	RK17059	RK17051	23CPJ024W	Field Sample
QC11102023EB	J128-12	1	NA	11/18/2312:58	10/17/2312:15	RK17060	RK17051	23CPJ024W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 12:15
Sample ID	: MW37102023	Date Analyzed:	11/18/23 10:55
Lab Samp ID:	J128-01	Dilution Factor:	1
Lab File ID:	RK17054	Matrix:	WATER
Ext Btch ID:	23CPJ024W	% Moisture:	NA
Calib. Ref.:	RK17051	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.11	0.021	0.042
beta-BHC	(ND) | ND	0.11	0.021	0.042
Heptachlor	(ND) | ND	0.11	0.021	0.042
delta-BHC	(ND) | ND	0.11	0.021	0.042
Aldrin	(ND) | ND	0.11	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.11	0.021	0.042
gamma-Chlordane	(ND) | ND	0.11	0.021	0.042
alpha-Chlordane	(ND) | ND	0.11	0.021	0.042
Endosulfan I	(ND) | ND	0.11	0.021	0.042
4,4'-DDE	(ND) | ND	0.11	0.021	0.042
Dieldrin	(ND) | ND	0.11	0.021	0.042
Endrin	(ND) | ND	0.11	0.021	0.042
4,4'-DDD	(ND) | ND	0.11	0.021	0.042
Endosulfan II	(ND) | ND	0.11	0.021	0.042
4,4'-DDT	(ND) | ND	0.11	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.11	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.11	0.021	0.042
Methoxychlor	(ND) | ND	1.1	0.11	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.53
Endrin Ketone	(ND) | ND	0.11	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.230) | 0.221	0.426	54	44-124
Decachlorobipheny1	(0.306) | 0.293	0.426	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 940ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK17052		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128
Sample ID : TMW52102023
Lab Samp ID: J128-03
Lab File ID: RK17055
Ext Btch ID: 23CPJ024W
Calib. Ref.: RK17051

Date Collected: 10/11/23 08:30
Date Received: 10/12/23
Date Extracted: 10/17/23 12:15
Date Analyzed: 11/18/23 11:15
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.042
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.042
beta-BHC	(ND) | ND	0.10	0.021	0.042
Heptachlor	(ND) | ND	0.10	0.021	0.042
delta-BHC	(ND) | ND	0.10	0.021	0.042
Aldrin	(ND) | ND	0.10	0.021	0.042
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.042
gamma-Chlordane	(ND) | ND	0.10	0.021	0.042
alpha-Chlordane	(ND) | ND	0.10	0.021	0.042
Endosulfan I	(ND) | ND	0.10	0.021	0.042
4,4'-DDE	(ND) | ND	0.10	0.021	0.042
Dieldrin	(ND) | ND	0.10	0.021	0.042
Endrin	(ND) | ND	0.10	0.021	0.042
4,4'-DDD	(ND) | ND	0.10	0.021	0.042
Endosulfan II	(ND) | ND	0.10	0.021	0.042
4,4'-DDT	(ND) | ND	0.10	0.021	0.042
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.042
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.042
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.042

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.198) | 0.194	0.417	48	44-124
Decachlorobiphenyl	(0.300) | 0.290	0.417	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml
Prepared by : RGalan
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK17052

Final Volume : 10ml
Analyzed by : EKim

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 12:15
Sample ID	: TMW35102023	Date Analyzed:	11/18/23 11:36
Lab Samp ID:	J128-06	Dilution Factor:	1
Lab File ID:	RK17056	Matrix:	WATER
Ext Btch ID:	23CPJ024W	% Moisture:	NA
Calib. Ref.:	RK17051	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.044
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.044
beta-BHC	(ND) | ND	0.11	0.022	0.044
Heptachlor	(ND) | ND	0.11	0.022	0.044
delta-BHC	(ND) | ND	0.11	0.022	0.044
Aldrin	(ND) | ND	0.11	0.022	0.044
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.044
gamma-Chlordane	(ND) | ND	0.11	0.022	0.044
alpha-Chlordane	(ND) | ND	0.11	0.022	0.044
Endosulfan I	(ND) | ND	0.11	0.022	0.044
4,4'-DDE	(ND) | ND	0.11	0.022	0.044
Dieldrin	(ND) | ND	0.11	0.022	0.044
Endrin	(ND) | ND	0.11	0.022	0.044
4,4'-DDD	(ND) | ND	0.11	0.022	0.044
Endosulfan II	(ND) | ND	0.11	0.022	0.044
4,4'-DDT	(ND) | ND	0.11	0.022	0.044
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.044
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.044
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.27	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.213) | 0.209	0.435	49	44-124
Decachlorobiphenyl	(0.296) | 0.290	0.435	68	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 920ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK17052		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128
Sample ID : TMW45102023
Lab Samp ID: J128-07
Lab File ID: RK17057
Ext Btch ID: 23CPJ024W
Calib. Ref.: RK17051

Date Collected: 10/11/23 10:35
Date Received: 10/12/23
Date Extracted: 10/17/23 12:15
Date Analyzed: 11/18/23 11:56
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.041
beta-BHC	(ND) | ND	0.10	0.021	0.041
Heptachlor	(ND) | ND	0.10	0.021	0.041
delta-BHC	(ND) | ND	0.10	0.021	0.041
Aldrin	(ND) | ND	0.10	0.021	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.041
gamma-Chlordane	(ND) | ND	0.10	0.021	0.041
alpha-Chlordane	(ND) | ND	0.10	0.021	0.041
Endosulfan I	(ND) | ND	0.10	0.021	0.041
4,4'-DDE	(ND) | ND	0.10	0.021	0.041
Dieldrin	(ND) | ND	0.10	0.021	0.041
Endrin	(ND) | ND	0.10	0.021	0.041
4,4'-DDD	(ND) | ND	0.10	0.021	0.041
Endosulfan II	(ND) | ND	0.10	0.021	0.041
4,4'-DDT	(ND) | ND	0.10	0.021	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.227) | 0.226	0.412	55	44-124
Decachlorobiphenyl	(0.288) | 0.281	0.412	70	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml
Final Volume : 10ml
Prepared by : RGalan
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RK17052

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 12:15
Sample ID	: TMW64102023	Date Analyzed:	11/18/23 12:17
Lab Samp ID:	J128-08	Dilution Factor:	1
Lab File ID:	RK17058	Matrix:	WATER
Ext Btch ID:	23CPJ024W	% Moisture:	NA
Calib. Ref.:	RK17051	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.098	0.020	0.039
gamma-BHC (Lindane)	(ND) | ND	0.098	0.020	0.039
beta-BHC	(ND) | ND	0.098	0.020	0.039
Heptachlor	(ND) | ND	0.098	0.020	0.039
delta-BHC	(ND) | ND	0.098	0.020	0.039
Aldrin	(ND) | ND	0.098	0.020	0.039
Heptachlor Epoxide	(ND) | ND	0.098	0.020	0.039
gamma-Chlordane	(ND) | ND	0.098	0.020	0.039
alpha-Chlordane	(ND) | ND	0.098	0.020	0.039
Endosulfan I	(ND) | ND	0.098	0.020	0.039
4,4'-DDE	(ND) | ND	0.098	0.020	0.039
Dieldrin	(ND) | ND	0.098	0.020	0.039
Endrin	(ND) | ND	0.098	0.020	0.039
4,4'-DDD	(ND) | ND	0.098	0.020	0.039
Endosulfan II	(ND) | ND	0.098	0.020	0.039
4,4'-DDT	(ND) | ND	0.098	0.020	0.039
Endrin Aldehyde	(ND) | ND	0.098	0.020	0.039
Endosulfan Sulfate	(ND) | ND	0.098	0.020	0.039
Methoxychlor	(ND) | ND	0.98	0.098	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.49
Endrin Ketone	(ND) | ND	0.098	0.020	0.039

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.189) | 0.188	0.392	48	44-124
Decachlorobiphenyl	(0.293) | 0.286	0.392	75	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1020ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column | Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK17052		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.		Date Collected: 10/11/23 12:35	
Project : USACE WINGATE		Date Received: 10/12/23	
Batch No. : 23J128		Date Extracted: 10/17/23 12:15	
Sample ID : MW20102023		Date Analyzed: 11/18/23 12:37	
Lab Samp ID: J128-10		Dilution Factor: 1	
Lab File ID: RK17059		Matrix: WATER	
Ext Btch ID: 23CPJ024W		% Moisture: NA	
Calib. Ref.: RK17051		Instrument ID: F9	

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | ND	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.51
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.196) | 0.188	0.404	48	44-124
Decachlorobiphenyl	(0.238) | 0.228	0.404	59	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 990ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.	: RK17052		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.		Date Collected: 10/11/23 14:00	
Project : USACE WINGATE		Date Received: 10/12/23	
Batch No. : 23J128		Date Extracted: 10/17/23 12:15	
Sample ID : QC11102023EB		Date Analyzed: 11/18/23 12:58	
Lab Samp ID: J128-12		Dilution Factor: 1	
Lab File ID: RK17060		Matrix: WATER	
Ext Btch ID: 23CPJ024W		% Moisture: NA	
Calib. Ref.: RK17051		Instrument ID: F9	

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.022	0.045
gamma-BHC (Lindane)	(ND) | ND	0.11	0.022	0.045
beta-BHC	(ND) | ND	0.11	0.022	0.045
Heptachlor	(ND) | ND	0.11	0.022	0.045
delta-BHC	(ND) | ND	0.11	0.022	0.045
Aldrin	(ND) | ND	0.11	0.022	0.045
Heptachlor Epoxide	(ND) | ND	0.11	0.022	0.045
gamma-Chlordane	(ND) | ND	0.11	0.022	0.045
alpha-Chlordane	(ND) | ND	0.11	0.022	0.045
Endosulfan I	(ND) | ND	0.11	0.022	0.045
4,4'-DDE	(ND) | ND	0.11	0.022	0.045
Dieldrin	(ND) | ND	0.11	0.022	0.045
Endrin	(ND) | ND	0.11	0.022	0.045
4,4'-DDD	(ND) | ND	0.11	0.022	0.045
Endosulfan II	(ND) | ND	0.11	0.022	0.045
4,4'-DDT	(ND) | ND	0.11	0.022	0.045
Endrin Aldehyde	(ND) | ND	0.11	0.022	0.045
Endosulfan Sulfate	(ND) | ND	0.11	0.022	0.045
Methoxychlor	(ND) | ND	1.1	0.11	0.22
Toxaphene	(ND) | ND	2.2	0.28	0.56
Endrin Ketone	(ND) | ND	0.11	0.022	0.045

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.206 | (0.215)	0.449	48	44-124
Decachlorobiphenyl	(0.328) | 0.316	0.449	73	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RK17052		

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW3520C/8082A
PCBS

A total of four(4) water samples were received on 10/12/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 60J024WL/60J024WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PCBs

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : 71

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ024WB	1	NA	10/18/2318:15	10/17/2312:15	KJ18025A	KJ18016A	CPJ024W	Method Blank
LCS1W	60J024WL	1	NA	10/18/2318:35	10/17/2312:15	KJ18026A	KJ18016A	CPJ024W	Lab Control Sample (LCS)
LCD1W	60J024WC	1	NA	10/18/2318:55	10/17/2312:15	KJ18027A	KJ18016A	CPJ024W	LCS Duplicate
MW37102023	J128-01	1.06	NA	10/18/2321:34	10/17/2312:15	KJ18035A	KJ18029A	CPJ024W	Field Sample
TMW52102023	J128-03	1.04	NA	10/18/2321:54	10/17/2312:15	KJ18036A	KJ18029A	CPJ024W	Field Sample
TMW64102023	J128-08	0.98	NA	10/18/2322:14	10/17/2312:15	KJ18037A	KJ18029A	CPJ024W	Field Sample
QC11102023EB	J128-12	1.12	NA	10/18/2322:34	10/17/2312:15	KJ18038A	KJ18029A	CPJ024W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 12:15
Sample ID: MW37102023	Date Analyzed: 10/18/23 21:34
Lab Samp ID: J128-01	Dilution Factor: 1.06
Lab File ID: KJ18035A	Matrix : WATER
Ext Btch ID: CPJ024W	% Moisture : NA
Calib. Ref.: KJ18029A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.26	0.53
PCB-1221	(ND)|ND	1.1	0.26	0.53
PCB-1232	(ND)|ND	1.1	0.26	0.53
PCB-1242	(ND)|ND	1.1	0.26	0.53
PCB-1248	(ND)|ND	1.1	0.26	0.53
PCB-1254	(ND)|ND	1.1	0.26	0.53
PCB-1260	(ND)|ND	1.1	0.26	0.53

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4957)|0.4137	0.4240	(117)|97.6	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/11/23
Project	: USACE WINGATE	Date Received	: 10/12/23
Batch No.	: 23J128	Date Extracted	: 10/17/23 12:15
Sample ID	: TMW52102023	Date Analyzed	: 10/18/23 21:54
Lab Samp ID	: J128-03	Dilution Factor	: 1.04
Lab File ID	: KJ18036A	Matrix	: WATER
Ext Btch ID	: CPJ024W	% Moisture	: NA
Calib. Ref.	: KJ18029A	Instrument ID	: GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.0	0.26	0.52
PCB-1221	(ND)|ND	1.0	0.26	0.52
PCB-1232	(ND)|ND	1.0	0.26	0.52
PCB-1242	(ND)|ND	1.0	0.26	0.52
PCB-1248	(ND)|ND	1.0	0.26	0.52
PCB-1254	(ND)|ND	1.0	0.26	0.52
PCB-1260	(ND)|ND	1.0	0.26	0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4912)|0.4056	0.4160	(118)|97.5	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 12:15
Sample ID: TMW64102023	Date Analyzed: 10/18/23 22:14
Lab Samp ID: J128-08	Dilution Factor: 0.98
Lab File ID: KJ18037A	Matrix : WATER
Ext Btch ID: CPJ024W	% Moisture : NA
Calib. Ref.: KJ18029A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	0.98	0.25	0.49
PCB-1221	(ND)|ND	0.98	0.25	0.49
PCB-1232	(ND)|ND	0.98	0.25	0.49
PCB-1242	(ND)|ND	0.98	0.25	0.49
PCB-1248	(ND)|ND	0.98	0.25	0.49
PCB-1254	(ND)|ND	0.98	0.25	0.49
PCB-1260	(ND)|ND	0.98	0.25	0.49

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4647)|0.3958	0.3920	(119)|101	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 12:15
Sample ID: QC11102023EB	Date Analyzed: 10/18/23 22:34
Lab Samp ID: J128-12	Dilution Factor: 1.12
Lab File ID: KJ18038A	Matrix : WATER
Ext Btch ID: CPJ024W	% Moisture : NA
Calib. Ref.: KJ18029A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.56
PCB-1221	(ND)|ND	1.1	0.28	0.56
PCB-1232	(ND)|ND	1.1	0.28	0.56
PCB-1242	(ND)|ND	1.1	0.28	0.56
PCB-1248	(ND)|ND	1.1	0.28	0.56
PCB-1254	(ND)|ND	1.1	0.28	0.56
PCB-1260	(ND)|ND	1.1	0.28	0.56

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.5398)|0.4476	0.4480	(120)|99.9	40-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD 8151A
HERBICIDES

A total of four(4) water samples were received on 10/12/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. HEJ012WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HEJ012WL/HEJ012WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J128
Project : USACE WINGATE Instrument ID : 16

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEJ012WB	1	NA	10/19/2303:45	10/18/2311:45	WJ18021A	WJ18014A	HEJ012W	Method Blank
LCS1W	HEJ012WL	1	NA	10/19/2304:13	10/18/2311:45	WJ18022A	WJ18014A	HEJ012W	Lab Control Sample (LCS)
LCD1W	HEJ012WC	1	NA	10/19/2304:42	10/18/2311:45	WJ18023A	WJ18014A	HEJ012W	LCS Duplicate
MW37102023	J128-01	1	NA	10/19/2305:10	10/18/2311:45	WJ18024A	WJ18014A	HEJ012W	Field Sample
TMW52102023	J128-03	1	NA	10/19/2306:36	10/18/2311:45	WJ18027A	WJ18026A	HEJ012W	Field Sample
TMW64102023	J128-08	1	NA	10/19/2307:04	10/18/2311:45	WJ18028A	WJ18026A	HEJ012W	Field Sample
QC11102023EB	J128-12	1	NA	10/19/2307:33	10/18/2311:45	WJ18029A	WJ18026A	HEJ012W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/18/23 11:45
Sample ID: MW37102023	Date Analyzed: 10/19/23 05:10
Lab Samp ID: J128-01	Dilution Factor: 1
Lab File ID: WJ18024A	Matrix : WATER
Ext Btch ID: HEJ012W	% Moisture : NA
Calib. Ref.: WJ18014A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	0.18J | (0.19J)	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	40J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.879 | (9.533)	10.00	88.8 | (95.3)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/18/23 11:45
Sample ID: TMW52102023	Date Analyzed: 10/19/23 06:36
Lab Samp ID: J128-03	Dilution Factor: 1
Lab File ID: WJ18027A	Matrix : WATER
Ext Btch ID: HEJ012W	% Moisture : NA
Calib. Ref.: WJ18026A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	0.16J | (0.20J)	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	23J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.731 | (9.411)	10.00	87.3 | (94.1)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/18/23 11:45
Sample ID: TMW64102023	Date Analyzed: 10/19/23 07:04
Lab Samp ID: J128-08	Dilution Factor: 1
Lab File ID: WJ18028A	Matrix : WATER
Ext Btch ID: HEJ012W	% Moisture : NA
Calib. Ref.: WJ18026A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(ND) | 0.14J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	12J | (ND)	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.069 | (8.705)	10.00	80.7 | (87.0)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/18/23 11:45
Sample ID: QC11102023EB	Date Analyzed: 10/19/23 07:33
Lab Samp ID: J128-12	Dilution Factor: 1
Lab File ID: WJ18029A	Matrix : WATER
Ext Btch ID: HEJ012W	% Moisture : NA
Calib. Ref.: WJ18026A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	1.0	0.10	0.20
2,4-DB	(0.23J) | 0.20J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | ND	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | ND	1.0	0.10	0.20
DICHLOROPROP	(ND) | ND	1.0	0.10	0.20
DINOSEB	(ND) | ND	1.0	0.10	0.20
MCPA	(ND) | ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.429 | (9.232)	10.00	84.3 | (92.3)	32-138

Left of | is related to first column; Right of | related to second column
Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW8330B
EXPLOSIVES

A total of nine(9) water samples were received on 10/12/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ019WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ019WL/EXJ019WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J128-02M/J128-02S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW8330B
EXPLOSIVES

A total of nine(9) water samples were received on 10/12/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ019WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. 35J019WL/35J019WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. 3,5-Dinitroaniline was within MS QC limits in J128-02M/J128-02S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ019WB	1	NA	10/18/2320:59	10/17/2311:30	XJ18004A	XJ18002A	EXJ019W	Method Blank
LCS1W	EXJ019WL	1	NA	10/18/2321:55	10/17/2311:30	XJ18005A	XJ18002A	EXJ019W	Lab Control Sample (LCS)
LCD1W	EXJ019WC	1	NA	10/18/2322:43	10/17/2311:30	XJ18006A	XJ18002A	EXJ019W	LCS Duplicate
MW37102023	J128-01	1	NA	10/19/2301:25	10/17/2311:30	XJ18009A	XJ18002A	EXJ019W	Field Sample
TMW15102023	J128-02	1	NA	10/19/2302:13	10/17/2311:30	XJ18010A	XJ18002A	EXJ019W	Field Sample
TMW52102023	J128-03	1	NA	10/19/2308:24	10/17/2311:30	XJ18017A	XJ18013A	EXJ019W	Field Sample
TMW45102023	J128-07	1	NA	10/19/2309:12	10/17/2311:30	XJ18018A	XJ18013A	EXJ019W	Field Sample
TMW64102023	J128-08	1	NA	10/19/2310:08	10/17/2311:30	XJ18019A	XJ18013A	EXJ019W	Field Sample
MW20102023	J128-10	1	NA	10/19/2310:57	10/17/2311:30	XJ18020A	XJ18013A	EXJ019W	Field Sample
MW18D102023	J128-11	1	NA	10/19/2311:53	10/17/2311:30	XJ18021A	XJ18013A	EXJ019W	Field Sample
QC11102023EB	J128-12	1	NA	10/19/2312:41	10/17/2311:30	XJ18022A	XJ18013A	EXJ019W	Field Sample
TMW06102023	J128-13	1	NA	10/19/2313:38	10/17/2311:30	XJ18023A	XJ18013A	EXJ019W	Field Sample
TMW15102023MS	J128-02M	1	NA	10/19/2303:09	10/17/2311:30	XJ18011A	XJ18002A	EXJ019W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	1	NA	10/19/2303:58	10/17/2311:30	XJ18012A	XJ18002A	EXJ019W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ019WB	1	NA	10/18/2320:59	10/17/2311:30	XJ18004A	XJ18003A	EXJ019W	Method Blank
LCS1W	35J019WL	1	NA	10/18/2323:40	10/17/2311:30	XJ18007A	XJ18003A	EXJ019W	Lab Control Sample (LCS)
LCD1W	35J019WC	1	NA	10/19/2300:28	10/17/2311:30	XJ18008A	XJ18003A	EXJ019W	LCS Duplicate
MW37102023	J128-01	1	NA	10/19/2301:25	10/17/2311:30	XJ18009A	XJ18003A	EXJ019W	Field Sample
TMW15102023	J128-02	1	NA	10/19/2302:13	10/17/2311:30	XJ18010A	XJ18003A	EXJ019W	Field Sample
TMW52102023	J128-03	1	NA	10/19/2308:24	10/17/2311:30	XJ18017A	XJ18014A	EXJ019W	Field Sample
TMW45102023	J128-07	1	NA	10/19/2309:12	10/17/2311:30	XJ18018A	XJ18014A	EXJ019W	Field Sample
TMW64102023	J128-08	1	NA	10/19/2310:08	10/17/2311:30	XJ18019A	XJ18014A	EXJ019W	Field Sample
MW20102023	J128-10	1	NA	10/19/2310:57	10/17/2311:30	XJ18020A	XJ18014A	EXJ019W	Field Sample
MW18D102023	J128-11	1	NA	10/19/2311:53	10/17/2311:30	XJ18021A	XJ18014A	EXJ019W	Field Sample
QC11102023EB	J128-12	1	NA	10/19/2312:41	10/17/2311:30	XJ18022A	XJ18014A	EXJ019W	Field Sample
TMW06102023	J128-13	1	NA	10/19/2313:38	10/17/2311:30	XJ18023A	XJ18014A	EXJ019W	Field Sample
TMW15102023MS	J128-02M	1	NA	10/19/2306:39	10/17/2311:30	XJ18015A	XJ18014A	EXJ019W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	1	NA	10/19/2307:27	10/17/2311:30	XJ18016A	XJ18014A	EXJ019W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 11:30
Sample ID:	MW37102023	Date Analyzed:	10/19/23 01:25
Lab Samp ID:	J128-01	Dilution Factor:	1
Lab File ID:	XJ18009A	Matrix :	WATER
Ext Btch ID:	EXJ019W	% Moisture :	NA
Calib. Ref.:	XJ18002A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.75	4.000	93.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: MW37102023	Date Analyzed: 10/19/23 01:25
Lab Samp ID: J128-01	Dilution Factor: 1
Lab File ID: XJ18009A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18003A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.75	4.000	93.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW15102023	Date Analyzed: 10/19/23 02:13
Lab Samp ID: J128-02	Dilution Factor: 1
Lab File ID: XJ18010A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.67	4.000	91.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW15102023	Date Analyzed: 10/19/23 02:13
Lab Samp ID: J128-02	Dilution Factor: 1
Lab File ID: XJ18010A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18003A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.67	4.000	91.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW52102023	Date Analyzed: 10/19/23 08:24
Lab Samp ID: J128-03	Dilution Factor: 1
Lab File ID: XJ18017A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18013A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	2.99	4.000	74.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW52102023	Date Analyzed: 10/19/23 08:24
Lab Samp ID: J128-03	Dilution Factor: 1
Lab File ID: XJ18017A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	2.99	4.000	74.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW45102023	Date Analyzed: 10/19/23 09:12
Lab Samp ID: J128-07	Dilution Factor: 1
Lab File ID: XJ18018A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18013A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.74	4.000	93.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW45102023	Date Analyzed: 10/19/23 09:12
Lab Samp ID: J128-07	Dilution Factor: 1
Lab File ID: XJ18018A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.74	4.000	93.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW64102023	Date Analyzed: 10/19/23 10:08
Lab Samp ID: J128-08	Dilution Factor: 1
Lab File ID: XJ18019A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18013A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.59	4.000	89.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW64102023	Date Analyzed: 10/19/23 10:08
Lab Samp ID: J128-08	Dilution Factor: 1
Lab File ID: XJ18019A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.59	4.000	89.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: MW20102023	Date Analyzed: 10/19/23 10:57
Lab Samp ID: J128-10	Dilution Factor: 1
Lab File ID: XJ18020A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18013A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: MW20102023	Date Analyzed: 10/19/23 10:57
Lab Samp ID: J128-10	Dilution Factor: 1
Lab File ID: XJ18020A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.71	4.000	92.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: MW18D102023	Date Analyzed: 10/19/23 11:53
Lab Samp ID: J128-11	Dilution Factor: 1
Lab File ID: XJ18021A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18013A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.86	4.000	96.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: MW18D102023	Date Analyzed: 10/19/23 11:53
Lab Samp ID: J128-11	Dilution Factor: 1
Lab File ID: XJ18021A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.86	4.000	96.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: QC11102023EB	Date Analyzed: 10/19/23 12:41
Lab Samp ID: J128-12	Dilution Factor: 1
Lab File ID: XJ18022A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18013A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.98	4.000	99.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: QC11102023EB	Date Analyzed: 10/19/23 12:41
Lab Samp ID: J128-12	Dilution Factor: 1
Lab File ID: XJ18022A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.98	4.000	99.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW06102023	Date Analyzed: 10/19/23 13:38
Lab Samp ID: J128-13	Dilution Factor: 1
Lab File ID: XJ18023A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18013A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.69	4.000	92.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 11:30
Sample ID: TMW06102023	Date Analyzed: 10/19/23 13:38
Lab Samp ID: J128-13	Dilution Factor: 1
Lab File ID: XJ18023A	Matrix : WATER
Ext Btch ID: EXJ019W	% Moisture : NA
Calib. Ref.: XJ18014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.69	4.000	92.2	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW8332
NITROGLYCERIN AND PETN

A total of nine(9) water samples were received on 10/12/23 to be analyzed for Nitroglycerin and PETN in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ018WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ018WL/EXJ018WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. J128-02M/J128-02S - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ018WB	1	NA	10/19/2310:28	10/17/2313:00	NJ19003A	NJ19002A	EXJ018W	Method Blank
LCS1W	EXJ018WL	1	NA	10/19/2310:38	10/17/2313:00	NJ19004A	NJ19002A	EXJ018W	Lab Control Sample (LCS)
LCD1W	EXJ018WC	1	NA	10/19/2310:47	10/17/2313:00	NJ19005A	NJ19002A	EXJ018W	LCS Duplicate
MW37102023	J128-01	1	NA	10/19/2310:56	10/17/2313:00	NJ19006A	NJ19002A	EXJ018W	Field Sample
TMW15102023	J128-02	1	NA	10/19/2311:05	10/17/2313:00	NJ19007A	NJ19002A	EXJ018W	Field Sample
TMW52102023	J128-03	1	NA	10/19/2314:11	10/17/2313:00	NJ19010A	NJ19002A	EXJ018W	Field Sample
TMW45102023	J128-07	1	NA	10/19/2314:20	10/17/2313:00	NJ19011A	NJ19002A	EXJ018W	Field Sample
TMW64102023	J128-08	1	NA	10/19/2314:30	10/17/2313:00	NJ19012A	NJ19002A	EXJ018W	Field Sample
MW20102023	J128-10	1	NA	10/19/2314:48	10/17/2313:00	NJ19014A	NJ19013A	EXJ018W	Field Sample
MW18D102023	J128-11	1	NA	10/19/2314:57	10/17/2313:00	NJ19015A	NJ19013A	EXJ018W	Field Sample
QC11102023EB	J128-12	1	NA	10/19/2315:06	10/17/2313:00	NJ19016A	NJ19013A	EXJ018W	Field Sample
TMW06102023	J128-13	1	NA	10/19/2315:15	10/17/2313:00	NJ19017A	NJ19013A	EXJ018W	Field Sample
TMW15102023MS	J128-02M	1	NA	10/19/2313:26	10/17/2313:00	NJ19008A	NJ19002A	EXJ018W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	1	NA	10/19/2314:02	10/17/2313:00	NJ19009A	NJ19002A	EXJ018W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 13:00
Sample ID:	MW37102023	Date Analyzed:	10/19/23 10:56
Lab Samp ID:	J128-01	Dilution Factor:	1
Lab File ID:	NJ19006A	Matrix :	WATER
Ext Btch ID:	EXJ018W	% Moisture :	NA
Calib. Ref.:	NJ19002A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	593	500.0	119	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 13:00
Sample ID: TMW15102023	Date Analyzed: 10/19/23 11:05
Lab Samp ID: J128-02	Dilution Factor: 1
Lab File ID: NJ19007A	Matrix : WATER
Ext Btch ID: EXJ018W	% Moisture : NA
Calib. Ref.: NJ19002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	565	500.0	113	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 13:00
Sample ID: TMW52102023	Date Analyzed: 10/19/23 14:11
Lab Samp ID: J128-03	Dilution Factor: 1
Lab File ID: NJ19010A	Matrix : WATER
Ext Btch ID: EXJ018W	% Moisture : NA
Calib. Ref.: NJ19002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	533	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 13:00
Sample ID: TMW45102023	Date Analyzed: 10/19/23 14:20
Lab Samp ID: J128-07	Dilution Factor: 1
Lab File ID: NJ19011A	Matrix : WATER
Ext Btch ID: EXJ018W	% Moisture : NA
Calib. Ref.: NJ19002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	537	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 13:00
Sample ID: TMW64102023	Date Analyzed: 10/19/23 14:30
Lab Samp ID: J128-08	Dilution Factor: 1
Lab File ID: NJ19012A	Matrix : WATER
Ext Btch ID: EXJ018W	% Moisture : NA
Calib. Ref.: NJ19002A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	537	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23
Project	: USACE WINGATE	Date Received:	10/12/23
Batch No.	: 23J128	Date Extracted:	10/17/23 13:00
Sample ID:	MW20102023	Date Analyzed:	10/19/23 14:48
Lab Samp ID:	J128-10	Dilution Factor:	1
Lab File ID:	NJ19014A	Matrix :	WATER
Ext Btch ID:	EXJ018W	% Moisture :	NA
Calib. Ref.:	NJ19013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	541	500.0	108	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 13:00
Sample ID: MW18D102023	Date Analyzed: 10/19/23 14:57
Lab Samp ID: J128-11	Dilution Factor: 1
Lab File ID: NJ19015A	Matrix : WATER
Ext Btch ID: EXJ018W	% Moisture : NA
Calib. Ref.: NJ19013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	549	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 13:00
Sample ID: QC11102023EB	Date Analyzed: 10/19/23 15:06
Lab Samp ID: J128-12	Dilution Factor: 1
Lab File ID: NJ19016A	Matrix : WATER
Ext Btch ID: EXJ018W	% Moisture : NA
Calib. Ref.: NJ19013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	547	500.0	109	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23
Project : USACE WINGATE	Date Received: 10/12/23
Batch No. : 23J128	Date Extracted: 10/17/23 13:00
Sample ID: TMW06102023	Date Analyzed: 10/19/23 15:15
Lab Samp ID: J128-13	Dilution Factor: 1
Lab File ID: NJ19017A	Matrix : WATER
Ext Btch ID: EXJ018W	% Moisture : NA
Calib. Ref.: NJ19013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	541	500.0	108	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW6020A
METALS BY ICP-MS

A total of twelve(12) water samples were received on 10/12/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Vanadium(0.37J <1/2 LOQ) was detected at trace level in IMJ041WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ041WL/IMJ041WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J128-02M/J128-02S - Percent recovery for Sodium(190X) was not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ041WB	1	NA	11/08/2315:31	10/30/2309:55	H6K06022	H6K06018	IMJ041W	Method Blank
LCS1W	IMJ041WL	1	NA	11/08/2315:34	10/30/2309:55	H6K06023	H6K06018	IMJ041W	Lab Control Sample (LCS)
LCD1W	IMJ041WC	1	NA	11/08/2315:37	10/30/2309:55	H6K06024	H6K06018	IMJ041W	LCS Duplicate
MW37102023	J128-01G	5	NA	11/08/2316:05	10/30/2309:55	H6K06030	H6K06028	IMJ041W	Diluted Sample
TMW15102023	J128-02A	5	NA	11/08/2316:07	10/30/2309:55	H6K06031	H6K06028	IMJ041W	Analytical Spike Sample
TMW15102023	J128-02G	5	NA	11/08/2316:10	10/30/2309:55	H6K06032	H6K06028	IMJ041W	Diluted Sample
TMW15102023	J128-02J	25	NA	11/08/2316:13	10/30/2309:55	H6K06033	H6K06028	IMJ041W	Diluted Sample
TMW15102023MS	J128-02M	5	NA	11/08/2316:16	10/30/2309:55	H6K06034	H6K06028	IMJ041W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	5	NA	11/08/2316:19	10/30/2309:55	H6K06035	H6K06028	IMJ041W	MS Duplicate (MSD)
TMW52102023	J128-03G	5	NA	11/08/2316:22	10/30/2309:55	H6K06036	H6K06028	IMJ041W	Diluted Sample
TMW13102023	J128-04G	5	NA	11/08/2316:30	10/30/2309:55	H6K06037	H6K06028	IMJ041W	Diluted Sample
FDUP09-102023	J128-05G	5	NA	11/08/2316:33	10/30/2309:55	H6K06038	H6K06028	IMJ041W	Diluted Sample
TMW35102023	J128-06G	5	NA	11/08/2316:36	10/30/2309:55	H6K06039	H6K06028	IMJ041W	Diluted Sample
TMW45102023	J128-07G	5	NA	11/08/2316:45	10/30/2309:55	H6K06042	H6K06040	IMJ041W	Diluted Sample
TMW64102023	J128-08G	5	NA	11/08/2316:47	10/30/2309:55	H6K06043	H6K06040	IMJ041W	Diluted Sample
MW20102023	J128-10K	20	NA	11/08/2316:50	10/30/2309:55	H6K06044	H6K06040	IMJ041W	Diluted Sample
MW18D102023	J128-11K	20	NA	11/08/2316:53	10/30/2309:55	H6K06045	H6K06040	IMJ041W	Diluted Sample
QC11102023EB	J128-12	1	NA	11/08/2316:56	10/30/2309:55	H6K06046	H6K06040	IMJ041W	Field Sample
TMW06102023	J128-13G	5	NA	11/08/2316:59	10/30/2309:55	H6K06047	H6K06040	IMJ041W	Diluted Sample
MW37102023	J128-01T	50	NA	11/08/2317:08	10/30/2309:55	H6K06050	H6K06048	IMJ041W	Diluted Sample
TMW15102023	J128-02A	50	NA	11/08/2317:11	10/30/2309:55	H6K06051	H6K06048	IMJ041W	Analytical Spike Sample
TMW15102023	J128-02T	50	NA	11/08/2317:13	10/30/2309:55	H6K06052	H6K06048	IMJ041W	Diluted Sample
TMW15102023	J128-02J	250	NA	11/08/2317:16	10/30/2309:55	H6K06053	H6K06048	IMJ041W	Diluted Sample
TMW15102023MS	J128-02M	50	NA	11/08/2317:19	10/30/2309:55	H6K06054	H6K06048	IMJ041W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	50	NA	11/08/2317:22	10/30/2309:55	H6K06055	H6K06048	IMJ041W	MS Duplicate (MSD)
TMW52102023	J128-03T	50	NA	11/08/2317:25	10/30/2309:55	H6K06056	H6K06048	IMJ041W	Diluted Sample
TMW13102023	J128-04T	50	NA	11/08/2317:28	10/30/2309:55	H6K06057	H6K06048	IMJ041W	Diluted Sample
FDUP09-102023	J128-05T	50	NA	11/08/2317:31	10/30/2309:55	H6K06058	H6K06048	IMJ041W	Diluted Sample
TMW35102023	J128-06T	50	NA	11/08/2317:34	10/30/2309:55	H6K06059	H6K06048	IMJ041W	Diluted Sample
TMW45102023	J128-07T	50	NA	11/08/2317:42	10/30/2309:55	H6K06062	H6K06060	IMJ041W	Diluted Sample
TMW64102023	J128-08T	50	NA	11/08/2317:45	10/30/2309:55	H6K06063	H6K06060	IMJ041W	Diluted Sample
MW20102023	J128-10T	100	NA	11/08/2317:48	10/30/2309:55	H6K06064	H6K06060	IMJ041W	Diluted Sample
MW18D102023	J128-11T	100	NA	11/08/2317:51	10/30/2309:55	H6K06065	H6K06060	IMJ041W	Diluted Sample
TMW06102023	J128-13T	50	NA	11/08/2317:54	10/30/2309:55	H6K06066	H6K06060	IMJ041W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW37102023	Date Analyzed:	11/08/23 16:05
Lab Samp ID:	J128-01G	Dilution Factor:	5
Lab File ID:	H6K06030	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	9600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	4.7J	5.0	0.62	1.2
Barium	320	5.0	1.2	2.5
Beryllium	0.84J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	47000	1000	250	500
Chromium	8.0	5.0	0.50	1.0
Cobalt	7.2	3.7	0.50	1.0
Copper	8.3J	10	2.5	5.0
Iron	6600	1000	120	250
Lead	7.0	5.0	0.25	0.50
Magnesium	8500	500	100	250
Manganese	1700	5.0	1.2	2.5
Nickel	13	5.0	1.2	2.5
Potassium	1600	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	22	5.0	1.2	2.5
Zinc	41J	100	25	50

Sample ID:	MW37102023	Date Analyzed:	11/08/23 17:08
Lab Samp ID:	J128-01T	Dilution Factor:	50
Lab File ID:	H6K06050	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	670000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW37102023	Date Analyzed:	11/08/23 16:05
Lab Samp ID:	J128-01G	Dilution Factor:	5
Lab File ID:	H6K06030	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	9600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	4.7J	5.0	0.62	1.2
Barium	320	5.0	1.2	2.5
Beryllium	0.84J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	47000	1000	250	500
Chromium	8.0	5.0	0.50	1.0
Cobalt	7.2	3.7	0.50	1.0
Copper	8.3J	10	2.5	5.0
Iron	6600	1000	120	250
Lead	7.0	5.0	0.25	0.50
Magnesium	8500	500	100	250
Manganese	1700	5.0	1.2	2.5
Nickel	13	5.0	1.2	2.5
Potassium	1600	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	660000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	22	5.0	1.2	2.5
Zinc	41J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW37102023	Date Analyzed:	11/08/23 17:08
Lab Samp ID:	J128-01T	Dilution Factor:	50
Lab File ID:	H6K06050	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	11000	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	14J	50	6.2	12
Barium	320	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	47000	10000	2500	5000
Chromium	20J	50	5.0	10
Cobalt	7.5J	37	5.0	10
Copper	ND	100	25	50
Iron	6800J	10000	1200	2500
Lead	6.2J	50	2.5	5.0
Magnesium	9100	5000	1000	2500
Manganese	1800	50	12	25
Nickel	18J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	670000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	48J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW15102023	Date Analyzed:	11/08/23 16:10
Lab Samp ID:	J128-02G	Dilution Factor:	5
Lab File ID:	H6K06032	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	5.0	0.62	1.2
Barium	23	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	18000	1000	250	500
Chromium	2.1J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3400	500	100	250
Manganese	1.4J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	13	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW15102023	Date Analyzed:	11/08/23 17:13
Lab Samp ID:	J128-02T	Dilution Factor:	50
Lab File ID:	H6K06052	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW15102023	Date Analyzed:	11/08/23 16:10
Lab Samp ID:	J128-02G	Dilution Factor:	5
Lab File ID:	H6K06032	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	5.0	0.62	1.2
Barium	23	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	18000	1000	250	500
Chromium	2.1J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3400	500	100	250
Manganese	1.4J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	13	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	550000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.7	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW15102023	Date Analyzed:	11/08/23 17:13
Lab Samp ID:	J128-02T	Dilution Factor:	50
Lab File ID:	H6K06052	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	24J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	19000	10000	2500	5000
Chromium	38J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3400J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	15J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	570000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	35J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW52102023	Date Analyzed:	11/08/23 16:22
Lab Samp ID:	J128-03G	Dilution Factor:	5
Lab File ID:	H6K06036	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	23000	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	9.2	5.0	0.62	1.2
Barium	530	5.0	1.2	2.5
Beryllium	1.9J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	32	5.0	0.50	1.0
Cobalt	9.5	3.7	0.50	1.0
Copper	17	10	2.5	5.0
Iron	12000	1000	120	250
Lead	8.9	5.0	0.25	0.50
Magnesium	7200	500	100	250
Manganese	750	5.0	1.2	2.5
Nickel	23	5.0	1.2	2.5
Potassium	3200	1000	250	500
Selenium	3.8J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	50	5.0	1.2	2.5
Zinc	52J	100	25	50

Sample ID:	TMW52102023	Date Analyzed:	11/08/23 17:25
Lab Samp ID:	J128-03T	Dilution Factor:	50
Lab File ID:	H6K06056	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	490000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW52102023	Date Analyzed:	11/08/23 16:22
Lab Samp ID:	J128-03G	Dilution Factor:	5
Lab File ID:	H6K06036	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	23000	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	9.2	5.0	0.62	1.2
Barium	530	5.0	1.2	2.5
Beryllium	1.9J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	32	5.0	0.50	1.0
Cobalt	9.5	3.7	0.50	1.0
Copper	17	10	2.5	5.0
Iron	12000	1000	120	250
Lead	8.9	5.0	0.25	0.50
Magnesium	7200	500	100	250
Manganese	750	5.0	1.2	2.5
Nickel	23	5.0	1.2	2.5
Potassium	3200	1000	250	500
Selenium	3.8J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	460000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	50	5.0	1.2	2.5
Zinc	52J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23 08:30
Project : USACE WINGATE	Date Received: 10/12/23
SDG NO. : 23J128	Date Extracted: 10/30/23 09:55
Sample ID: TMW52102023	Date Analyzed: 11/08/23 17:25
Lab Samp ID: J128-03T	Dilution Factor: 50
Lab File ID: H6K06056	Matrix: WATER
Ext Btch ID: IMJ041W	% Moisture: NA
Calib. Ref.: H6K06048	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	24000	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	19J	50	6.2	12
Barium	560	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	36000	10000	2500	5000
Chromium	51	50	5.0	10
Cobalt	9.9J	37	5.0	10
Copper	ND	100	25	50
Iron	13000	10000	1200	2500
Lead	8.9J	50	2.5	5.0
Magnesium	7600	5000	1000	2500
Manganese	780	50	12	25
Nickel	31J	50	12	25
Potassium	4100J	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	490000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	85	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:05
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW13102023	Date Analyzed:	11/08/23 16:30
Lab Samp ID:	J128-04G	Dilution Factor:	5
Lab File ID:	H6K06037	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.8J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	28000	1000	250	500
Chromium	1.3J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5200	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	380J	1000	250	500
Selenium	9.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW13102023	Date Analyzed:	11/08/23 17:28
Lab Samp ID:	J128-04T	Dilution Factor:	50
Lab File ID:	H6K06057	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	580000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:05
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW13102023	Date Analyzed:	11/08/23 16:30
Lab Samp ID:	J128-04G	Dilution Factor:	5
Lab File ID:	H6K06037	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.8J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	28000	1000	250	500
Chromium	1.3J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5200	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	380J	1000	250	500
Selenium	9.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	540000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:05
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW13102023	Date Analyzed:	11/08/23 17:28
Lab Samp ID:	J128-04T	Dilution Factor:	50
Lab File ID:	H6K06057	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	18J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	29000	10000	2500	5000
Chromium	7.8J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5300	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	9.8J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	580000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	41J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: FDUP09-102023
Lab Samp ID: J128-05G
Lab File ID: H6K06038
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06028

Date Collected: 10/11/23 09:15
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 16:33
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	27000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5200	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	8.8	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP09-102023
Lab Samp ID: J128-05T
Lab File ID: H6K06058
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06048

Date Analyzed: 11/08/23 17:31
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:15
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	FDUP09-102023	Date Analyzed:	11/08/23 16:33
Lab Samp ID:	J128-05G	Dilution Factor:	5
Lab File ID:	H6K06038	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	27000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5200	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	8.8	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	550000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:15
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	FDUP09-102023	Date Analyzed:	11/08/23 17:31
Lab Samp ID:	J128-05T	Dilution Factor:	50
Lab File ID:	H6K06058	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	12J	50	6.2	12
Barium	18J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	29000	10000	2500	5000
Chromium	16J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5400	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	11J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	570000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	41J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW35102023
Lab Samp ID: J128-06G
Lab File ID: H6K06039
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06028

Date Collected: 10/11/23 10:25
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 16:36
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	72000	1000	250	500
Chromium	1.2J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	56	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	360J	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW35102023
Lab Samp ID: J128-06T
Lab File ID: H6K06059
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06048

Date Analyzed: 11/08/23 17:34
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW35102023	Date Analyzed:	11/08/23 16:36
Lab Samp ID:	J128-06G	Dilution Factor:	5
Lab File ID:	H6K06039	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06028	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	72000	1000	250	500
Chromium	1.2J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	4.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	56	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	360J	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW35102023	Date Analyzed:	11/08/23 17:34
Lab Samp ID:	J128-06T	Dilution Factor:	50
Lab File ID:	H6K06059	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	12J	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	75000	10000	2500	5000
Chromium	15J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	14000	5000	1000	2500
Manganese	59	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	38J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW45102023	Date Analyzed:	11/08/23 16:45
Lab Samp ID:	J128-07G	Dilution Factor:	5
Lab File ID:	H6K06042	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06040	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	71	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7800	500	100	250
Manganese	340	5.0	1.2	2.5
Nickel	2.2J	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	1.3J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.9	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW45102023	Date Analyzed:	11/08/23 17:42
Lab Samp ID:	J128-07T	Dilution Factor:	50
Lab File ID:	H6K06062	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06060	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	960000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW45102023	Date Analyzed:	11/08/23 16:45
Lab Samp ID:	J128-07G	Dilution Factor:	5
Lab File ID:	H6K06042	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06040	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	71	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7800	500	100	250
Manganese	340	5.0	1.2	2.5
Nickel	2.2J	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	1.3J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	950000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.9	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW45102023	Date Analyzed:	11/08/23 17:42
Lab Samp ID:	J128-07T	Dilution Factor:	50
Lab File ID:	H6K06062	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06060	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	12J	50	6.2	12
Barium	71	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	31000	10000	2500	5000
Chromium	21J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7900	5000	1000	2500
Manganese	360	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	960000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	34J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW64102023
Lab Samp ID: J128-08G
Lab File ID: H6K06043
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06040

Date Collected: 10/11/23 10:40
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 16:47
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	150J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	36	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	2.3J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1600	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	890J	1000	250	500
Selenium	0.80J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	9.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW64102023
Lab Samp ID: J128-08T
Lab File ID: H6K06063
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06060

Date Analyzed: 11/08/23 17:45
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	630000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW64102023	Date Analyzed:	11/08/23 16:47
Lab Samp ID:	J128-08G	Dilution Factor:	5
Lab File ID:	H6K06043	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06040	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	150J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	36	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	2.3J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1600	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	890J	1000	250	500
Selenium	0.80J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	620000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	9.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW64102023	Date Analyzed:	11/08/23 17:45
Lab Samp ID:	J128-08T	Dilution Factor:	50
Lab File ID:	H6K06063	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06060	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	34J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	12000	10000	2500	5000
Chromium	9.4J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1500J	5000	1000	2500
Manganese	36J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	630000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	38J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: MW20102023
Lab Samp ID: J128-10K
Lab File ID: H6K06044
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06040

Date Collected: 10/11/23 12:35
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 16:50
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	4.7J	20	2.5	5.0
Barium	15J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	250000	4000	1000	2000
Chromium	3.7J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	560J	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	55000	2000	400	1000
Manganese	1800	20	5.0	10
Nickel	6.5J	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	96	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	11J	20	5.0	10
Zinc	140J	400	100	200

Sample ID: MW20102023
Lab Samp ID: J128-10T
Lab File ID: H6K06064
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06060

Date Analyzed: 11/08/23 17:48
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2800000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW20102023	Date Analyzed:	11/08/23 16:50
Lab Samp ID:	J128-10K	Dilution Factor:	20
Lab File ID:	H6K06044	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06040	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	4.7J	20	2.5	5.0
Barium	15J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	250000	4000	1000	2000
Chromium	3.7J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	560J	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	55000	2000	400	1000
Manganese	1800	20	5.0	10
Nickel	6.5J	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	96	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	2800000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	11J	20	5.0	10
Zinc	140J	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW20102023	Date Analyzed:	11/08/23 17:48
Lab Samp ID:	J128-10T	Dilution Factor:	100
Lab File ID:	H6K06064	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06060	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	21J	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	250000	20000	5000	10000
Chromium	13J	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	55000	10000	2000	5000
Manganese	1800	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	95J	100	15	30
Silver	ND	100	10	20
Sodium	2800000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	62J	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: MW18D102023
Lab Samp ID: J128-11K
Lab File ID: H6K06045
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06040

Date Collected: 10/11/23 13:40
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 16:53
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	730J	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	6.4J	20	2.5	5.0
Barium	29	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	74000	4000	1000	2000
Chromium	9.5J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	570J	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	20000	2000	400	1000
Manganese	620	20	5.0	10
Nickel	9.7J	20	5.0	10
Potassium	1000J	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	20J	20	5.0	10
Zinc	ND	400	100	200

Sample ID: MW18D102023
Lab Samp ID: J128-11T
Lab File ID: H6K06065
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06060

Date Analyzed: 11/08/23 17:51
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2100000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: MW18D102023
Lab Samp ID: J128-11K
Lab File ID: H6K06045
Ext Btch ID: IMJ041W
Calib. Ref.: H6K06040

Date Collected: 10/11/23 13:40
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 16:53
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	730J	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	6.4J	20	2.5	5.0
Barium	29	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	74000	4000	1000	2000
Chromium	9.5J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	570J	1000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	20000	2000	400	1000
Manganese	620	20	5.0	10
Nickel	9.7J	20	5.0	10
Potassium	1000J	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	2100000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	20J	20	5.0	10
Zinc	ND	400	100	200

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23 13:40
Project : USACE WINGATE	Date Received: 10/12/23
SDG NO. : 23J128	Date Extracted: 10/30/23 09:55
Sample ID: MW18D102023	Date Analyzed: 11/08/23 17:51
Lab Samp ID: J128-11T	Dilution Factor: 100
Lab File ID: H6K06065	Matrix: WATER
Ext Btch ID: IMJ041W	% Moisture: NA
Calib. Ref.: H6K06060	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	23J	100	12	25
Barium	29J	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	74000	20000	5000	10000
Chromium	12J	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	20000	10000	2000	5000
Manganese	620	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	2100000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	67J	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:00
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	QC11102023EB	Date Analyzed:	11/08/23 16:56
Lab Samp ID:	J128-12	Dilution Factor:	1
Lab File ID:	H6K06046	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06040	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	0.20J	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	0.35J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	110J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.73J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW06102023	Date Analyzed:	11/08/23 16:59
Lab Samp ID:	J128-13G	Dilution Factor:	5
Lab File ID:	H6K06047	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06040	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.3J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	37000	1000	250	500
Chromium	0.97J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	7.3J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	160	5.0	1.2	2.5
Nickel	1.6J	5.0	1.2	2.5
Potassium	340J	1000	250	500
Selenium	0.85J	5.0	0.75	1.5
Silver	0.58J	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	8.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW06102023	Date Analyzed:	11/08/23 17:54
Lab Samp ID:	J128-13T	Dilution Factor:	50
Lab File ID:	H6K06066	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06060	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	920000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW06102023	Date Analyzed:	11/08/23 16:59
Lab Samp ID:	J128-13G	Dilution Factor:	5
Lab File ID:	H6K06047	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06040	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.3J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	37000	1000	250	500
Chromium	0.97J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	7.3J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	160	5.0	1.2	2.5
Nickel	1.6J	5.0	1.2	2.5
Potassium	340J	1000	250	500
Selenium	0.85J	5.0	0.75	1.5
Silver	0.58J	5.0	0.50	1.0
Sodium	940000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	8.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW06102023	Date Analyzed:	11/08/23 17:54
Lab Samp ID:	J128-13T	Dilution Factor:	50
Lab File ID:	H6K06066	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06060	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	36000	10000	2500	5000
Chromium	19J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7700	5000	1000	2500
Manganese	160	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	920000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	35J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MBLK1W	Date Analyzed:	11/08/23 15:31
Lab Samp ID:	IMJ041WB	Dilution Factor:	1
Lab File ID:	H6K06022	Matrix:	WATER
Ext Btch ID:	IMJ041W	% Moisture:	NA
Calib. Ref.:	H6K06018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.37J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of twelve(12) water samples were received on 10/12/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ042WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ042WL/IMJ042WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: J128-02M/J128-02S - Percent recovery for Sodium(186X) was not within MS/MSD QC limits. Percent recovery for Nickel was not within MS QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ042WB	1	NA	11/08/2315:43	10/30/2309:55	H6K06025	H6K06018	IMJ042W	Method Blank
LCS1W	IMJ042WL	1	NA	11/08/2315:53	10/30/2309:55	H6K06026	H6K06018	IMJ042W	Lab Control Sample (LCS)
LCD1W	IMJ042WC	1	NA	11/08/2315:56	10/30/2309:55	H6K06027	H6K06018	IMJ042W	LCS Duplicate
MW37102023	J128-01G	5	NA	11/08/2318:03	10/30/2309:55	H6K06069	H6K06067	IMJ042W	Diluted Sample
TMW15102023	J128-02A	5	NA	11/08/2318:05	10/30/2309:55	H6K06070	H6K06067	IMJ042W	Analytical Spike Sample
TMW15102023	J128-02G	5	NA	11/08/2318:08	10/30/2309:55	H6K06071	H6K06067	IMJ042W	Diluted Sample
TMW15102023	J128-02J	25	NA	11/08/2318:11	10/30/2309:55	H6K06072	H6K06067	IMJ042W	Diluted Sample
TMW15102023MS	J128-02M	5	NA	11/08/2318:14	10/30/2309:55	H6K06073	H6K06067	IMJ042W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	5	NA	11/08/2318:17	10/30/2309:55	H6K06074	H6K06067	IMJ042W	MS Duplicate (MSD)
TMW52102023	J128-03G	5	NA	11/08/2318:20	10/30/2309:55	H6K06075	H6K06067	IMJ042W	Diluted Sample
TMW13102023	J128-04G	5	NA	11/08/2318:23	10/30/2309:55	H6K06076	H6K06067	IMJ042W	Diluted Sample
FDUP09-102023	J128-05G	5	NA	11/08/2318:26	10/30/2309:55	H6K06077	H6K06067	IMJ042W	Diluted Sample
TMW35102023	J128-06G	5	NA	11/08/2318:29	10/30/2309:55	H6K06078	H6K06067	IMJ042W	Diluted Sample
TMW45102023	J128-07G	5	NA	11/08/2318:37	10/30/2309:55	H6K06081	H6K06079	IMJ042W	Diluted Sample
TMW64102023	J128-08G	5	NA	11/08/2318:40	10/30/2309:55	H6K06082	H6K06079	IMJ042W	Diluted Sample
MW20102023	J128-10K	20	NA	11/08/2318:43	10/30/2309:55	H6K06083	H6K06079	IMJ042W	Diluted Sample
MW18D102023	J128-11K	20	NA	11/08/2318:46	10/30/2309:55	H6K06084	H6K06079	IMJ042W	Diluted Sample
QC11102023EB	J128-12	1	NA	11/08/2318:49	10/30/2309:55	H6K06085	H6K06079	IMJ042W	Field Sample
TMW06102023	J128-13G	5	NA	11/08/2318:52	10/30/2309:55	H6K06086	H6K06079	IMJ042W	Diluted Sample
MW37102023	J128-01T	50	NA	11/08/2319:00	10/30/2309:55	H6K06089	H6K06087	IMJ042W	Diluted Sample
TMW15102023	J128-02A	50	NA	11/08/2319:03	10/30/2309:55	H6K06090	H6K06087	IMJ042W	Analytical Spike Sample
TMW15102023	J128-02T	50	NA	11/08/2319:06	10/30/2309:55	H6K06091	H6K06087	IMJ042W	Diluted Sample
TMW15102023	J128-02J	250	NA	11/08/2319:09	10/30/2309:55	H6K06092	H6K06087	IMJ042W	Diluted Sample
TMW15102023MS	J128-02M	50	NA	11/08/2319:12	10/30/2309:55	H6K06093	H6K06087	IMJ042W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	50	NA	11/08/2319:15	10/30/2309:55	H6K06094	H6K06087	IMJ042W	MS Duplicate (MSD)
TMW52102023	J128-03T	50	NA	11/08/2319:18	10/30/2309:55	H6K06095	H6K06087	IMJ042W	Diluted Sample
TMW13102023	J128-04T	50	NA	11/08/2319:21	10/30/2309:55	H6K06096	H6K06087	IMJ042W	Diluted Sample
FDUP09-102023	J128-05T	50	NA	11/08/2319:24	10/30/2309:55	H6K06097	H6K06087	IMJ042W	Diluted Sample
TMW35102023	J128-06T	50	NA	11/08/2319:26	10/30/2309:55	H6K06098	H6K06087	IMJ042W	Diluted Sample
TMW45102023	J128-07T	50	NA	11/08/2319:35	10/30/2309:55	H6K06101	H6K06099	IMJ042W	Diluted Sample
TMW64102023	J128-08T	50	NA	11/08/2319:38	10/30/2309:55	H6K06102	H6K06099	IMJ042W	Diluted Sample
MW20102023	J128-10T	100	NA	11/08/2319:41	10/30/2309:55	H6K06103	H6K06099	IMJ042W	Diluted Sample
MW18D102023	J128-11T	100	NA	11/08/2319:44	10/30/2309:55	H6K06104	H6K06099	IMJ042W	Diluted Sample
TMW06102023	J128-13T	50	NA	11/08/2319:47	10/30/2309:55	H6K06105	H6K06099	IMJ042W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: MW37102023
Lab Samp ID: J128-01G
Lab File ID: H6K06069
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06067

Date Collected: 10/11/23 07:50
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:03
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	29	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	18000	1000	250	500
Chromium	0.72J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4400	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW37102023
Lab Samp ID: J128-01T
Lab File ID: H6K06089
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06087

Date Analyzed: 11/08/23 19:00
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	620000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID	: MW37102023	Date Analyzed:	11/08/23 18:03
Lab Samp ID	: J128-01G	Dilution Factor:	5
Lab File ID	: H6K06069	Matrix:	WATER
Ext Btch ID	: IMJ042W	% Moisture:	NA
Calib. Ref.	: H6K06067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	29	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	18000	1000	250	500
Chromium	0.72J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	4400	500	100	250
Manganese	19	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	600000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 07:50
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW37102023	Date Analyzed:	11/08/23 19:00
Lab Samp ID:	J128-01T	Dilution Factor:	50
Lab File ID:	H6K06089	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06087	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	12J	50	6.2	12
Barium	28J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	19000	10000	2500	5000
Chromium	6.0J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4500J	5000	1000	2500
Manganese	18J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	620000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	33J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW15102023
Lab Samp ID: J128-02G
Lab File ID: H6K06071
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06067

Date Collected: 10/11/23 08:25
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:08
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	23	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	17000	1000	250	500
Chromium	1.8J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3300	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	13	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	4.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW15102023
Lab Samp ID: J128-02T
Lab File ID: H6K06091
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06087

Date Analyzed: 11/08/23 19:06
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	560000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW15102023
Lab Samp ID: J128-02G
Lab File ID: H6K06071
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06067

Date Collected: 10/11/23 08:25
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:08
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	23	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	17000	1000	250	500
Chromium	1.8J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3300	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	13	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	540000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW15102023	Date Analyzed:	11/08/23 19:06
Lab Samp ID:	J128-02T	Dilution Factor:	50
Lab File ID:	H6K06091	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06087	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	24J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	18000	10000	2500	5000
Chromium	6.2J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3400J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	13J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	560000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	35J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW52102023
Lab Samp ID: J128-03G
Lab File ID: H6K06075
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06067

Date Collected: 10/11/23 08:30
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:20
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.3	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4000	1000	250	500
Chromium	1.9J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	440J	500	100	250
Manganese	3.9J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	640J	1000	250	500
Selenium	1.3J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	16	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW52102023
Lab Samp ID: J128-03T
Lab File ID: H6K06095
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06087

Date Analyzed: 11/08/23 19:18
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	460000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW52102023	Date Analyzed:	11/08/23 18:20
Lab Samp ID:	J128-03G	Dilution Factor:	5
Lab File ID:	H6K06075	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.3	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4000	1000	250	500
Chromium	1.9J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	440J	500	100	250
Manganese	3.9J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	640J	1000	250	500
Selenium	1.3J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	440000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	16	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 08:30
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW52102023	Date Analyzed:	11/08/23 19:18
Lab Samp ID:	J128-03T	Dilution Factor:	50
Lab File ID:	H6K06095	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06087	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	15J	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	4200J	10000	2500	5000
Chromium	7.8J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	ND	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	460000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	45J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW13102023
Lab Samp ID: J128-04G
Lab File ID: H6K06076
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06067

Date Collected: 10/11/23 09:05
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:23
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	28000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5200	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	9.8	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW13102023
Lab Samp ID: J128-04T
Lab File ID: H6K06096
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06087

Date Analyzed: 11/08/23 19:21
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23 09:05
Project : USACE WINGATE	Date Received: 10/12/23
SDG NO. : 23J128	Date Extracted: 10/30/23 09:55
Sample ID: TMW13102023	Date Analyzed: 11/08/23 18:23
Lab Samp ID: J128-04G	Dilution Factor: 5
Lab File ID: H6K06076	Matrix: WATER
Ext Btch ID: IMJ042W	% Moisture: NA
Calib. Ref.: H6K06067	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	18	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	28000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5200	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	9.8	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	560000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:05
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW13102023	Date Analyzed:	11/08/23 19:21
Lab Samp ID:	J128-04T	Dilution Factor:	50
Lab File ID:	H6K06096	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06087	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	16J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	28000	10000	2500	5000
Chromium	6.3J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5200	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	10J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	570000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	36J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: FDUP09-102023
Lab Samp ID: J128-05G
Lab File ID: H6K06077
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06067

Date Collected: 10/11/23 09:15
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:26
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	28000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5300	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	8.9	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP09-102023
Lab Samp ID: J128-05T
Lab File ID: H6K06097
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06087

Date Analyzed: 11/08/23 19:24
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	560000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:15
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	FDUP09-102023	Date Analyzed:	11/08/23 18:26
Lab Samp ID:	J128-05G	Dilution Factor:	5
Lab File ID:	H6K06077	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	28000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5300	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	8.9	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	550000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 09:15
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	FDUP09-102023	Date Analyzed:	11/08/23 19:24
Lab Samp ID:	J128-05T	Dilution Factor:	50
Lab File ID:	H6K06097	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06087	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	28000	10000	2500	5000
Chromium	6.4J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5300	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	9.1J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	560000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	37J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW35102023
Lab Samp ID: J128-06G
Lab File ID: H6K06078
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06067

Date Collected: 10/11/23 10:25
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:29
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	72000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	25	5.0	1.2	2.5
Nickel	1.4J	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW35102023
Lab Samp ID: J128-06T
Lab File ID: H6K06098
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06087

Date Analyzed: 11/08/23 19:26
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW35102023	Date Analyzed:	11/08/23 18:29
Lab Samp ID:	J128-06G	Dilution Factor:	5
Lab File ID:	H6K06078	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06067	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.7J	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	72000	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	25	5.0	1.2	2.5
Nickel	1.4J	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	2.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1100000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW35102023	Date Analyzed:	11/08/23 19:26
Lab Samp ID:	J128-06T	Dilution Factor:	50
Lab File ID:	H6K06098	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06087	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	13J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	73000	10000	2500	5000
Chromium	5.9J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	14000	5000	1000	2500
Manganese	24J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	35J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW45102023
Lab Samp ID: J128-07G
Lab File ID: H6K06081
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06079

Date Collected: 10/11/23 10:35
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:37
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.9J	5.0	0.62	1.2
Barium	67	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	160	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	540J	1000	250	500
Selenium	1.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	6.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW45102023
Lab Samp ID: J128-07T
Lab File ID: H6K06101
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06099

Date Analyzed: 11/08/23 19:35
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	970000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW45102023	Date Analyzed:	11/08/23 18:37
Lab Samp ID:	J128-07G	Dilution Factor:	5
Lab File ID:	H6K06081	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.9J	5.0	0.62	1.2
Barium	67	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	30000	1000	250	500
Chromium	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	160	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	540J	1000	250	500
Selenium	1.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	970000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW45102023	Date Analyzed:	11/08/23 19:35
Lab Samp ID:	J128-07T	Dilution Factor:	50
Lab File ID:	H6K06101	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	68	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	30000	10000	2500	5000
Chromium	5.4J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8000	5000	1000	2500
Manganese	170	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	970000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	33J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: TMW64102023
Lab Samp ID: J128-08G
Lab File ID: H6K06082
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06079

Date Collected: 10/11/23 10:40
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:40
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	25	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	1.3J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1400	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	880J	1000	250	500
Selenium	0.77J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	9.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW64102023
Lab Samp ID: J128-08T
Lab File ID: H6K06102
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06099

Date Analyzed: 11/08/23 19:38
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW64102023	Date Analyzed:	11/08/23 18:40
Lab Samp ID:	J128-08G	Dilution Factor:	5
Lab File ID:	H6K06082	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	25	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	11000	1000	250	500
Chromium	1.3J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1400	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	880J	1000	250	500
Selenium	0.77J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	610000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	9.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 10:40
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW64102023	Date Analyzed:	11/08/23 19:38
Lab Samp ID:	J128-08T	Dilution Factor:	50
Lab File ID:	H6K06102	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	10J	50	6.2	12
Barium	24J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	11000	10000	2500	5000
Chromium	7.6J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1400J	5000	1000	2500
Manganese	27J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	600000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	37J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: MW20102023
Lab Samp ID: J128-10K
Lab File ID: H6K06083
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06079

Date Collected: 10/11/23 12:35
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:43
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	4.4J	20	2.5	5.0
Barium	14J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	240000	4000	1000	2000
Chromium	2.9J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	52000	2000	400	1000
Manganese	1700	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	1000J	4000	1000	2000
Selenium	91	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	11J	20	5.0	10
Zinc	ND	400	100	200

Sample ID: MW20102023
Lab Samp ID: J128-10T
Lab File ID: H6K06103
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06099

Date Analyzed: 11/08/23 19:41
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2800000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW20102023	Date Analyzed:	11/08/23 18:43
Lab Samp ID:	J128-10K	Dilution Factor:	20
Lab File ID:	H6K06083	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	4.4J	20	2.5	5.0
Barium	14J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	240000	4000	1000	2000
Chromium	2.9J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	52000	2000	400	1000
Manganese	1700	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	1000J	4000	1000	2000
Selenium	91	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	2800000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	11J	20	5.0	10
Zinc	ND	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 12:35
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW20102023	Date Analyzed:	11/08/23 19:41
Lab Samp ID:	J128-10T	Dilution Factor:	100
Lab File ID:	H6K06103	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	20J	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	250000	20000	5000	10000
Chromium	13J	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	53000	10000	2000	5000
Manganese	1800	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	88J	100	15	30
Silver	ND	100	10	20
Sodium	2800000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	60J	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: MW18D102023
Lab Samp ID: J128-11K
Lab File ID: H6K06084
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06079

Date Collected: 10/11/23 13:40
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:46
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	5.2J	20	2.5	5.0
Barium	20	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	89000	4000	1000	2000
Chromium	2.7J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	22000	2000	400	1000
Manganese	720	20	5.0	10
Nickel	5.2J	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Thallium	ND	10	2.0	4.0
Vanadium	14J	20	5.0	10
Zinc	ND	400	100	200

Sample ID: MW18D102023
Lab Samp ID: J128-11T
Lab File ID: H6K06104
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06099

Date Analyzed: 11/08/23 19:44
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2200000	20000	5000	10000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 13:40
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MW18D102023	Date Analyzed:	11/08/23 18:46
Lab Samp ID:	J128-11K	Dilution Factor:	20
Lab File ID:	H6K06084	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	5.2J	20	2.5	5.0
Barium	20	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	89000	4000	1000	2000
Chromium	2.7J	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	ND	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	22000	2000	400	1000
Manganese	720	20	5.0	10
Nickel	5.2J	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	2200000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	14J	20	5.0	10
Zinc	ND	400	100	200

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/11/23 13:40
Project : USACE WINGATE	Date Received: 10/12/23
SDG NO. : 23J128	Date Extracted: 10/30/23 09:55
Sample ID: MW18D102023	Date Analyzed: 11/08/23 19:44
Lab Samp ID: J128-11T	Dilution Factor: 100
Lab File ID: H6K06104	Matrix: WATER
Ext Btch ID: IMJ042W	% Moisture: NA
Calib. Ref.: H6K06099	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	10000	2000	5000
Antimony	ND	100	25	50
Arsenic	22J	100	12	25
Barium	ND	100	25	50
Beryllium	ND	50	10	20
Cadmium	ND	100	10	20
Calcium	88000	20000	5000	10000
Chromium	12J	100	10	20
Cobalt	ND	75	10	20
Copper	ND	200	50	100
Iron	ND	20000	2500	5000
Lead	ND	100	5.0	10
Magnesium	22000	10000	2000	5000
Manganese	730	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	2200000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	63J	100	25	50
Zinc	ND	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J128
Sample ID: QC11102023EB
Lab Samp ID: J128-12
Lab File ID: H6K06085
Ext Btch ID: IMJ042W
Calib. Ref.: H6K06079

Date Collected: 10/11/23 14:00
Date Received: 10/12/23
Date Extracted: 10/30/23 09:55
Date Analyzed: 11/08/23 18:49
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	0.17J	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	0.38J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	1.1J	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	120J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	0.54J	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW06102023	Date Analyzed:	11/08/23 18:52
Lab Samp ID:	J128-13G	Dilution Factor:	5
Lab File ID:	H6K06086	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.1J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	35000	1000	250	500
Chromium	0.85J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7600	500	100	250
Manganese	45	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	1000	250	500
Selenium	0.85J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	7.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW06102023	Date Analyzed:	11/08/23 19:47
Lab Samp ID:	J128-13T	Dilution Factor:	50
Lab File ID:	H6K06105	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	900000	10000	2500	5000

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW06102023	Date Analyzed:	11/08/23 18:52
Lab Samp ID:	J128-13G	Dilution Factor:	5
Lab File ID:	H6K06086	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06079	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.1J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	35000	1000	250	500
Chromium	0.85J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7600	500	100	250
Manganese	45	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	1000	250	500
Selenium	0.85J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	920000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/11/23 14:25
Project	: USACE WINGATE	Date Received:	10/12/23
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	TMW06102023	Date Analyzed:	11/08/23 19:47
Lab Samp ID:	J128-13T	Dilution Factor:	50
Lab File ID:	H6K06105	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	11J	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	35000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7600	5000	1000	2500
Manganese	43J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	900000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	35J	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J128	Date Extracted:	10/30/23 09:55
Sample ID:	MBLK1W	Date Analyzed:	11/08/23 15:43
Lab Samp ID:	IMJ042WB	Dilution Factor:	1
Lab File ID:	H6K06025	Matrix:	WATER
Ext Btch ID:	IMJ042W	% Moisture:	NA
Calib. Ref.:	H6K06018	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of twelve(12) water samples were received on 10/12/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGK003WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGK003WL/HGK003WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J128-02M/J128-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGK003WB	1	NA	11/02/2315:22	11/02/2310:48	M47K002012	M47K002	23HGK003W	Method Blank
LCS1W	HGK003WL	1	NA	11/02/2315:24	11/02/2310:48	M47K002013	M47K002	23HGK003W	Lab Control Sample (LCS)
LCD1W	HGK003WC	1	NA	11/02/2315:25	11/02/2310:48	M47K002014	M47K002	23HGK003W	LCS Duplicate
MW37102023	J128-01	1	NA	11/02/2315:31	11/02/2310:48	M47K002017	M47K002	23HGK003W	Field Sample
TMW15102023MS	J128-02M	1	NA	11/02/2315:33	11/02/2310:48	M47K002018	M47K002	23HGK003W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	1	NA	11/02/2315:35	11/02/2310:48	M47K002019	M47K002	23HGK003W	MS Duplicate (MSD)
TMW15102023	J128-02	1	NA	11/02/2315:38	11/02/2310:48	M47K002021	M47K002	23HGK003W	Field Sample
TMW52102023	J128-03	1	NA	11/02/2315:45	11/02/2310:48	M47K002025	M47K002	23HGK003W	Field Sample
TMW13102023	J128-04	1	NA	11/02/2315:47	11/02/2310:48	M47K002026	M47K002	23HGK003W	Field Sample
FDUP09-102023	J128-05	1	NA	11/02/2315:49	11/02/2310:48	M47K002027	M47K002	23HGK003W	Field Sample
TMW35102023	J128-06	1	NA	11/02/2315:51	11/02/2310:48	M47K002028	M47K002	23HGK003W	Field Sample
TMW45102023	J128-07	1	NA	11/02/2315:53	11/02/2310:48	M47K002029	M47K002	23HGK003W	Field Sample
TMW64102023	J128-08	1	NA	11/02/2315:55	11/02/2310:48	M47K002030	M47K002	23HGK003W	Field Sample
MW20102023	J128-10	1	NA	11/02/2315:57	11/02/2310:48	M47K002031	M47K002	23HGK003W	Field Sample
MW18D102023	J128-11	1	NA	11/02/2315:58	11/02/2310:48	M47K002032	M47K002	23HGK003W	Field Sample
QC11102023EB	J128-12	1	NA	11/02/2316:00	11/02/2310:48	M47K002033	M47K002	23HGK003W	Field Sample
TMW06102023	J128-13	1	NA	11/02/2316:05	11/02/2310:48	M47K002036	M47K002	23HGK003W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGK003WB	ND	1	NA	0.50	0.10	0.20	11/02/2315:22	11/02/2310:48	M47K002012	M47K002	23HGK003W	NA	NA
LCS1W	HGK003WL	2.5	1	NA	0.50	0.10	0.20	11/02/2315:24	11/02/2310:48	M47K002013	M47K002	23HGK003W	NA	NA
LCD1W	HGK003WC	2.5	1	NA	0.50	0.10	0.20	11/02/2315:25	11/02/2310:48	M47K002014	M47K002	23HGK003W	NA	NA
MW37102023	J128-01	ND	1	NA	0.50	0.10	0.20	11/02/2315:31	11/02/2310:48	M47K002017	M47K002	23HGK003W	10/11/2307:50	10/12/23
TMW15102023MS	J128-02M	2.6	1	NA	0.50	0.10	0.20	11/02/2315:33	11/02/2310:48	M47K002018	M47K002	23HGK003W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02S	2.6	1	NA	0.50	0.10	0.20	11/02/2315:35	11/02/2310:48	M47K002019	M47K002	23HGK003W	10/11/2308:25	10/12/23
TMW15102023	J128-02	ND	1	NA	0.50	0.10	0.20	11/02/2315:38	11/02/2310:48	M47K002021	M47K002	23HGK003W	10/11/2308:25	10/12/23
TMW52102023	J128-03	ND	1	NA	0.50	0.10	0.20	11/02/2315:45	11/02/2310:48	M47K002025	M47K002	23HGK003W	10/11/2308:30	10/12/23
TMW13102023	J128-04	ND	1	NA	0.50	0.10	0.20	11/02/2315:47	11/02/2310:48	M47K002026	M47K002	23HGK003W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05	ND	1	NA	0.50	0.10	0.20	11/02/2315:49	11/02/2310:48	M47K002027	M47K002	23HGK003W	10/11/2309:15	10/12/23
TMW35102023	J128-06	ND	1	NA	0.50	0.10	0.20	11/02/2315:51	11/02/2310:48	M47K002028	M47K002	23HGK003W	10/11/2310:25	10/12/23
TMW45102023	J128-07	ND	1	NA	0.50	0.10	0.20	11/02/2315:53	11/02/2310:48	M47K002029	M47K002	23HGK003W	10/11/2310:35	10/12/23
TMW64102023	J128-08	ND	1	NA	0.50	0.10	0.20	11/02/2315:55	11/02/2310:48	M47K002030	M47K002	23HGK003W	10/11/2310:40	10/12/23
MW20102023	J128-10	ND	1	NA	0.50	0.10	0.20	11/02/2315:57	11/02/2310:48	M47K002031	M47K002	23HGK003W	10/11/2312:35	10/12/23
MW18D102023	J128-11	ND	1	NA	0.50	0.10	0.20	11/02/2315:58	11/02/2310:48	M47K002032	M47K002	23HGK003W	10/11/2313:40	10/12/23
QC11102023EB	J128-12	ND	1	NA	0.50	0.10	0.20	11/02/2316:00	11/02/2310:48	M47K002033	M47K002	23HGK003W	10/11/2314:00	10/12/23
TMW06102023	J128-13	ND	1	NA	0.50	0.10	0.20	11/02/2316:05	11/02/2310:48	M47K002036	M47K002	23HGK003W	10/11/2314:25	10/12/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of twelve(12) water samples were received on 10/12/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGK004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGK004WL/HGK004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Mercury was within MS QC limits in J128-02M/J128-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J128
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGK004WB	1	NA	11/02/2316:14	11/02/2311:38	M47K002041	M47K002	23HGK004W	Method Blank
LCS1W	HGK004WL	1	NA	11/02/2316:16	11/02/2311:38	M47K002042	M47K002	23HGK004W	Lab Control Sample (LCS)
LCD1W	HGK004WC	1	NA	11/02/2316:18	11/02/2311:38	M47K002043	M47K002	23HGK004W	LCS Duplicate
MW37102023	J128-01	1	NA	11/02/2316:20	11/02/2311:38	M47K002044	M47K002	23HGK004W	Field Sample
TMW15102023MS	J128-02M	1	NA	11/02/2316:22	11/02/2311:38	M47K002045	M47K002	23HGK004W	Matrix Spike Sample (MS)
TMW15102023MSD	J128-02S	1	NA	11/02/2316:28	11/02/2311:38	M47K002048	M47K002	23HGK004W	MS Duplicate (MSD)
TMW15102023	J128-02	1	NA	11/02/2316:31	11/02/2311:38	M47K002050	M47K002	23HGK004W	Field Sample
TMW52102023	J128-03	1	NA	11/02/2316:37	11/02/2311:38	M47K002052	M47K002	23HGK004W	Field Sample
TMW13102023	J128-04	1	NA	11/02/2316:38	11/02/2311:38	M47K002053	M47K002	23HGK004W	Field Sample
FDUP09-102023	J128-05	1	NA	11/02/2316:40	11/02/2311:38	M47K002054	M47K002	23HGK004W	Field Sample
TMW35102023	J128-06	1	NA	11/02/2316:42	11/02/2311:38	M47K002055	M47K002	23HGK004W	Field Sample
TMW45102023	J128-07	1	NA	11/02/2316:43	11/02/2311:38	M47K002056	M47K002	23HGK004W	Field Sample
TMW64102023	J128-08	1	NA	11/02/2316:45	11/02/2311:38	M47K002057	M47K002	23HGK004W	Field Sample
MW20102023	J128-10	1	NA	11/02/2316:51	11/02/2311:38	M47K002060	M47K002	23HGK004W	Field Sample
MW18D102023	J128-11	1	NA	11/02/2316:53	11/02/2311:38	M47K002061	M47K002	23HGK004W	Field Sample
QC11102023EB	J128-12	1	NA	11/02/2316:55	11/02/2311:38	M47K002062	M47K002	23HGK004W	Field Sample
TMW06102023	J128-13	1	NA	11/02/2316:57	11/02/2311:38	M47K002063	M47K002	23HGK004W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGK004WB	ND	1	NA	0.50	0.10	0.20	11/02/2316:14	11/02/2311:38	M47K002041	M47K002	23HGK004W	NA	NA
LCS1W	HGK004WL	2.5	1	NA	0.50	0.10	0.20	11/02/2316:16	11/02/2311:38	M47K002042	M47K002	23HGK004W	NA	NA
LCD1W	HGK004WC	2.4	1	NA	0.50	0.10	0.20	11/02/2316:18	11/02/2311:38	M47K002043	M47K002	23HGK004W	NA	NA
MW37102023	J128-01	ND	1	NA	0.50	0.10	0.20	11/02/2316:20	11/02/2311:38	M47K002044	M47K002	23HGK004W	10/11/2307:50	10/12/23
TMW15102023MS	J128-02M	2.5	1	NA	0.50	0.10	0.20	11/02/2316:22	11/02/2311:38	M47K002045	M47K002	23HGK004W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02S	2.4	1	NA	0.50	0.10	0.20	11/02/2316:28	11/02/2311:38	M47K002048	M47K002	23HGK004W	10/11/2308:25	10/12/23
TMW15102023	J128-02	ND	1	NA	0.50	0.10	0.20	11/02/2316:31	11/02/2311:38	M47K002050	M47K002	23HGK004W	10/11/2308:25	10/12/23
TMW52102023	J128-03	ND	1	NA	0.50	0.10	0.20	11/02/2316:37	11/02/2311:38	M47K002052	M47K002	23HGK004W	10/11/2308:30	10/12/23
TMW13102023	J128-04	ND	1	NA	0.50	0.10	0.20	11/02/2316:38	11/02/2311:38	M47K002053	M47K002	23HGK004W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05	ND	1	NA	0.50	0.10	0.20	11/02/2316:40	11/02/2311:38	M47K002054	M47K002	23HGK004W	10/11/2309:15	10/12/23
TMW35102023	J128-06	ND	1	NA	0.50	0.10	0.20	11/02/2316:42	11/02/2311:38	M47K002055	M47K002	23HGK004W	10/11/2310:25	10/12/23
TMW45102023	J128-07	ND	1	NA	0.50	0.10	0.20	11/02/2316:43	11/02/2311:38	M47K002056	M47K002	23HGK004W	10/11/2310:35	10/12/23
TMW64102023	J128-08	ND	1	NA	0.50	0.10	0.20	11/02/2316:45	11/02/2311:38	M47K002057	M47K002	23HGK004W	10/11/2310:40	10/12/23
MW20102023	J128-10	0.15J	1	NA	0.50	0.10	0.20	11/02/2316:51	11/02/2311:38	M47K002060	M47K002	23HGK004W	10/11/2312:35	10/12/23
MW18D102023	J128-11	ND	1	NA	0.50	0.10	0.20	11/02/2316:53	11/02/2311:38	M47K002061	M47K002	23HGK004W	10/11/2313:40	10/12/23
QC11102023EB	J128-12	ND	1	NA	0.50	0.10	0.20	11/02/2316:55	11/02/2311:38	M47K002062	M47K002	23HGK004W	10/11/2314:00	10/12/23
TMW06102023	J128-13	ND	1	NA	0.50	0.10	0.20	11/02/2316:57	11/02/2311:38	M47K002063	M47K002	23HGK004W	10/11/2314:25	10/12/23

Note: Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23J128

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of eleven(11) water samples were received on 10/12/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. PLJ015WB and PLJ016WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
-PLJ015WL/PLJ015WC were within LCS limits.
-PLJ016WL/PLJ016WC were within LCS limits.
Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Perchlorate was within MS QC limits in J128-02M/J128-02S. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J128-01I, -02I, -03I, -04I, -05I, -06I, -07I, -10J, and -11I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ015WB	ND	1	NA	0.20	0.050	0.10	10/24/2311:06	NA	23MJ24007	MJ24004	PLJ015W	NA	NA
LCS1W	PLJ015WL	0.21	1	NA	0.20	0.050	0.10	10/24/2311:21	NA	23MJ24008	MJ24004	PLJ015W	NA	NA
LCD1W	PLJ015WC	0.22	1	NA	0.20	0.050	0.10	10/24/2311:36	NA	23MJ24009	MJ24004	PLJ015W	NA	NA
QC11102023EB	J128-12	ND	1	NA	0.20	0.050	0.10	10/24/2315:14	NA	23MJ24023	MJ24017	PLJ015W	10/11/2314:00	10/12/23
MBLK2W	PLJ016WB	ND	1	NA	0.20	0.050	0.10	10/26/2308:59	NA	23MJ26007	MJ26004	PLJ016W	NA	NA
LCS2W	PLJ016WL	0.21	1	NA	0.20	0.050	0.10	10/26/2309:14	NA	23MJ26008	MJ26004	PLJ016W	NA	NA
LCD2W	PLJ016WC	0.19	1	NA	0.20	0.050	0.10	10/26/2309:28	NA	23MJ26009	MJ26004	PLJ016W	NA	NA
MW37102023	J128-01I	ND	5	NA	1.0	0.25	0.50	10/26/2309:50	NA	23MJ26010	MJ26004	PLJ016W	10/11/2307:50	10/12/23
TMW15102023	J128-02I	ND	5	NA	1.0	0.25	0.50	10/26/2310:07	NA	23MJ26011	MJ26004	PLJ016W	10/11/2308:25	10/12/23
TMW15102023MS	J128-02M	1.1	5	NA	1.0	0.25	0.50	10/26/2310:22	NA	23MJ26012	MJ26004	PLJ016W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02S	1.1	5	NA	1.0	0.25	0.50	10/26/2310:37	NA	23MJ26013	MJ26004	PLJ016W	10/11/2308:25	10/12/23
TMW52102023	J128-03I	ND	5	NA	1.0	0.25	0.50	10/26/2310:51	NA	23MJ26014	MJ26004	PLJ016W	10/11/2308:30	10/12/23
TMW13102023	J128-04I	ND	5	NA	1.0	0.25	0.50	10/26/2311:06	NA	23MJ26015	MJ26004	PLJ016W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05I	ND	5	NA	1.0	0.25	0.50	10/26/2311:21	NA	23MJ26016	MJ26004	PLJ016W	10/11/2309:15	10/12/23
TMW35102023	J128-06I	ND	5	NA	1.0	0.25	0.50	10/26/2311:50	NA	23MJ26018	MJ26017	PLJ016W	10/11/2310:25	10/12/23
TMW45102023	J128-07I	ND	5	NA	1.0	0.25	0.50	10/26/2312:04	NA	23MJ26019	MJ26017	PLJ016W	10/11/2310:35	10/12/23
TMW64102023	J128-08I	48	10	NA	2.0	0.50	1.0	10/26/2312:19	NA	23MJ26020	MJ26017	PLJ016W	10/11/2310:40	10/12/23
MW20102023	J128-10J	0.52J	5	NA	1.0	0.25	0.50	10/26/2312:48	NA	23MJ26022	MJ26017	PLJ016W	10/11/2312:35	10/12/23
MW18D102023	J128-11I	ND	5	NA	1.0	0.25	0.50	10/26/2313:03	NA	23MJ26023	MJ26017	PLJ016W	10/11/2313:40	10/12/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD 9056A
BROMIDE

A total of thirteen(13) water samples were received on 10/12/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ026WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ026WL/ICJ026WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J128-02M/J128-02S - Percent recovery for Bromide(1X) was not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples J128-01I and -06I were reported at a 2X dilution factor due to yellow color. Sample J128-11I was reported at a 10X dilution factor due to yellow color. Samples J128-09I and -13I were reported at a 2X dilution factor due to high conductivity. Samples J128-07I and -10I were reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD 9056A
CHLORIDE-CL

A total of thirteen(13) water samples were received on 10/12/23 to be analyzed for Chloride-CL in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, three(3) method blanks were analyzed. ICJ026WB, ICJ028WB and ICJ058WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, three(3) sets of LCS/LCD were analyzed. ICJ026WL/ICJ026WC, ICJ028WL/ICJ028WC and ICJ058WL/ICJ058WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Chloride-CL was within MS QC limits in J128-02KM/J128-02KS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD 9056A
FLUORIDE

A total of thirteen(13) water samples were received on 10/12/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Fluoride-F was not detected in ICJ026WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ026WL/ICJ026WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Fluoride-F was within MS QC limits in J128-02M/J128-02S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J128-01I and -06I were reported at a 2X dilution factor due to yellow color. Sample J128-11I was reported at a 10X dilution factor due to yellow color. Samples J128-09I and -13I were reported at a 2X dilution factor due to high conductivity. Samples J128-07I and -10I were reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW9056A
NITRATE-N

A total of thirteen(13) water samples were received on 10/12/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrate was not detected in ICJ026WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ026WL/ICJ026WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Nitrate was within MS QC limits in J128-02IM/J128-02IS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J128-01I and -11I were reported at a 2X and 10X dilution factor respectively due to yellow color. Sample J128-07I was reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD SW9056A
NITRITE-N

A total of thirteen(13) water samples were received on 10/12/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrite was not detected in ICJ026WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ026WL/ICJ026WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Nitrite was within MS QC limits in J128-02M/J128-02S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J128-01I and -06I were reported at a 2X dilution factor due to yellow color. Sample J128-11I was reported at a 10X dilution factor due to yellow color. Samples J128-09I and -13I were reported at a 2X dilution factor due to high conductivity. Sample J128-07I was reported at a 5X dilution factor due to high conductivity. Sample J128-10J was reported at a 10X dilution factor due to chloride interference. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD 9056A
ORTHOPHOSPHATE-P

A total of thirteen(13) water samples were received on 10/12/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ026WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ026WL/ICJ026WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Orthophosphate-P was within MS QC limits in J128-02M/J128-02S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J128-01I and -06I were reported at a 2X dilution factor due to yellow color. Sample J128-11I was reported at a 10X dilution factor due to yellow color. Samples J128-09I and -13I were reported at a 2X dilution factor due to high conductivity. Samples J128-07I and -10I were reported at a 5X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J128

METHOD 9056A
SULFATE

A total of thirteen(13) water samples were received on 10/12/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, three(3) method blanks were analyzed. ICJ026WB, ICJ028WB and ICJ058WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, three(3) sets of LCS/LCD were analyzed. ICJ026WL/ICJ026WC, ICJ028WL/ICJ028WC and ICJ058WL/ICJ058WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Sulfate was within MS QC limits in J128-02JM/J128-02JS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ026WB	ND	1	NA	0.2	0.05	0.1	10/12/2307:27	NA	AJ14-48	AJ14-46	ICJ026W	NA	NA
LCS1W	ICJ026WL	1.8	1	NA	0.2	0.05	0.1	10/12/2307:47	NA	AJ14-49	AJ14-46	ICJ026W	NA	NA
LCD1W	ICJ026WC	1.8	1	NA	0.2	0.05	0.1	10/12/2308:08	NA	AJ14-50	AJ14-46	ICJ026W	NA	NA
QC11102023EB	J128-12	0.15J	1	NA	0.2	0.05	0.1	10/12/2317:41	NA	AJ14-76	AJ14-74	ICJ028W	10/11/2314:00	10/12/23
MBLK2W	ICJ028WB	ND	1	NA	0.2	0.05	0.1	10/13/2302:10	NA	AJ14-100	AJ14-98	ICJ028W	NA	NA
LCS2W	ICJ028WL	1.8	1	NA	0.2	0.05	0.1	10/13/2302:30	NA	AJ14-101	AJ14-98	ICJ028W	NA	NA
LCD2W	ICJ028WC	1.8	1	NA	0.2	0.05	0.1	10/13/2302:51	NA	AJ14-102	AJ14-98	ICJ028W	NA	NA
TMW15102023	J128-02K	70	40	NA	8	2	4	10/13/2311:18	NA	AJ14-127	AJ14-121	ICJ028W	10/11/2308:25	10/12/23
TMW15102023DUP	J128-02KD	70	40	NA	8	2	4	10/13/2311:38	NA	AJ14-128	AJ14-121	ICJ028W	10/11/2308:25	10/12/23
TMW15102023MS	J128-02KM	150	40	NA	8	2	4	10/13/2311:59	NA	AJ14-129	AJ14-121	ICJ028W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02KS	150	40	NA	8	2	4	10/13/2312:20	NA	AJ14-130	AJ14-121	ICJ028W	10/11/2308:25	10/12/23
MBLK3W	ICJ058WB	ND	1	NA	0.2	0.05	0.1	10/27/2315:15	NA	AJ34-03	AJ34-01	ICJ058W	NA	NA
LCS3W	ICJ058WL	1.9	1	NA	0.2	0.05	0.1	10/27/2315:35	NA	AJ34-04	AJ34-01	ICJ058W	NA	NA
LCD3W	ICJ058WC	1.9	1	NA	0.2	0.05	0.1	10/27/2315:55	NA	AJ34-05	AJ34-01	ICJ058W	NA	NA
MW37102023	J128-01J	170	50	NA	10	2.5	5	10/27/2322:01	NA	AJ34-23	AJ34-13	ICJ058W	10/11/2307:50	10/12/23
TMW52102023	J128-03I	65	25	NA	5	1.2	2.5	10/27/2322:21	NA	AJ34-24	AJ34-13	ICJ058W	10/11/2308:30	10/12/23
TMW13102023	J128-04J	74	40	NA	8	2	4	10/27/2323:22	NA	AJ34-27	AJ34-25	ICJ058W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05J	75	40	NA	8	2	4	10/27/2323:42	NA	AJ34-28	AJ34-25	ICJ058W	10/11/2309:15	10/12/23
TMW35102023	J128-06K	240	100	NA	20	5	10	10/28/2300:02	NA	AJ34-29	AJ34-25	ICJ058W	10/11/2310:25	10/12/23
TMW45102023	J128-07J	180	50	NA	10	2.5	5	10/28/2300:22	NA	AJ34-30	AJ34-25	ICJ058W	10/11/2310:35	10/12/23
TMW64102023	J128-08J	120	50	NA	10	2.5	5	10/28/2300:43	NA	AJ34-31	AJ34-25	ICJ058W	10/11/2310:40	10/12/23
MW25102023	J128-09K	300	200	NA	40	10	20	10/28/2301:03	NA	AJ34-32	AJ34-25	ICJ058W	10/11/2312:00	10/12/23
MW20102023	J128-10T	1100	400	NA	80	20	40	10/28/2301:23	NA	AJ34-33	AJ34-25	ICJ058W	10/11/2312:35	10/12/23
MW18D102023	J128-11J	690	200	NA	40	10	20	10/28/2301:43	NA	AJ34-34	AJ34-25	ICJ058W	10/11/2313:40	10/12/23
TMW06102023	J128-13K	110	50	NA	10	2.5	5	10/28/2302:04	NA	AJ34-35	AJ34-25	ICJ058W	10/11/2314:25	10/12/23

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ026WB	ND	1	NA	0.5	0.13	0.25	10/12/2307:27	NA	AJ14-48	AJ14-46	ICJ026W	NA	NA
LCS1W	ICJ026WL	0.97	1	NA	0.5	0.13	0.25	10/12/2307:47	NA	AJ14-49	AJ14-46	ICJ026W	NA	NA
LCD1W	ICJ026WC	0.97	1	NA	0.5	0.13	0.25	10/12/2308:08	NA	AJ14-50	AJ14-46	ICJ026W	NA	NA
TMW15102023	J128-02	0.70	1	NA	0.5	0.13	0.25	10/12/2313:01	NA	AJ14-64	AJ14-62	ICJ026W	10/11/2308:25	10/12/23
MW37102023	J128-01I	0.89J	2	NA	1	0.26	0.5	10/12/2313:36	NA	AJ14-65	AJ14-62	ICJ026W	10/11/2307:50	10/12/23
TMW52102023	J128-03	0.44J	1	NA	0.5	0.13	0.25	10/12/2313:57	NA	AJ14-66	AJ14-62	ICJ026W	10/11/2308:30	10/12/23
TMW13102023	J128-04	0.79	1	NA	0.5	0.13	0.25	10/12/2314:17	NA	AJ14-67	AJ14-62	ICJ026W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05	0.79	1	NA	0.5	0.13	0.25	10/12/2314:37	NA	AJ14-68	AJ14-62	ICJ026W	10/11/2309:15	10/12/23
TMW35102023	J128-06I	0.85J	2	NA	1	0.26	0.5	10/12/2314:57	NA	AJ14-69	AJ14-62	ICJ026W	10/11/2310:25	10/12/23
TMW45102023	J128-07I	1.6J	5	NA	2.5	0.65	1.2	10/12/2315:18	NA	AJ14-70	AJ14-62	ICJ026W	10/11/2310:35	10/12/23
TMW64102023	J128-08	1.0	1	NA	0.5	0.13	0.25	10/12/2315:59	NA	AJ14-71	AJ14-62	ICJ026W	10/11/2310:40	10/12/23
MW25102023	J128-09I	1.4	2	NA	1	0.26	0.5	10/12/2316:19	NA	AJ14-72	AJ14-62	ICJ026W	10/11/2312:00	10/12/23
MW20102023	J128-10I	3.4	5	NA	2.5	0.65	1.2	10/12/2316:40	NA	AJ14-73	AJ14-62	ICJ026W	10/11/2312:35	10/12/23
QC11102023EB	J128-12	ND	1	NA	0.5	0.13	0.25	10/12/2317:41	NA	AJ14-76	AJ14-74	ICJ026W	10/11/2314:00	10/12/23
MW18D102023	J128-11I	3.6J	10	NA	5	1.3	2.5	10/12/2318:01	NA	AJ14-77	AJ14-74	ICJ026W	10/11/2313:40	10/12/23
TMW06102023	J128-13I	0.90J	2	NA	1	0.26	0.5	10/12/2318:22	NA	AJ14-78	AJ14-74	ICJ026W	10/11/2314:25	10/12/23
TMW15102023DUP	J128-02D	0.71	1	NA	0.5	0.13	0.25	10/12/2320:05	NA	AJ14-82	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MS	J128-02M	1.5	1	NA	0.5	0.13	0.25	10/12/2320:25	NA	AJ14-83	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02S	1.5	1	NA	0.5	0.13	0.25	10/12/2320:45	NA	AJ14-84	AJ14-74	ICJ026W	10/11/2308:25	10/12/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ026WB	ND	1	NA	0.1	0.025	0.05	10/12/2307:27	NA	AJ14-48	AJ14-46	ICJ026W	NA	NA
LCS1W	ICJ026WL	1.1	1	NA	0.1	0.025	0.05	10/12/2307:47	NA	AJ14-49	AJ14-46	ICJ026W	NA	NA
LCD1W	ICJ026WC	1.1	1	NA	0.1	0.025	0.05	10/12/2308:08	NA	AJ14-50	AJ14-46	ICJ026W	NA	NA
TMW15102023	J128-02	1.8	1	NA	0.1	0.025	0.05	10/12/2313:01	NA	AJ14-64	AJ14-62	ICJ026W	10/11/2308:25	10/12/23
MW37102023	J128-01I	1.3	2	NA	0.2	0.05	0.1	10/12/2313:36	NA	AJ14-65	AJ14-62	ICJ026W	10/11/2307:50	10/12/23
TMW52102023	J128-03	1.6	1	NA	0.1	0.025	0.05	10/12/2313:57	NA	AJ14-66	AJ14-62	ICJ026W	10/11/2308:30	10/12/23
TMW13102023	J128-04	1.6	1	NA	0.1	0.025	0.05	10/12/2314:17	NA	AJ14-67	AJ14-62	ICJ026W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05	1.6	1	NA	0.1	0.025	0.05	10/12/2314:37	NA	AJ14-68	AJ14-62	ICJ026W	10/11/2309:15	10/12/23
TMW35102023	J128-06I	0.67	2	NA	0.2	0.05	0.1	10/12/2314:57	NA	AJ14-69	AJ14-62	ICJ026W	10/11/2310:25	10/12/23
TMW45102023	J128-07I	0.83	5	NA	0.5	0.12	0.25	10/12/2315:18	NA	AJ14-70	AJ14-62	ICJ026W	10/11/2310:35	10/12/23
TMW64102023	J128-08	0.23	1	NA	0.1	0.025	0.05	10/12/2315:59	NA	AJ14-71	AJ14-62	ICJ026W	10/11/2310:40	10/12/23
MW25102023	J128-09I	0.35	2	NA	0.2	0.05	0.1	10/12/2316:19	NA	AJ14-72	AJ14-62	ICJ026W	10/11/2312:00	10/12/23
MW20102023	J128-10I	0.50	5	NA	0.5	0.12	0.25	10/12/2316:40	NA	AJ14-73	AJ14-62	ICJ026W	10/11/2312:35	10/12/23
QC11102023EB	J128-12	0.047J	1	NA	0.1	0.025	0.05	10/12/2317:41	NA	AJ14-76	AJ14-74	ICJ026W	10/11/2314:00	10/12/23
MW18D102023	J128-11I	0.94J	10	NA	1	0.25	0.5	10/12/2318:01	NA	AJ14-77	AJ14-74	ICJ026W	10/11/2313:40	10/12/23
TMW06102023	J128-13I	0.91	2	NA	0.2	0.05	0.1	10/12/2318:22	NA	AJ14-78	AJ14-74	ICJ026W	10/11/2314:25	10/12/23
TMW15102023DUP	J128-02D	1.9	1	NA	0.1	0.025	0.05	10/12/2320:05	NA	AJ14-82	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MS	J128-02M	2.9	1	NA	0.1	0.025	0.05	10/12/2320:25	NA	AJ14-83	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02S	2.9	1	NA	0.1	0.025	0.05	10/12/2320:45	NA	AJ14-84	AJ14-74	ICJ026W	10/11/2308:25	10/12/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ026WB	ND	1	NA	0.1	0.03	0.06	10/12/2307:27	NA	AJ14-48	AJ14-46	ICJ026W	NA	NA
LCS1W	ICJ026WL	0.95	1	NA	0.1	0.03	0.06	10/12/2307:47	NA	AJ14-49	AJ14-46	ICJ026W	NA	NA
LCD1W	ICJ026WC	0.95	1	NA	0.1	0.03	0.06	10/12/2308:08	NA	AJ14-50	AJ14-46	ICJ026W	NA	NA
MW37102023	J128-01I	ND	2	NA	0.2	0.06	0.12	10/12/2313:36	NA	AJ14-65	AJ14-62	ICJ026W	10/11/2307:50	10/12/23
TMW52102023	J128-03	0.69	1	NA	0.1	0.03	0.06	10/12/2313:57	NA	AJ14-66	AJ14-62	ICJ026W	10/11/2308:30	10/12/23
TMW45102023	J128-07I	1.6	5	NA	0.5	0.15	0.3	10/12/2315:18	NA	AJ14-70	AJ14-62	ICJ026W	10/11/2310:35	10/12/23
TMW64102023	J128-08	0.43	1	NA	0.1	0.03	0.06	10/12/2315:59	NA	AJ14-71	AJ14-62	ICJ026W	10/11/2310:40	10/12/23
QC11102023EB	J128-12	ND	1	NA	0.1	0.03	0.06	10/12/2317:41	NA	AJ14-76	AJ14-74	ICJ026W	10/11/2314:00	10/12/23
MW18D102023	J128-11I	ND	10	NA	1	0.3	0.6	10/12/2318:01	NA	AJ14-77	AJ14-74	ICJ026W	10/11/2313:40	10/12/23
TMW13102023	J128-04I	3.7	5	NA	0.5	0.15	0.3	10/12/2321:06	NA	AJ14-85	AJ14-74	ICJ026W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05I	3.7	5	NA	0.5	0.15	0.3	10/12/2322:07	NA	AJ14-88	AJ14-86	ICJ026W	10/11/2309:15	10/12/23
TMW35102023	J128-06J	5.4	5	NA	0.5	0.15	0.3	10/12/2322:27	NA	AJ14-89	AJ14-86	ICJ026W	10/11/2310:25	10/12/23
MW25102023	J128-09J	51	50	NA	5	1.5	3	10/12/2322:47	NA	AJ14-90	AJ14-86	ICJ026W	10/11/2312:00	10/12/23
MW20102023	J128-10K	18	20	NA	2	0.6	1.2	10/12/2323:28	NA	AJ14-92	AJ14-86	ICJ026W	10/11/2312:35	10/12/23
TMW06102023	J128-13J	12	10	NA	1	0.3	0.6	10/12/2323:48	NA	AJ14-93	AJ14-86	ICJ026W	10/11/2314:25	10/12/23
TMW15102023	J128-02I	1.6	2	NA	0.2	0.06	0.12	10/13/2300:08	NA	AJ14-94	AJ14-86	ICJ026W	10/11/2308:25	10/12/23
TMW15102023DUP	J128-02ID	1.6	2	NA	0.2	0.06	0.12	10/13/2300:29	NA	AJ14-95	AJ14-86	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MS	J128-02IM	3.7	2	NA	0.2	0.06	0.12	10/13/2300:49	NA	AJ14-96	AJ14-86	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02IS	3.6	2	NA	0.2	0.06	0.12	10/13/2301:09	NA	AJ14-97	AJ14-86	ICJ026W	10/11/2308:25	10/12/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ026WB	ND	1	NA	0.1	0.03	0.06	10/12/2307:27	NA	AJ14-48	AJ14-46	ICJ026W	NA	NA
LCS1W	ICJ026WL	2.0	1	NA	0.1	0.03	0.06	10/12/2307:47	NA	AJ14-49	AJ14-46	ICJ026W	NA	NA
LCD1W	ICJ026WC	2.0	1	NA	0.1	0.03	0.06	10/12/2308:08	NA	AJ14-50	AJ14-46	ICJ026W	NA	NA
TMW15102023	J128-02	ND	1	NA	0.1	0.03	0.06	10/12/2313:01	NA	AJ14-64	AJ14-62	ICJ026W	10/11/2308:25	10/12/23
MW37102023	J128-01I	ND	2	NA	0.2	0.06	0.12	10/12/2313:36	NA	AJ14-65	AJ14-62	ICJ026W	10/11/2307:50	10/12/23
TMW52102023	J128-03	ND	1	NA	0.1	0.03	0.06	10/12/2313:57	NA	AJ14-66	AJ14-62	ICJ026W	10/11/2308:30	10/12/23
TMW13102023	J128-04	ND	1	NA	0.1	0.03	0.06	10/12/2314:17	NA	AJ14-67	AJ14-62	ICJ026W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05	ND	1	NA	0.1	0.03	0.06	10/12/2314:37	NA	AJ14-68	AJ14-62	ICJ026W	10/11/2309:15	10/12/23
TMW35102023	J128-06I	ND	2	NA	0.2	0.06	0.12	10/12/2314:57	NA	AJ14-69	AJ14-62	ICJ026W	10/11/2310:25	10/12/23
TMW45102023	J128-07I	ND	5	NA	0.5	0.15	0.3	10/12/2315:18	NA	AJ14-70	AJ14-62	ICJ026W	10/11/2310:35	10/12/23
TMW64102023	J128-08	ND	1	NA	0.1	0.03	0.06	10/12/2315:59	NA	AJ14-71	AJ14-62	ICJ026W	10/11/2310:40	10/12/23
MW25102023	J128-09I	ND	2	NA	0.2	0.06	0.12	10/12/2316:19	NA	AJ14-72	AJ14-62	ICJ026W	10/11/2312:00	10/12/23
QC11102023EB	J128-12	ND	1	NA	0.1	0.03	0.06	10/12/2317:41	NA	AJ14-76	AJ14-74	ICJ026W	10/11/2314:00	10/12/23
MW18D102023	J128-11I	ND	10	NA	1	0.3	0.6	10/12/2318:01	NA	AJ14-77	AJ14-74	ICJ026W	10/11/2313:40	10/12/23
TMW06102023	J128-13I	ND	2	NA	0.2	0.06	0.12	10/12/2318:22	NA	AJ14-78	AJ14-74	ICJ026W	10/11/2314:25	10/12/23
TMW15102023DUP	J128-02D	ND	1	NA	0.1	0.03	0.06	10/12/2320:05	NA	AJ14-82	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MS	J128-02M	2.0	1	NA	0.1	0.03	0.06	10/12/2320:25	NA	AJ14-83	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02S	2.0	1	NA	0.1	0.03	0.06	10/12/2320:45	NA	AJ14-84	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
MW20102023	J128-10J	ND	10	NA	1	0.3	0.6	10/12/2323:08	NA	AJ14-91	AJ14-86	ICJ026W	10/11/2312:35	10/12/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ026WB	ND	1	NA	0.5	0.12	0.25	10/12/2307:27	NA	AJ14-48	AJ14-46	ICJ026W	NA	NA
LCS1W	ICJ026WL	2.0	1	NA	0.5	0.12	0.25	10/12/2307:47	NA	AJ14-49	AJ14-46	ICJ026W	NA	NA
LCD1W	ICJ026WC	2.0	1	NA	0.5	0.12	0.25	10/12/2308:08	NA	AJ14-50	AJ14-46	ICJ026W	NA	NA
TMW15102023	J128-02	ND	1	NA	0.5	0.12	0.25	10/12/2313:01	NA	AJ14-64	AJ14-62	ICJ026W	10/11/2308:25	10/12/23
MW37102023	J128-01I	ND	2	NA	1	0.25	0.5	10/12/2313:36	NA	AJ14-65	AJ14-62	ICJ026W	10/11/2307:50	10/12/23
TMW52102023	J128-03	ND	1	NA	0.5	0.12	0.25	10/12/2313:57	NA	AJ14-66	AJ14-62	ICJ026W	10/11/2308:30	10/12/23
TMW13102023	J128-04	ND	1	NA	0.5	0.12	0.25	10/12/2314:17	NA	AJ14-67	AJ14-62	ICJ026W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05	ND	1	NA	0.5	0.12	0.25	10/12/2314:37	NA	AJ14-68	AJ14-62	ICJ026W	10/11/2309:15	10/12/23
TMW35102023	J128-06I	ND	2	NA	1	0.25	0.5	10/12/2314:57	NA	AJ14-69	AJ14-62	ICJ026W	10/11/2310:25	10/12/23
TMW45102023	J128-07I	ND	5	NA	2.5	0.62	1.2	10/12/2315:18	NA	AJ14-70	AJ14-62	ICJ026W	10/11/2310:35	10/12/23
TMW64102023	J128-08	ND	1	NA	0.5	0.12	0.25	10/12/2315:59	NA	AJ14-71	AJ14-62	ICJ026W	10/11/2310:40	10/12/23
MW25102023	J128-09I	ND	2	NA	1	0.25	0.5	10/12/2316:19	NA	AJ14-72	AJ14-62	ICJ026W	10/11/2312:00	10/12/23
MW20102023	J128-10I	ND	5	NA	2.5	0.62	1.2	10/12/2316:40	NA	AJ14-73	AJ14-62	ICJ026W	10/11/2312:35	10/12/23
QC11102023EB	J128-12	ND	1	NA	0.5	0.12	0.25	10/12/2317:41	NA	AJ14-76	AJ14-74	ICJ026W	10/11/2314:00	10/12/23
MW18D102023	J128-11I	ND	10	NA	5	1.2	2.5	10/12/2318:01	NA	AJ14-77	AJ14-74	ICJ026W	10/11/2313:40	10/12/23
TMW06102023	J128-13I	ND	2	NA	1	0.25	0.5	10/12/2318:22	NA	AJ14-78	AJ14-74	ICJ026W	10/11/2314:25	10/12/23
TMW15102023DUP	J128-02D	ND	1	NA	0.5	0.12	0.25	10/12/2320:05	NA	AJ14-82	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MS	J128-02M	1.6	1	NA	0.5	0.12	0.25	10/12/2320:25	NA	AJ14-83	AJ14-74	ICJ026W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02S	1.6	1	NA	0.5	0.12	0.25	10/12/2320:45	NA	AJ14-84	AJ14-74	ICJ026W	10/11/2308:25	10/12/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J128

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ026WB	ND	1	NA	0.5	0.13	0.25	10/12/2307:27	NA	AJ14-48	AJ14-46	ICJ026W	NA	NA
LCS1W	ICJ026WL	4.7	1	NA	0.5	0.13	0.25	10/12/2307:47	NA	AJ14-49	AJ14-46	ICJ026W	NA	NA
LCD1W	ICJ026WC	4.7	1	NA	0.5	0.13	0.25	10/12/2308:08	NA	AJ14-50	AJ14-46	ICJ026W	NA	NA
QC11102023EB	J128-12	1.3	1	NA	0.5	0.13	0.25	10/12/2317:41	NA	AJ14-76	AJ14-74	ICJ028W	10/11/2314:00	10/12/23
MBLK2W	ICJ028WB	ND	1	NA	0.5	0.13	0.25	10/13/2302:10	NA	AJ14-100	AJ14-98	ICJ028W	NA	NA
LCS2W	ICJ028WL	4.6	1	NA	0.5	0.13	0.25	10/13/2302:30	NA	AJ14-101	AJ14-98	ICJ028W	NA	NA
LCD2W	ICJ028WC	4.6	1	NA	0.5	0.13	0.25	10/13/2302:51	NA	AJ14-102	AJ14-98	ICJ028W	NA	NA
TMW15102023	J128-02J	240	20	NA	10	2.6	5	10/13/2309:57	NA	AJ14-123	AJ14-121	ICJ028W	10/11/2308:25	10/12/23
TMW15102023DUP	J128-02JD	240	20	NA	10	2.6	5	10/13/2310:17	NA	AJ14-124	AJ14-121	ICJ028W	10/11/2308:25	10/12/23
TMW15102023MS	J128-02JM	330	20	NA	10	2.6	5	10/13/2310:37	NA	AJ14-125	AJ14-121	ICJ028W	10/11/2308:25	10/12/23
TMW15102023MSD	J128-02JS	330	20	NA	10	2.6	5	10/13/2310:58	NA	AJ14-126	AJ14-121	ICJ028W	10/11/2308:25	10/12/23
MBLK3W	ICJ058WB	ND	1	NA	0.5	0.13	0.25	10/27/2315:15	NA	AJ34-03	AJ34-01	ICJ058W	NA	NA
LCS3W	ICJ058WL	4.8	1	NA	0.5	0.13	0.25	10/27/2315:35	NA	AJ34-04	AJ34-01	ICJ058W	NA	NA
LCD3W	ICJ058WC	4.8	1	NA	0.5	0.13	0.25	10/27/2315:55	NA	AJ34-05	AJ34-01	ICJ058W	NA	NA
MW37102023	J128-01J	420	50	NA	25	6.5	12	10/27/2322:01	NA	AJ34-23	AJ34-13	ICJ058W	10/11/2307:50	10/12/23
TMW52102023	J128-03I	400	25	NA	12	3.3	6.2	10/27/2322:21	NA	AJ34-24	AJ34-13	ICJ058W	10/11/2308:30	10/12/23
TMW13102023	J128-04J	310	40	NA	20	5.2	10	10/27/2323:22	NA	AJ34-27	AJ34-25	ICJ058W	10/11/2309:05	10/12/23
FDUP09-102023	J128-05J	310	40	NA	20	5.2	10	10/27/2323:42	NA	AJ34-28	AJ34-25	ICJ058W	10/11/2309:15	10/12/23
TMW35102023	J128-06K	1100	100	NA	50	13	25	10/28/2300:02	NA	AJ34-29	AJ34-25	ICJ058W	10/11/2310:25	10/12/23
TMW45102023	J128-07J	500	50	NA	25	6.5	12	10/28/2300:22	NA	AJ34-30	AJ34-25	ICJ058W	10/11/2310:35	10/12/23
TMW64102023	J128-08J	820	50	NA	25	6.5	12	10/28/2300:43	NA	AJ34-31	AJ34-25	ICJ058W	10/11/2310:40	10/12/23
MW25102023	J128-09K	1600	200	NA	100	26	50	10/28/2301:03	NA	AJ34-32	AJ34-25	ICJ058W	10/11/2312:00	10/12/23
MW20102023	J128-10T	3400	400	NA	200	52	100	10/28/2301:23	NA	AJ34-33	AJ34-25	ICJ058W	10/11/2312:35	10/12/23
MW18D102023	J128-11J	2000	200	NA	100	26	50	10/28/2301:43	NA	AJ34-34	AJ34-25	ICJ058W	10/11/2313:40	10/12/23
TMW06102023	J128-13K	790	50	NA	25	6.5	12	10/28/2302:04	NA	AJ34-35	AJ34-25	ICJ058W	10/11/2314:25	10/12/23

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 12-05-2023
EMAX Batch No.: 23J142

Attn: Jeff Ockerman

Eco & Associates, Inc.
18231 Irvine Blvd, Suite 204
Tustin CA 92780

Subject: Laboratory Report
Project: USACE WINGATE

Enclosed is the Laboratory report for samples received on 10/13/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW14A102023	J142-01	10/12/23	WATER	VOCS BY 8260C NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS SEMIVOLATILES + APP 9 ANIONS BY IC
TMW21102023	J142-02	10/12/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS TPH-DRO ANIONS BY IC
FDUP10-102023	J142-03	10/12/23	WATER	VOCS BY 8260C TPH GASOLINE PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS TPH-DRO ANIONS BY IC
TMW38102023	J142-04	10/12/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 NITROGLYCERINE AND PETN NITROAROMATICS & NITRAMINES DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS PESTICIDES ORGANOCHLORINE SEMIVOLATILES + APP 9 ANIONS BY IC

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
MW22D102023	J142-05	10/12/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				TPH-DRO
				ANIONS BY IC
TMW32102023	J142-06	10/12/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6B50
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				ANIONS BY IC
TMW47102023	J142-07	10/12/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILES + APP 9
				ANIONS BY IC
QC12102023TB	J142-08	10/12/23	WATER	VOCS BY 8260C
				TPH GASOLINE
TMW14A102023MS	J142-01M	10/12/23	WATER	ANIONS BY IC
TMW14A102023MSD	J142-01S	10/12/23	WATER	ANIONS BY IC

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of eight(8) water samples were received on 10/13/23 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied except for Bromomethane was detected biased low in CCV (data file ID RJG368). 1,2-Dibromo-3-Chloropropane, Naphthalene and 1,2,3-Trichlorobenzene were detected biased low in CCV(data file ID RJW524). Furthermore, LCS/LCSD (having the same concentration as the CCV) was analyzed right after the CCV and endings CCV'S were within project QC acceptance criteria. Note that" Minimum Response Factor" for all analytes were within method recommended response factors with the exception of Acetone and 2-Butanone. However, percent recoveries for all target analytes were within 70-130% on all calibration points. Refer to calibration summary forms of ICAL, ICV and CCV's as well as LCS/LCD forms for details. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. V006J22B and V0E2J15B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. All analytes were within LCS limits in V006J22X/V006J22C. All analytes were within LCS limits in V0E2J15L/V0E2J15C, except for percent recoveries for 2-Hexanone, and 4-Methyl-2-Pentanone and RPDs for few analytes were greater than RPD QC limit. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : E2

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOE2J15L	1	NA	10/23/2314:03	10/23/2314:03	RJG342	RJG046	VOE2J15	Lab Control Sample (LCS)
LCD1W	VOE2J15C	1	NA	10/23/2314:28	10/23/2314:28	RJG343	RJG046	VOE2J15	LCS Duplicate
MBLK1W	VOE2J15B	1	NA	10/23/2315:16	10/23/2315:16	RJG345	RJG046	VOE2J15	Method Blank
TMW14A102023	23J142-01	1	NA	10/23/2323:00	10/23/2323:00	RJG364	RJG046	VOE2J15	Field Sample
TMW21102023	23J142-02	1	NA	10/23/2323:24	10/23/2323:24	RJG365	RJG046	VOE2J15	Field Sample
FDUP10-102023	23J142-03	1	NA	10/23/2323:49	10/23/2323:49	RJG366	RJG046	VOE2J15	Field Sample
TMW38102023	23J142-04	1	NA	10/24/2300:13	10/24/2300:13	RJG367	RJG046	VOE2J15	Field Sample
LCD2W!	VO06J22C	1	NA	10/26/2311:20	10/26/2311:20	RJW526	RJW093	VO06J22	LCS Duplicate
LCS2W!	VO06J22X	1	NA	10/26/2312:12	10/26/2312:12	RJW528	RJW093	VO06J22	Lab Control Sample (LCS)
MBLK2W!	VO06J22B	1	NA	10/26/2313:12	10/26/2313:12	RJW530	RJW093	VO06J22	Method Blank
MW22D102023!	23J142-05	1	NA	10/26/2313:57	10/26/2313:57	RJW531	RJW093	VO06J22	Field Sample
TMW32102023!	23J142-06	1	NA	10/26/2314:23	10/26/2314:23	RJW532	RJW093	VO06J22	Field Sample
TMW47102023!	23J142-07	1	NA	10/26/2314:49	10/26/2314:49	RJW533	RJW093	VO06J22	Field Sample
QC12102023TB!	23J142-08	1	NA	10/26/2315:15	10/26/2315:15	RJW534	RJW093	VO06J22	Field Sample

! Instrument ID : 06
FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 07:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/23/23 23:00
Sample ID	: TMW14A102023	Date Analyzed:	10/23/23 23:00
Lab Samp ID:	23J142-01	Dilution Factor:	1
Lab File ID:	RJG364	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.6	10.0	116	81-118
4-Bromofluorobenzene	9.92	10.0	99	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:10
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/23/23 23:24
Sample ID	: TMW21102023	Date Analyzed:	10/23/23 23:24
Lab Samp ID:	23J142-02	Dilution Factor:	1
Lab File ID:	RJG365	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.6	10.0	116	81-118
4-Bromofluorobenzene	9.89	10.0	99	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:20
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/23/23 23:49
Sample ID	: FDUP10-102023	Date Analyzed:	10/23/23 23:49
Lab Samp ID:	23J142-03	Dilution Factor:	1
Lab File ID:	RJG366	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.6	10.0	116	81-118
4-Bromofluorobenzene	9.68	10.0	97	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/24/23 00:13
Sample ID	: TMW38102023	Date Analyzed:	10/24/23 00:13
Lab Samp ID:	23J142-04	Dilution Factor:	1
Lab File ID:	RJG367	Matrix:	WATER
Ext Btch ID:	VOE2J15	% Moisture:	NA
Calib. Ref.:	RJG046	Instrument ID:	E2

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	11.8	10.0	118	81-118
4-Bromofluorobenzene	9.83	10.0	98	85-114
Toluene-d8	10.1	10.0	101	89-112
Dibromofluoromethane	11.1	10.0	111	80-119

Notes:
Sample Amount : 10ml
Final Volume : 10ml
Prepared by : DNguye
Analyzed by : DNguye
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/26/23 13:57
Sample ID	: MW22D102023	Date Analyzed:	10/26/23 13:57
Lab Samp ID:	23J142-05	Dilution Factor:	1
Lab File ID:	RJW531	Matrix:	WATER
Ext Btch ID:	VOO6J22	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.2	10.0	102	81-118
4-Bromofluorobenzene	10.5	10.0	105	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	11.3	10.0	113	80-119

Notes:
Sample Amount : 25ml
Prepared by : JLee
Final Volume : 25ml
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/26/23 14:23
Sample ID	: TMW32102023	Date Analyzed:	10/26/23 14:23
Lab Samp ID:	23J142-06	Dilution Factor:	1
Lab File ID:	RJW532	Matrix:	WATER
Ext Btch ID:	VO06J22	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.5	10.0	105	81-118
4-Bromofluorobenzene	11.3	10.0	113	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 25ml
Prepared by : JLee
Final Volume : 25ml
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/26/23 14:49
Sample ID	: TMW47102023	Date Analyzed:	10/26/23 14:49
Lab Samp ID:	23J142-07	Dilution Factor:	1
Lab File ID:	RJW533	Matrix:	WATER
Ext Btch ID:	VO06J22	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	1.0	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.5	10.0	105	81-118
4-Bromofluorobenzene	10.7	10.0	107	85-114
Toluene-d8	10.6	10.0	106	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

Notes:
Sample Amount : 25ml
Prepared by : JLee
Final Volume : 25ml
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:00
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/26/23 15:15
Sample ID	: QC12102023TB	Date Analyzed:	10/26/23 15:15
Lab Samp ID:	23J142-08	Dilution Factor:	1
Lab File ID:	RJW534	Matrix:	WATER
Ext Btch ID:	VOO6J22	% Moisture:	NA
Calib. Ref.:	RJW093	Instrument ID:	06

PARAMETER(S)	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,1,1,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,1-Trichloroethane	ND	1.0	0.10	0.20
1,1,2,2-Tetrachloroethane	ND	1.0	0.10	0.20
1,1,2-Trichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethane	ND	1.0	0.10	0.20
1,1-Dichloroethene	ND	1.0	0.10	0.20
1,1-Dichloropropene	ND	1.0	0.10	0.20
1,2,3-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,3-Trichloropropane	ND	2.0	0.25	0.50
1,2,4-Trichlorobenzene	ND	1.0	0.15	0.30
1,2,4-Trimethylbenzene	ND	1.0	0.25	0.50
1,2-Dibromo-3-chloropropane	ND	2.0	0.25	0.50
1,2-Dibromoethane	ND	1.0	0.10	0.20
1,2-Dichlorobenzene	ND	1.0	0.10	0.20
1,2-Dichloroethane	ND	1.0	0.10	0.20
1,3,5-Trimethylbenzene	ND	1.0	0.25	0.50
1,3-Dichlorobenzene	ND	1.0	0.10	0.20
1,3-Dichloropropane	ND	1.0	0.10	0.20
1,4-Dichlorobenzene	ND	1.0	0.10	0.20
2,2-Dichloropropane	ND	1.0	0.25	0.50
2-Butanone	ND	20	5.0	10
2-Chlorotoluene	ND	1.0	0.25	0.50
2-Hexanone	ND	20	5.0	10
4-Chlorotoluene	ND	1.0	0.25	0.50
Acetone	ND	20	5.0	10
Benzene	ND	1.0	0.10	0.20
Bromobenzene	ND	1.0	0.10	0.20
Bromochloromethane	ND	1.0	0.15	0.30
Bromodichloromethane	ND	1.0	0.10	0.20
Bromoform	ND	1.0	0.15	0.30
Bromomethane	ND	1.0	0.25	0.50
Carbon Disulfide	ND	1.0	0.25	0.50
Carbon Tetrachloride	ND	1.0	0.10	0.20
Chlorobenzene	ND	1.0	0.10	0.20
Chloroethane	ND	2.0	0.50	1.0
Chloroform	ND	1.0	0.10	0.20
Chloromethane	ND	1.0	0.25	0.50
cis-1,2-Dichloroethene	ND	1.0	0.10	0.20
cis-1,3-Dichloropropene	ND	1.0	0.10	0.20
Dibromochloromethane	ND	1.0	0.10	0.20
Dibromomethane	ND	1.0	0.10	0.20
Dichlorodifluoromethane	ND	1.0	0.25	0.50
Ethylbenzene	ND	1.0	0.10	0.20
Hexachlorobutadiene	ND	2.0	0.50	1.0
Isopropylbenzene	ND	1.0	0.10	0.20
m,p-Xylenes	ND	2.0	0.21	0.50
4-Methyl-2-Pentanone	ND	20	5.0	10
Methylene Chloride	ND	2.0	0.50	1.0
Methyl tert-butyl ether	ND	1.0	0.15	0.30
Naphthalene	ND	2.0	0.50	1.0
n-Butylbenzene	ND	1.0	0.25	0.50
n-Propylbenzene	ND	1.0	0.25	0.50
o-Xylene	ND	1.0	0.10	0.20
p-Isopropyltoluene	ND	1.0	0.25	0.50
Sec-Butylbenzene	ND	1.0	0.25	0.50
Styrene	ND	1.0	0.25	0.50
Tert-Butylbenzene	ND	1.0	0.25	0.50
Toluene	ND	1.0	0.10	0.20
Trans-1,2-Dichloroethene	ND	1.0	0.10	0.20
Trans-1,3-Dichloropropene	ND	1.0	0.25	0.50
Trichloroethene	ND	1.0	0.10	0.20
Trichlorofluoromethane	ND	1.0	0.25	0.50
Vinyl Chloride	ND	1.0	0.11	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	0.25	0.50
Methyl Acetate	ND	2.0	0.50	1.0
Methylcyclohexane	ND	2.0	0.50	1.0

SURROGATE PARAMETER(S)	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
1,2-Dichloroethane-d4	10.8	10.0	108	81-118
4-Bromofluorobenzene	10.8	10.0	108	85-114
Toluene-d8	10.5	10.0	105	89-112
Dibromofluoromethane	11.0	10.0	110	80-119

Notes:
Sample Amount : 25ml
Prepared by : JLee
Final Volume : 25ml
Analyzed by : JLee
Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS + APPENDIX 9

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of five(5) water samples were received on 10/13/23 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. For this SDG, the following were noted: 2,4-Dinitrophenol and 4,6-Dinitro-2-Methylphenol were detected biased high(%D=38.0) and (%D=32.3)respectively in CCV(data file ID: RJJ528). However, these analytes were not detected in any of the associated field samples. Target analytes in CCVs(Data File IDs: RJJ529, RJJ563 and RJJ564) were within calibration acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ040WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: SVJ040WL/SVJ040WC - Percent recoveries for several analytes in LCS and/or LCD were biased high. However, all analytes were not detected in the associated samples. The rest of the analytes were in control. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. For this SDG, all surrogate recoveries were within QC limits except for 2-Fluorophenol in J142-04 and Terphenyl-D14 in J142-07; most likely due to matrix interference. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of five(5) water samples were received on 10/13/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data File IDs: RJJ530 and RJJ562) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ040WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. The target analyte was within LCS limits except for: CLJ040WL/CLJ040WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=31*) was was greater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

A total of five(5) water samples were received on 10/13/23 to be analyzed for Semi Volatile Organics by GC/MS (APPENDIX 9) in accordance with Method 3520C/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. There were two(2)CCVs (Data File IDs: RJJ529 and RJJ563) associated with this SDG. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. SVJ040WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. Lab control sample was prepared and analyzed at a frequency required by the project. All analytes were within LCS limits except for: CLJ040WL/CLJ040WC - RPDs for Caprolactam(RPD=33*), and Benzaldehyde(RPD=25*) were greater than RPD QC limit. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ040WB	1	NA	10/23/2313:04	10/18/2315:30	RJJ531	RGJ087	23SVJ040W	Method Blank
LCS1W	SVJ040WL	1	NA	10/23/2313:22	10/18/2315:30	RJJ532	RGJ087	23SVJ040W	Lab Control Sample (LCS)
LCD1W	SVJ040WC	1	NA	10/23/2313:41	10/18/2315:30	RJJ533	RGJ087	23SVJ040W	LCS Duplicate
TMW14A102023	23J142-01	1	NA	10/23/2319:19	10/18/2315:30	RJJ551	RGJ087	23SVJ040W	Field Sample
TMW38102023	23J142-04	1	NA	10/23/2319:37	10/18/2315:30	RJJ552	RGJ087	23SVJ040W	Field Sample
MW22D102023	23J142-05	1	NA	10/23/2319:56	10/18/2315:30	RJJ553	RGJ087	23SVJ040W	Field Sample
TMW32102023	23J142-06	1	NA	10/23/2320:15	10/18/2315:30	RJJ554	RGJ087	23SVJ040W	Field Sample
TMW47102023	23J142-07	1	NA	10/23/2320:34	10/18/2315:30	RJJ555	RGJ087	23SVJ040W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ040WB	1	NA	10/23/2313:04	10/18/2315:30	RJJ531	RGJ100	23SVJ040W	Method Blank
LCS1W	CLJ040WL	1	NA	10/23/2314:00	10/18/2315:30	RJJ534	RGJ100	23SVJ040W	Lab Control Sample (LCS)
LCD1W	CLJ040WC	1	NA	10/23/2314:19	10/18/2315:30	RJJ535	RGJ100	23SVJ040W	LCS Duplicate
TMW14A102023	23J142-01	1	NA	10/23/2319:19	10/18/2315:30	RJJ551	RGJ100	23SVJ040W	Field Sample
TMW38102023	23J142-04	1	NA	10/23/2319:37	10/18/2315:30	RJJ552	RGJ100	23SVJ040W	Field Sample
MW22D102023	23J142-05	1	NA	10/23/2319:56	10/18/2315:30	RJJ553	RGJ100	23SVJ040W	Field Sample
TMW32102023	23J142-06	1	NA	10/23/2320:15	10/18/2315:30	RJJ554	RGJ100	23SVJ040W	Field Sample
TMW47102023	23J142-07	1	NA	10/23/2320:34	10/18/2315:30	RJJ555	RGJ100	23SVJ040W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : E4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVJ040WB	1	NA	10/23/2313:04	10/18/2315:30	RJJ531	RGJ079	23SVJ040W	Method Blank
LCS1W	CLJ040WL	1	NA	10/23/2314:00	10/18/2315:30	RJJ534	RGJ079	23SVJ040W	Lab Control Sample (LCS)
LCD1W	CLJ040WC	1	NA	10/23/2314:19	10/18/2315:30	RJJ535	RGJ079	23SVJ040W	LCS Duplicate
TMW14A102023	23J142-01	1	NA	10/23/2319:19	10/18/2315:30	RJJ551	RGJ079	23SVJ040W	Field Sample
TMW38102023	23J142-04	1	NA	10/23/2319:37	10/18/2315:30	RJJ552	RGJ079	23SVJ040W	Field Sample
MW22D102023	23J142-05	1	NA	10/23/2319:56	10/18/2315:30	RJJ553	RGJ079	23SVJ040W	Field Sample
TMW32102023	23J142-06	1	NA	10/23/2320:15	10/18/2315:30	RJJ554	RGJ079	23SVJ040W	Field Sample
TMW47102023	23J142-07	1	NA	10/23/2320:34	10/18/2315:30	RJJ555	RGJ079	23SVJ040W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 07:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW14A102023	Date Analyzed:	10/23/23 19:19
Lab Samp ID:	23J142-01	Dilution Factor:	1
Lab File ID:	RJJ551	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.6	11
1,2-Dichlorobenzene	ND	11	2.8	5.6
1,2-Diphenylhydrazine	ND	11	2.8	5.6
1,3-Dichlorobenzene	ND	11	2.8	5.6
1,4-Dichlorobenzene	ND	11	2.8	5.6
2,4,5-Trichlorophenol	ND	11	2.8	5.6
2,4,6-Trichlorophenol	ND	11	2.8	5.6
2,4-Dichlorophenol	ND	11	2.8	5.6
2,4-Dimethylphenol	ND	11	2.8	5.6
2,4-Dinitrophenol	ND	22	2.8	5.6
2,4-Dinitrotoluene	ND	11	2.8	5.6
2,6-Dinitrotoluene	ND	11	2.8	5.6
2-Chloronaphthalene	ND	11	2.8	5.6
2-Chlorophenol	ND	11	2.8	5.6
2-Methylnaphthalene	ND	11	2.8	5.6
2-Methylphenol	ND	11	2.8	5.6
2-Nitroaniline	ND	11	2.8	5.6
2-Nitrophenol	ND	11	2.8	5.6
3,3'-Dichlorobenzidine	ND	11	2.8	5.6
3/4-Methylphenol	ND	11	2.8	5.6
3-Nitroaniline	ND	11	2.8	5.6
4,6-Dinitro-2-methylphenol	ND	22	2.8	5.6
4-Bromophenyl phenyl ether	ND	11	2.8	5.6
4-Chloro-3-methylphenol	ND	11	2.8	5.6
4-Chloroaniline	ND	22	5.6	11
4-Chlorophenyl-phenyl ether	ND	11	2.8	5.6
4-Nitroaniline	ND	11	2.8	5.6
4-Nitrophenol	ND	22	2.8	5.6
Acenaphthene	ND	11	2.8	5.6
Acenaphthylene	ND	11	2.8	5.6
Anthracene	ND	11	2.8	5.6
Benzo(a)anthracene	ND	11	2.8	5.6
Benzo(a)pyrene	ND	11	2.8	5.6
Benzo(b)fluoranthene	ND	11	2.8	5.6
Benzo(g,h,i)perylene	ND	11	2.8	5.6
Benzo(k)fluoranthene	ND	11	2.8	5.6
Benzoic Acid	ND	110	22	45
Benzyl Alcohol	ND	11	2.8	5.6
bis(2-Chloroisopropyl) ether	ND	11	2.8	5.6
bis(2-Chloroethoxy)methane	ND	11	2.8	5.6
bis(2-Chloroethyl) ether	ND	11	2.8	5.6
bis(2-Ethylhexyl) phthalate	ND	22	5.6	11
Butylbenzylphthalate	ND	11	2.8	5.6
Carbazole	ND	11	2.8	5.6
Chrysene	ND	11	2.8	5.6
Dibenzo(a,h)anthracene	ND	11	2.8	5.6
Dibenzofuran	ND	11	2.8	5.6
Diethylphthalate	ND	11	2.8	5.6
Dimethylphthalate	ND	11	2.8	5.6
Di-n-butyl phthalate	ND	11	2.8	5.6
Di-n-octyl phthalate	ND	11	2.8	5.6
Fluoranthene	ND	11	2.8	5.6
Fluorene	ND	11	2.8	5.6
Hexachlorobenzene	ND	11	2.8	5.6
Hexachlorobutadiene	ND	11	2.8	5.6
Hexachloroethane	ND	11	2.8	5.6
Indeno(1,2,3-cd)pyrene	ND	11	2.8	5.6
Isophorone	ND	11	2.8	5.6
Naphthalene	ND	11	2.8	5.6
Nitrobenzene	ND	11	2.8	5.6
N-Nitrosodimethylamine	ND	11	2.8	5.6
n-Nitroso-di-n-propylamine	ND	11	2.8	5.6
n-Nitrosodiphenylamine	ND	11	2.8	5.6
Pentachlorophenol	ND	22	2.8	5.6
Phenanthrene	ND	11	2.8	5.6
Phenol	ND	11	2.8	5.6
Pyrene	ND	11	2.8	5.6
Hexachlorocyclopentadiene	ND	11	2.8	5.6
Benzidine	ND	45	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.8	5.6
2,6-Dichlorophenol	ND	11	2.8	5.6

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	62.7	67.2	93	43-140
2-Fluorobiphenyl	23.0	22.4	103	44-119
2-Fluorophenol	43.9	67.2	65	19-119
Nitrobenzene-d5	21.1	22.4	94	44-120
Phenol-d5	49.9	67.2	74	40-130
Terphenyl-d14	22.6	22.4	101	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 07:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW14A102023	Date Analyzed:	10/23/23 19:19
Lab Samp ID:	23J142-01	Dilution Factor:	1
Lab File ID:	RJJ551	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.8	5.6

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 07:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW14A102023	Date Analyzed:	10/23/23 19:19
Lab Samp ID:	23J142-01	Dilution Factor:	1
Lab File ID:	RJJ551	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.6	11
Benzaldehyde	ND	22	5.6	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume :	2ml
Prepared by	: JMuert	Analyzed by :	KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW38102023	Date Analyzed:	10/23/23 19:37
Lab Samp ID:	23J142-04	Dilution Factor:	1
Lab File ID:	RJJ552	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	42.7	71.4	60	43-140
2-Fluorobiphenyl	17.8	23.8	75	44-119
2-Fluorophenol	3.83	71.4	5*	19-119
Nitrobenzene-d5	17.0	23.8	72	44-120
Phenol-d5	31.2	71.4	44	40-130
Terphenyl-d14	29.3	23.8	123	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW38102023	Date Analyzed:	10/23/23 19:37
Lab Samp ID:	23J142-04	Dilution Factor:	1
Lab File ID:	RJJ552	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW38102023	Date Analyzed:	10/23/23 19:37
Lab Samp ID:	23J142-04	Dilution Factor:	1
Lab File ID:	RJJ552	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: MW22D102023	Date Analyzed:	10/23/23 19:56
Lab Samp ID:	23J142-05	Dilution Factor:	1
Lab File ID:	RJJ553	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.0	12
1,2-Dichlorobenzene	ND	12	3.0	6.0
1,2-Diphenylhydrazine	ND	12	3.0	6.0
1,3-Dichlorobenzene	ND	12	3.0	6.0
1,4-Dichlorobenzene	ND	12	3.0	6.0
2,4,5-Trichlorophenol	ND	12	3.0	6.0
2,4,6-Trichlorophenol	ND	12	3.0	6.0
2,4-Dichlorophenol	ND	12	3.0	6.0
2,4-Dimethylphenol	ND	12	3.0	6.0
2,4-Dinitrophenol	ND	24	3.0	6.0
2,4-Dinitrotoluene	ND	12	3.0	6.0
2,6-Dinitrotoluene	ND	12	3.0	6.0
2-Chloronaphthalene	ND	12	3.0	6.0
2-Chlorophenol	ND	12	3.0	6.0
2-Methylnaphthalene	ND	12	3.0	6.0
2-Methylphenol	ND	12	3.0	6.0
2-Nitroaniline	ND	12	3.0	6.0
2-Nitrophenol	ND	12	3.0	6.0
3,3'-Dichlorobenzidine	ND	12	3.0	6.0
3/4-Methylphenol	ND	12	3.0	6.0
3-Nitroaniline	ND	12	3.0	6.0
4,6-Dinitro-2-methylphenol	ND	24	3.0	6.0
4-Bromophenyl phenyl ether	ND	12	3.0	6.0
4-Chloro-3-methylphenol	ND	12	3.0	6.0
4-Chloroaniline	ND	24	6.0	12
4-Chlorophenyl-phenyl ether	ND	12	3.0	6.0
4-Nitroaniline	ND	12	3.0	6.0
4-Nitrophenol	ND	24	3.0	6.0
Acenaphthene	ND	12	3.0	6.0
Acenaphthylene	ND	12	3.0	6.0
Anthracene	ND	12	3.0	6.0
Benzo(a)anthracene	ND	12	3.0	6.0
Benzo(a)pyrene	ND	12	3.0	6.0
Benzo(b)fluoranthene	ND	12	3.0	6.0
Benzo(g,h,i)perylene	ND	12	3.0	6.0
Benzo(k)fluoranthene	ND	12	3.0	6.0
Benzoic Acid	ND	120	24	48
Benzyl Alcohol	ND	12	3.0	6.0
bis(2-Chloroisopropyl) ether	ND	12	3.0	6.0
bis(2-Chloroethoxy)methane	ND	12	3.0	6.0
bis(2-Chloroethyl) ether	ND	12	3.0	6.0
bis(2-Ethylhexyl) phthalate	ND	24	6.0	12
Butylbenzylphthalate	ND	12	3.0	6.0
Carbazole	ND	12	3.0	6.0
Chrysene	ND	12	3.0	6.0
Dibenzo(a,h)anthracene	ND	12	3.0	6.0
Dibenzofuran	ND	12	3.0	6.0
Diethylphthalate	ND	12	3.0	6.0
Dimethylphthalate	ND	12	3.0	6.0
Di-n-butyl phthalate	ND	12	3.0	6.0
Di-n-octyl phthalate	ND	12	3.0	6.0
Fluoranthene	ND	12	3.0	6.0
Fluorene	ND	12	3.0	6.0
Hexachlorobenzene	ND	12	3.0	6.0
Hexachlorobutadiene	ND	12	3.0	6.0
Hexachloroethane	ND	12	3.0	6.0
Indeno(1,2,3-cd)pyrene	ND	12	3.0	6.0
Isophorone	ND	12	3.0	6.0
Naphthalene	ND	12	3.0	6.0
Nitrobenzene	ND	12	3.0	6.0
N-Nitrosodimethylamine	ND	12	3.0	6.0
n-Nitroso-di-n-propylamine	ND	12	3.0	6.0
n-Nitrosodiphenylamine	ND	12	3.0	6.0
Pentachlorophenol	ND	24	3.0	6.0
Phenanthrene	ND	12	3.0	6.0
Phenol	ND	12	3.0	6.0
Pyrene	ND	12	3.0	6.0
Hexachlorocyclopentadiene	ND	12	3.0	6.0
Benzidine	ND	48	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.0	6.0
2,6-Dichlorophenol	ND	12	3.0	6.0

SURROGATE PARAMETERS	RESULT	SPK AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	62.4	71.4	87	43-140
2-Fluorobiphenyl	21.6	23.8	91	44-119
2-Fluorophenol	28.1	71.4	39	19-119
Nitrobenzene-d5	17.2	23.8	72	44-120
Phenol-d5	39.5	71.4	55	40-130
Terphenyl-d14	29.4	23.8	124	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: MW22D102023	Date Analyzed:	10/23/23 19:56
Lab Samp ID:	23J142-05	Dilution Factor:	1
Lab File ID:	RJJ553	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	12	3.0	6.0

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: MW22D102023	Date Analyzed:	10/23/23 19:56
Lab Samp ID:	23J142-05	Dilution Factor:	1
Lab File ID:	RJJ553	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.0	12
Benzaldehyde	ND	24	6.0	12

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW32102023	Date Analyzed:	10/23/23 20:15
Lab Samp ID:	23J142-06	Dilution Factor:	1
Lab File ID:	RJJ554	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	43
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	43	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	62.3	64.8	96	43-140
2-Fluorobiphenyl	19.7	21.6	91	44-119
2-Fluorophenol	37.7	64.8	58	19-119
Nitrobenzene-d5	20.7	21.6	96	44-120
Phenol-d5	46.6	64.8	72	40-130
Terphenyl-d14	27.8	21.6	129	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW32102023	Date Analyzed:	10/23/23 20:15
Lab Samp ID:	23J142-06	Dilution Factor:	1
Lab File ID:	RJJ554	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW32102023	Date Analyzed:	10/23/23 20:15
Lab Samp ID:	23J142-06	Dilution Factor:	1
Lab File ID:	RJJ554	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW47102023	Date Analyzed:	10/23/23 20:34
Lab Samp ID:	23J142-07	Dilution Factor:	1
Lab File ID:	RJJ555	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ087	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	22	5.4	11
1,2-Dichlorobenzene	ND	11	2.7	5.4
1,2-Diphenylhydrazine	ND	11	2.7	5.4
1,3-Dichlorobenzene	ND	11	2.7	5.4
1,4-Dichlorobenzene	ND	11	2.7	5.4
2,4,5-Trichlorophenol	ND	11	2.7	5.4
2,4,6-Trichlorophenol	ND	11	2.7	5.4
2,4-Dichlorophenol	ND	11	2.7	5.4
2,4-Dimethylphenol	ND	11	2.7	5.4
2,4-Dinitrophenol	ND	22	2.7	5.4
2,4-Dinitrotoluene	ND	11	2.7	5.4
2,6-Dinitrotoluene	ND	11	2.7	5.4
2-Chloronaphthalene	ND	11	2.7	5.4
2-Chlorophenol	ND	11	2.7	5.4
2-Methylnaphthalene	ND	11	2.7	5.4
2-Methylphenol	ND	11	2.7	5.4
2-Nitroaniline	ND	11	2.7	5.4
2-Nitrophenol	ND	11	2.7	5.4
3,3'-Dichlorobenzidine	ND	11	2.7	5.4
3/4-Methylphenol	ND	11	2.7	5.4
3-Nitroaniline	ND	11	2.7	5.4
4,6-Dinitro-2-methylphenol	ND	22	2.7	5.4
4-Bromophenyl phenyl ether	ND	11	2.7	5.4
4-Chloro-3-methylphenol	ND	11	2.7	5.4
4-Chloroaniline	ND	22	5.4	11
4-Chlorophenyl-phenyl ether	ND	11	2.7	5.4
4-Nitroaniline	ND	11	2.7	5.4
4-Nitrophenol	ND	22	2.7	5.4
Acenaphthene	ND	11	2.7	5.4
Acenaphthylene	ND	11	2.7	5.4
Anthracene	ND	11	2.7	5.4
Benzo(a)anthracene	ND	11	2.7	5.4
Benzo(a)pyrene	ND	11	2.7	5.4
Benzo(b)fluoranthene	ND	11	2.7	5.4
Benzo(g,h,i)perylene	ND	11	2.7	5.4
Benzo(k)fluoranthene	ND	11	2.7	5.4
Benzoic Acid	ND	110	22	43
Benzyl Alcohol	ND	11	2.7	5.4
bis(2-Chloroisopropyl) ether	ND	11	2.7	5.4
bis(2-Chloroethoxy)methane	ND	11	2.7	5.4
bis(2-Chloroethyl) ether	ND	11	2.7	5.4
bis(2-Ethylhexyl) phthalate	ND	22	5.4	11
Butylbenzylphthalate	ND	11	2.7	5.4
Carbazole	ND	11	2.7	5.4
Chrysene	ND	11	2.7	5.4
Dibenzo(a,h)anthracene	ND	11	2.7	5.4
Dibenzofuran	ND	11	2.7	5.4
Diethylphthalate	ND	11	2.7	5.4
Dimethylphthalate	ND	11	2.7	5.4
Di-n-butyl phthalate	ND	11	2.7	5.4
Di-n-octyl phthalate	ND	11	2.7	5.4
Fluoranthene	ND	11	2.7	5.4
Fluorene	ND	11	2.7	5.4
Hexachlorobenzene	ND	11	2.7	5.4
Hexachlorobutadiene	ND	11	2.7	5.4
Hexachloroethane	ND	11	2.7	5.4
Indeno(1,2,3-cd)pyrene	ND	11	2.7	5.4
Isophorone	ND	11	2.7	5.4
Naphthalene	ND	11	2.7	5.4
Nitrobenzene	ND	11	2.7	5.4
N-Nitrosodimethylamine	ND	11	2.7	5.4
n-Nitroso-di-n-propylamine	ND	11	2.7	5.4
n-Nitrosodiphenylamine	ND	11	2.7	5.4
Pentachlorophenol	ND	22	2.7	5.4
Phenanthrene	ND	11	2.7	5.4
Phenol	ND	11	2.7	5.4
Pyrene	ND	11	2.7	5.4
Hexachlorocyclopentadiene	ND	11	2.7	5.4
Benzidine	ND	43	11	22
2,3,4,6-Tetrachlorophenol	ND	11	2.7	5.4
2,6-Dichlorophenol	ND	11	2.7	5.4

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	60.0	64.8	93	43-140
2-Fluorobiphenyl	20.1	21.6	93	44-119
2-Fluorophenol	34.7	64.8	53	19-119
Nitrobenzene-d5	18.4	21.6	85	44-120
Phenol-d5	42.4	64.8	65	40-130
Terphenyl-d14	29.1	21.6	135*	50-134

Notes:
(1): 4-Methylphenol cannot be separated from 3-Methylphenol
(2): n-Nitrosodiphenylamine cannot be separated from Diphenylamine
(3): 1,2-Diphenylhydrazine is analyzed as Azobenzene due to decomposition in injector
(4) Benzidine ICAL Ref: RGJ079 DCC Ref: RJJ529
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW47102023	Date Analyzed:	10/23/23 20:34
Lab Samp ID:	23J142-07	Dilution Factor:	1
Lab File ID:	RJJ555	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ100	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	11	2.7	5.4

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 2ml
Prepared by : JMuert Analyzed by : KV

METHOD 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/18/23 15:30
Sample ID	: TMW47102023	Date Analyzed:	10/23/23 20:34
Lab Samp ID:	23J142-07	Dilution Factor:	1
Lab File ID:	RJJ555	Matrix:	WATER
Ext Btch ID:	23SVJ040W	% Moisture:	NA
Calib. Ref.:	RGJ079	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	22	5.4	11
Benzaldehyde	ND	22	5.4	11

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 930ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KV

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of four(4) water samples were received on 10/13/23 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method SW5030B/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39J10B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VG39J10L/VG39J10C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. TPH-Gasoline was within MS QC limits in J142-02M/J142-02S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Discrete peaks were included in sample results.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG39J10B	1	NA	10/14/2306:00	10/14/2306:00	EJ13034A	EJ13033A	23VG39J10	Method Blank
LCS1W	VG39J10L	1	NA	10/14/2306:38	10/14/2306:38	EJ13035A	EJ13033A	23VG39J10	Lab Control Sample (LCS)
LCD1W	VG39J10C	1	NA	10/14/2307:16	10/14/2307:16	EJ13036A	EJ13033A	23VG39J10	LCS Duplicate
TMW21102023	J142-02	1	NA	10/14/2316:48	10/14/2316:48	EJ13051A	EJ13046A	23VG39J10	Field Sample
TMW21102023MS	J142-02M	1	NA	10/14/2317:26	10/14/2317:26	EJ13052A	EJ13046A	23VG39J10	Matrix Spike Sample (MS)
TMW21102023MSD	J142-02S	1	NA	10/14/2318:04	10/14/2318:04	EJ13053A	EJ13046A	23VG39J10	MS Duplicate (MSD)
FDUP10-102023	J142-03	1	NA	10/14/2318:42	10/14/2318:42	EJ13054A	EJ13046A	23VG39J10	Field Sample
MW22D102023	J142-05	1	NA	10/14/2319:20	10/14/2319:20	EJ13055A	EJ13046A	23VG39J10	Field Sample
QC12102023TB	J142-08	1	NA	10/14/2319:58	10/14/2319:58	EJ13056A	EJ13046A	23VG39J10	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:10
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/14/23 16:48
Sample ID	: TMW21102023	Date Analyzed:	10/14/23 16:48
Lab Samp ID:	J142-02	Dilution Factor:	1
Lab File ID:	EJ13051A	Matrix:	WATER
Ext Btch ID:	23VG39J10	% Moisture:	NA
Calib. Ref.:	EJ13046A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	33.5	40.0	84	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume :	5ml
Prepared by	: SCerva	Analyzed by :	SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:20
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/14/23 18:42
Sample ID	: FDUP10-102023	Date Analyzed:	10/14/23 18:42
Lab Samp ID:	J142-03	Dilution Factor:	1
Lab File ID:	EJ13054A	Matrix:	WATER
Ext Btch ID:	23VG39J10	% Moisture:	NA
Calib. Ref.:	EJ13046A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	32.7	40.0	82	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/14/23 19:20
Sample ID	: MW22D102023	Date Analyzed:	10/14/23 19:20
Lab Samp ID:	J142-05	Dilution Factor:	1
Lab File ID:	EJ13055A	Matrix:	WATER
Ext Btch ID:	23VG39J10	% Moisture:	NA
Calib. Ref.:	EJ13046A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	ND	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	32.6	40.0	81	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

METHOD SW5030B/8015D
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:00
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/14/23 19:58
Sample ID	: QC12102023TB	Date Analyzed:	10/14/23 19:58
Lab Samp ID:	J142-08	Dilution Factor:	1
Lab File ID:	EJ13056A	Matrix:	WATER
Ext Btch ID:	23VG39J10	% Moisture:	NA
Calib. Ref.:	EJ13046A	Instrument ID:	39

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
TPH-Gasoline	16J	100	10	20

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	32.2	40.0	80	69-133

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of three(3) water samples were received on 10/13/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method SW3520C/8015D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ020WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSJ020WL/DSJ020WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ020WB	1	NA	10/18/2314:10	10/17/2311:30	LJ18005A	LJ18003A	23DSJ020W	Method Blank
LCS1W	DSJ020WL	1	NA	10/18/2314:29	10/17/2311:30	LJ18006A	LJ18003A	23DSJ020W	Lab Control Sample (LCS)
LCD1W	DSJ020WC	1	NA	10/18/2314:48	10/17/2311:30	LJ18007A	LJ18003A	23DSJ020W	LCS Duplicate
TMW21102023	J142-02	1	NA	10/18/2320:25	10/17/2311:30	LJ18025A	LJ18018A	23DSJ020W	Field Sample
FDUP10-102023	J142-03	1	NA	10/18/2320:43	10/17/2311:30	LJ18026A	LJ18018A	23DSJ020W	Field Sample
MW22D102023	J142-05	1	NA	10/18/2321:02	10/17/2311:30	LJ18027A	LJ18018A	23DSJ020W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:10
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/17/23 11:30
Sample ID	: TMW21102023	Date Analyzed:	10/18/23 20:25
Lab Samp ID:	23J142-02	Dilution Factor:	1
Lab File ID:	LJ18025A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.52	0.052	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.768	1.03	75	60-130
Hexacosane	0.248	0.257	96	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:20
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/17/23 11:30
Sample ID	: FDUP10-102023	Date Analyzed:	10/18/23 20:43
Lab Samp ID:	23J142-03	Dilution Factor:	1
Lab File ID:	LJ18026A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.51	0.051	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.760	1.02	74	60-130
Hexacosane	0.238	0.255	93	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 980ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/17/23 11:30
Sample ID	: MW22D102023	Date Analyzed:	10/18/23 21:02
Lab Samp ID:	23J142-05	Dilution Factor:	1
Lab File ID:	LJ18027A	Matrix:	WATER
Ext Btch ID:	23DSJ020W	% Moisture:	NA
Calib. Ref.:	LJ18018A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.788	1.09	72	60-130
Hexacosane	0.239	0.273	88	60-140

Notes:
Parameter H-C Range
Diesel Range C10-C28

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW3520C/8081B
PESTICIDES

A total of four(4) water samples were received on 10/13/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ027WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ027WL/CPJ027WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW3520C/8081B
PESTICIDES

A total of four(4) water samples were received on 10/13/23 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried out at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. CPJ027WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. CPJ027WL/CPJ027WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as specified in project SAP/DOD QSM 5.3.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : E8

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPJ027WB	1	NA	11/02/2315:34	10/19/2314:00	MK02006	MK02003	23CPJ027W	Method Blank
LCS1W	CPJ027WL	1	NA	11/02/2315:57	10/19/2314:00	MK02007	MK02003	23CPJ027W	Lab Control Sample (LCS)
LCD1W	CPJ027WC	1	NA	11/02/2316:20	10/19/2314:00	MK02008	MK02003	23CPJ027W	LCS Duplicate
TMW38102023	J142-04	1	NA	11/02/2317:29	10/19/2314:00	MK02011	MK02003	23CPJ027W	Field Sample
MW22D102023	J142-05	1	NA	11/02/2317:53	10/19/2314:00	MK02012	MK02003	23CPJ027W	Field Sample
TMW32102023	J142-06	1	NA	11/02/2318:16	10/19/2314:00	MK02013	MK02003	23CPJ027W	Field Sample
TMW47102023	J142-07	1	NA	11/02/2318:39	10/19/2314:00	MK02014	MK02003	23CPJ027W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/19/23 14:00
Sample ID	: TMW38102023	Date Analyzed:	11/02/23 17:29
Lab Samp ID:	J142-04	Dilution Factor:	1
Lab File ID:	MK02011	Matrix:	WATER
Ext Btch ID:	23CPJ027W	% Moisture:	NA
Calib. Ref.:	MK02003	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.023	0.046
gamma-BHC (Lindane)	(ND) | ND	0.12	0.023	0.046
beta-BHC	(ND) | ND	0.12	0.023	0.046
Heptachlor	(ND) | ND	0.12	0.023	0.046
delta-BHC	(ND) | ND	0.12	0.023	0.046
Aldrin	(ND) | ND	0.12	0.023	0.046
Heptachlor Epoxide	(ND) | ND	0.12	0.023	0.046
gamma-Chlordane	(ND) | ND	0.12	0.023	0.046
alpha-Chlordane	(ND) | ND	0.12	0.023	0.046
Endosulfan I	(ND) | ND	0.12	0.023	0.046
4,4'-DDE	(ND) | ND	0.12	0.023	0.046
Dieldrin	(ND) | ND	0.12	0.023	0.046
Endrin	(ND) | ND	0.12	0.023	0.046
4,4'-DDD	(ND) | ND	0.12	0.023	0.046
Endosulfan II	(ND) | ND	0.12	0.023	0.046
4,4'-DDT	(ND) | ND	0.12	0.023	0.046
Endrin Aldehyde	(ND) | ND	0.12	0.023	0.046
Endosulfan Sulfate	(ND) | ND	0.12	0.023	0.046
Methoxychlor	(ND) | ND	1.1	0.12	0.23
Toxaphene	(ND) | ND	2.3	0.29	0.58
Endrin Ketone	(ND) | ND	0.12	0.023	0.046

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.221) | 0.203	0.460	48	44-124
Decachlorobiphenyl	0.323 | (0.325)	0.460	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	MK02004		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/19/23 14:00
Sample ID	: MW22D102023	Date Analyzed:	11/02/23 17:53
Lab Samp ID:	J142-05	Dilution Factor:	1
Lab File ID:	MK02012	Matrix:	WATER
Ext Btch ID:	23CPJ027W	% Moisture:	NA
Calib. Ref.:	MK02003	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.021	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.021	0.041
beta-BHC	(ND) | ND	0.10	0.021	0.041
Heptachlor	(ND) | ND	0.10	0.021	0.041
delta-BHC	(ND) | ND	0.10	0.021	0.041
Aldrin	(ND) | ND	0.10	0.021	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.021	0.041
gamma-Chlordane	(ND) | ND	0.10	0.021	0.041
alpha-Chlordane	(ND) | ND	0.10	0.021	0.041
Endosulfan I	(ND) | ND	0.10	0.021	0.041
4,4'-DDE	(ND) | ND	0.10	0.021	0.041
Dieldrin	(ND) | ND	0.10	0.021	0.041
Endrin	(ND) | ND	0.10	0.021	0.041
4,4'-DDD	(ND) | ND	0.10	0.021	0.041
Endosulfan II	(ND) | ND	0.10	0.021	0.041
4,4'-DDT	(ND) | ND	0.10	0.021	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.021	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.021	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.21
Toxaphene	(ND) | ND	2.1	0.26	0.52
Endrin Ketone	(ND) | ND	0.10	0.021	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.235 | (0.243)	0.412	59	44-124
Decachlorobiphenyl	0.294 | (0.310)	0.412	75	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 970ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	MK02004		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/19/23 14:00
Sample ID	: TMW32102023	Date Analyzed:	11/02/23 18:16
Lab Samp ID:	J142-06	Dilution Factor:	1
Lab File ID:	MK02013	Matrix:	WATER
Ext Btch ID:	23CPJ027W	% Moisture:	NA
Calib. Ref.:	MK02003	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.041
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.041
beta-BHC	(ND) | ND	0.10	0.020	0.041
Heptachlor	(ND) | ND	0.10	0.020	0.041
delta-BHC	(ND) | ND	0.10	0.020	0.041
Aldrin	(ND) | ND	0.10	0.020	0.041
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.041
gamma-Chlordane	(ND) | ND	0.10	0.020	0.041
alpha-Chlordane	(ND) | ND	0.10	0.020	0.041
Endosulfan I	(ND) | ND	0.10	0.020	0.041
4,4'-DDE	(ND) | ND	0.10	0.020	0.041
Dieldrin	(ND) | ND	0.10	0.020	0.041
Endrin	(ND) | ND	0.10	0.020	0.041
4,4'-DDD	(ND) | ND	0.10	0.020	0.041
Endosulfan II	(ND) | ND	0.10	0.020	0.041
4,4'-DDT	(ND) | ND	0.10	0.020	0.041
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.041
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.041
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.51
Endrin Ketone	(ND) | ND	0.10	0.020	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.240 | (0.253)	0.408	62	44-124
Decachlorobiphenyl	0.316 | (0.321)	0.408	79	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 980ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: MK02004

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/19/23 14:00
Sample ID	: TMW47102023	Date Analyzed:	11/02/23 18:39
Lab Samp ID:	J142-07	Dilution Factor:	1
Lab File ID:	MK02014	Matrix:	WATER
Ext Btch ID:	23CPJ027W	% Moisture:	NA
Calib. Ref.:	MK02003	Instrument ID:	E8

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.10	0.020	0.040
gamma-BHC (Lindane)	(ND) | ND	0.10	0.020	0.040
beta-BHC	(ND) | ND	0.10	0.020	0.040
Heptachlor	(ND) | ND	0.10	0.020	0.040
delta-BHC	(ND) | ND	0.10	0.020	0.040
Aldrin	(ND) | ND	0.10	0.020	0.040
Heptachlor Epoxide	(ND) | ND	0.10	0.020	0.040
gamma-Chlordane	(ND) | ND	0.10	0.020	0.040
alpha-Chlordane	(ND) | ND	0.10	0.020	0.040
Endosulfan I	(ND) | ND	0.10	0.020	0.040
4,4'-DDE	(ND) | ND	0.10	0.020	0.040
Dieldrin	(ND) | ND	0.10	0.020	0.040
Endrin	(ND) | ND	0.10	0.020	0.040
4,4'-DDD	(ND) | ND	0.10	0.020	0.040
Endosulfan II	(ND) | ND	0.10	0.020	0.040
4,4'-DDT	(ND) | ND	0.10	0.020	0.040
Endrin Aldehyde	(ND) | ND	0.10	0.020	0.040
Endosulfan Sulfate	(ND) | ND	0.10	0.020	0.040
Methoxychlor	(ND) | ND	1.0	0.10	0.20
Toxaphene	(ND) | ND	2.0	0.25	0.50
Endrin Ketone	(ND) | ND	0.10	0.020	0.040

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.288 | (0.365)	0.400	91	44-124
Decachlorobiphenyl	(0.283) | 0.282	0.400	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1000ml	Final Volume	: 10ml
Prepared by	: RGalan	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	MK02004		

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW8330B
EXPLOSIVES

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ017WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ017WL/EXJ017WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW8330B
EXPLOSIVES

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Explosives in accordance with Method SW8330B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ017WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ017WL/EXJ017WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ017WB	1	NA	10/17/2309:41	10/16/2314:45	XJ16020A	XJ16014A	EXJ017W	Method Blank
LCS1W	EXJ017WL	1	NA	10/17/2310:37	10/16/2314:45	XJ16021A	XJ16014A	EXJ017W	Lab Control Sample (LCS)
LCD1W	EXJ017WC	1	NA	10/17/2311:25	10/16/2314:45	XJ16022A	XJ16014A	EXJ017W	LCS Duplicate
TMW14A102023	J142-01	1	NA	10/17/2314:07	10/16/2314:45	XJ16025A	XJ16014A	EXJ017W	Field Sample
TMW21102023	J142-02	1	NA	10/17/2316:40	10/16/2314:45	XJ16028A	XJ16026A	EXJ017W	Field Sample
FDUP10-102023	J142-03	1	NA	10/17/2317:36	10/16/2314:45	XJ16029A	XJ16026A	EXJ017W	Field Sample
TMW38102023	J142-04	1	NA	10/17/2318:25	10/16/2314:45	XJ16030A	XJ16026A	EXJ017W	Field Sample
MW22D102023	J142-05	1	NA	10/17/2319:21	10/16/2314:45	XJ16031A	XJ16026A	EXJ017W	Field Sample
TMW32102023	J142-06	1	NA	10/17/2320:09	10/16/2314:45	XJ16032A	XJ16026A	EXJ017W	Field Sample
TMW47102023	J142-07	1	NA	10/17/2321:06	10/16/2314:45	XJ16033A	XJ16026A	EXJ017W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : T081

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ017WB	1	NA	10/17/2309:41	10/16/2314:45	XJ16020A	XJ16015A	EXJ017W	Method Blank
LCS1W	EXJ017WL	1	NA	10/17/2312:22	10/16/2314:45	XJ16023A	XJ16015A	EXJ017W	Lab Control Sample (LCS)
LCD1W	EXJ017WC	1	NA	10/17/2313:10	10/16/2314:45	XJ16024A	XJ16015A	EXJ017W	LCS Duplicate
TMW14A102023	J142-01	1	NA	10/17/2314:07	10/16/2314:45	XJ16025A	XJ16015A	EXJ017W	Field Sample
TMW21102023	J142-02	1	NA	10/17/2316:40	10/16/2314:45	XJ16028A	XJ16027A	EXJ017W	Field Sample
FDUP10-102023	J142-03	1	NA	10/17/2317:36	10/16/2314:45	XJ16029A	XJ16027A	EXJ017W	Field Sample
TMW38102023	J142-04	1	NA	10/17/2318:25	10/16/2314:45	XJ16030A	XJ16027A	EXJ017W	Field Sample
MW22D102023	J142-05	1	NA	10/17/2319:21	10/16/2314:45	XJ16031A	XJ16027A	EXJ017W	Field Sample
TMW32102023	J142-06	1	NA	10/17/2320:09	10/16/2314:45	XJ16032A	XJ16027A	EXJ017W	Field Sample
TMW47102023	J142-07	1	NA	10/17/2321:06	10/16/2314:45	XJ16033A	XJ16027A	EXJ017W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: TMW14A102023	Date Analyzed: 10/17/23 14:07
Lab Samp ID: J142-01	Dilution Factor: 1
Lab File ID: XJ16025A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16014A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.61	4.000	90.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: TMW14A102023	Date Analyzed: 10/17/23 14:07
Lab Samp ID: J142-01	Dilution Factor: 1
Lab File ID: XJ16025A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16015A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.61	4.000	90.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: TMW21102023	Date Analyzed: 10/17/23 16:40
Lab Samp ID: J142-02	Dilution Factor: 1
Lab File ID: XJ16028A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16026A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.77	4.000	94.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: TMW21102023	Date Analyzed: 10/17/23 16:40
Lab Samp ID: J142-02	Dilution Factor: 1
Lab File ID: XJ16028A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16027A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.77	4.000	94.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: FDUP10-102023	Date Analyzed: 10/17/23 17:36
Lab Samp ID: J142-03	Dilution Factor: 1
Lab File ID: XJ16029A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16026A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.69	4.000	92.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: FDUP10-102023	Date Analyzed: 10/17/23 17:36
Lab Samp ID: J142-03	Dilution Factor: 1
Lab File ID: XJ16029A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16027A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.69	4.000	92.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: TMW38102023	Date Analyzed: 10/17/23 18:25
Lab Samp ID: J142-04	Dilution Factor: 1
Lab File ID: XJ16030A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16026A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	0.52J	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.62	4.000	90.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/16/23 14:45
Sample ID:	TMW38102023	Date Analyzed:	10/17/23 18:25
Lab Samp ID:	J142-04	Dilution Factor:	1
Lab File ID:	XJ16030A	Matrix :	WATER
Ext Btch ID:	EXJ017W	% Moisture :	NA
Calib. Ref.:	XJ16027A	Instrument ID :	T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.62	4.000	90.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: MW22D102023	Date Analyzed: 10/17/23 19:21
Lab Samp ID: J142-05	Dilution Factor: 1
Lab File ID: XJ16031A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16026A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.94	4.000	98.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: MW22D102023	Date Analyzed: 10/17/23 19:21
Lab Samp ID: J142-05	Dilution Factor: 1
Lab File ID: XJ16031A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16027A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.94	4.000	98.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: TMW32102023	Date Analyzed: 10/17/23 20:09
Lab Samp ID: J142-06	Dilution Factor: 1
Lab File ID: XJ16032A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16026A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	ND	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.68	4.000	92.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client	: ECO & ASSOCIATES, INC.	Date Collected	: 10/12/23
Project	: USACE WINGATE	Date Received	: 10/13/23
Batch No.	: 23J142	Date Extracted	: 10/16/23 14:45
Sample ID	: TMW32102023	Date Analyzed	: 10/17/23 20:09
Lab Samp ID	: J142-06	Dilution Factor	: 1
Lab File ID	: XJ16032A	Matrix	: WATER
Ext Btch ID	: EXJ017W	% Moisture	: NA
Calib. Ref.	: XJ16027A	Instrument ID	: T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.68	4.000	92.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: TMW47102023	Date Analyzed: 10/17/23 21:06
Lab Samp ID: J142-07	Dilution Factor: 1
Lab File ID: XJ16033A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16026A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	1.0	0.10	0.20
RDX	ND	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	ND	1.0	0.10	0.20
1,3-DINITROBENZENE	ND	1.0	0.10	0.20
TETRYL	ND	1.0	0.10	0.20
NITROBENZENE	0.93J	1.0	0.10	0.20
2,4,6-TRINITROTOLUENE	ND	1.0	0.10	0.20
4-AMINO-2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	ND	1.0	0.10	0.20
2-NITROTOLUENE	ND	1.0	0.10	0.20
3-NITROTOLUENE	ND	1.0	0.10	0.20
4-NITROTOLUENE	ND	1.0	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.92	4.000	97.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 14:45
Sample ID: TMW47102023	Date Analyzed: 10/17/23 21:06
Lab Samp ID: J142-07	Dilution Factor: 1
Lab File ID: XJ16033A	Matrix : WATER
Ext Btch ID: EXJ017W	% Moisture : NA
Calib. Ref.: XJ16027A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	ND	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.92	4.000	97.9	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW8332
NITROGLYCERIN AND PETN

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Nitroglycerin and PETN in accordance with Method SW8332 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. EXJ016WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. EXJ016WL/EXJ016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
All positive results above LOQ were confirmed by Biphenyl column. Confirmation was presumptive because it was based on retention time window. All project requirements were met otherwise anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : E6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	EXJ016WB	1	NA	10/17/2311:19	10/16/2312:00	NJ17019A	NJ17013A	EXJ016W	Method Blank
LCS1W	EXJ016WL	1	NA	10/17/2311:28	10/16/2312:00	NJ17020A	NJ17013A	EXJ016W	Lab Control Sample (LCS)
LCD1W	EXJ016WC	1	NA	10/17/2311:37	10/16/2312:00	NJ17021A	NJ17013A	EXJ016W	LCS Duplicate
TMW14A102023	J142-01	1	NA	10/17/2311:46	10/16/2312:00	NJ17022A	NJ17013A	EXJ016W	Field Sample
TMW21102023	J142-02	1	NA	10/17/2311:55	10/16/2312:00	NJ17023A	NJ17013A	EXJ016W	Field Sample
FDUP10-102023	J142-03	1	NA	10/17/2312:13	10/16/2312:00	NJ17025A	NJ17024A	EXJ016W	Field Sample
TMW38102023	J142-04	1	NA	10/17/2312:22	10/16/2312:00	NJ17026A	NJ17024A	EXJ016W	Field Sample
MW22D102023	J142-05	1	NA	10/17/2312:31	10/16/2312:00	NJ17027A	NJ17024A	EXJ016W	Field Sample
TMW32102023	J142-06	1	NA	10/17/2312:41	10/16/2312:00	NJ17028A	NJ17024A	EXJ016W	Field Sample
TMW47102023	J142-07	1	NA	10/17/2312:50	10/16/2312:00	NJ17029A	NJ17024A	EXJ016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 12:00
Sample ID: TMW14A102023	Date Analyzed: 10/17/23 11:46
Lab Samp ID: J142-01	Dilution Factor: 1
Lab File ID: NJ17022A	Matrix : WATER
Ext Btch ID: EXJ016W	% Moisture : NA
Calib. Ref.: NJ17013A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	534	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23
Project	: USACE WINGATE	Date Received:	10/13/23
Batch No.	: 23J142	Date Extracted:	10/16/23 12:00
Sample ID:	TMW21102023	Date Analyzed:	10/17/23 11:55
Lab Samp ID:	J142-02	Dilution Factor:	1
Lab File ID:	NJ17023A	Matrix :	WATER
Ext Btch ID:	EXJ016W	% Moisture :	NA
Calib. Ref.:	NJ17013A	Instrument ID :	E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	533	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 12:00
Sample ID: FDUP10-102023	Date Analyzed: 10/17/23 12:13
Lab Samp ID: J142-03	Dilution Factor: 1
Lab File ID: NJ17025A	Matrix : WATER
Ext Btch ID: EXJ016W	% Moisture : NA
Calib. Ref.: NJ17024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	536	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 12:00
Sample ID: TMW38102023	Date Analyzed: 10/17/23 12:22
Lab Samp ID: J142-04	Dilution Factor: 1
Lab File ID: NJ17026A	Matrix : WATER
Ext Btch ID: EXJ016W	% Moisture : NA
Calib. Ref.: NJ17024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	551	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 12:00
Sample ID: MW22D102023	Date Analyzed: 10/17/23 12:31
Lab Samp ID: J142-05	Dilution Factor: 1
Lab File ID: NJ17027A	Matrix : WATER
Ext Btch ID: EXJ016W	% Moisture : NA
Calib. Ref.: NJ17024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	530	500.0	106	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 12:00
Sample ID: TMW32102023	Date Analyzed: 10/17/23 12:41
Lab Samp ID: J142-06	Dilution Factor: 1
Lab File ID: NJ17028A	Matrix : WATER
Ext Btch ID: EXJ016W	% Moisture : NA
Calib. Ref.: NJ17024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	548	500.0	110	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23
Project : USACE WINGATE	Date Received: 10/13/23
Batch No. : 23J142	Date Extracted: 10/16/23 12:00
Sample ID: TMW47102023	Date Analyzed: 10/17/23 12:50
Lab Samp ID: J142-07	Dilution Factor: 1
Lab File ID: NJ17029A	Matrix : WATER
Ext Btch ID: EXJ016W	% Moisture : NA
Calib. Ref.: NJ17024A	Instrument ID : E6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
NITROGLYCERIN	ND	120	31	62
PETN	ND	120	31	62

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	535	500.0	107	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW6020A
METALS BY ICP-MS

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ035WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ035WL/IMJ035WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC. SDG NO. : 23J142
Project : USACE WINGATE Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	IMJ035WL	1	NA	10/31/2313:56	10/26/2309:53	H6J22020	H6J22017	IMJ035W	Lab Control Sample (LCS)
LCD1W	IMJ035WC	1	NA	10/31/2313:59	10/26/2309:53	H6J22021	H6J22017	IMJ035W	LCS Duplicate
MBLK1W	IMJ035WB	1	NA	10/31/2315:32	10/26/2309:53	H6J22051	H6J22049	IMJ035W	Method Blank
TMW14A102023	J142-01G	5	NA	10/31/2318:04	10/26/2309:53	H6J22098	H6J22096	IMJ035W	Diluted Sample
TMW21102023	J142-02G	5	NA	10/31/2318:07	10/26/2309:53	H6J22099	H6J22096	IMJ035W	Diluted Sample
FDUP10-102023	J142-03G	5	NA	10/31/2318:10	10/26/2309:53	H6J22100	H6J22096	IMJ035W	Diluted Sample
TMW38102023	J142-04G	5	NA	10/31/2318:12	10/26/2309:53	H6J22101	H6J22096	IMJ035W	Diluted Sample
MW22D102023	J142-05I	10	NA	10/31/2318:15	10/26/2309:53	H6J22102	H6J22096	IMJ035W	Diluted Sample
TMW32102023	J142-06G	5	NA	10/31/2318:18	10/26/2309:53	H6J22103	H6J22096	IMJ035W	Diluted Sample
TMW47102023	J142-07G	5	NA	10/31/2318:21	10/26/2309:53	H6J22104	H6J22096	IMJ035W	Diluted Sample
TMW14A102023	J142-01T	50	NA	10/31/2318:30	10/26/2309:53	H6J22107	H6J22105	IMJ035W	Diluted Sample
TMW21102023	J142-02T	50	NA	10/31/2318:33	10/26/2309:53	H6J22108	H6J22105	IMJ035W	Diluted Sample
FDUP10-102023	J142-03T	50	NA	10/31/2318:36	10/26/2309:53	H6J22109	H6J22105	IMJ035W	Diluted Sample
TMW38102023	J142-04T	50	NA	10/31/2318:39	10/26/2309:53	H6J22110	H6J22105	IMJ035W	Diluted Sample
MW22D102023	J142-05T	50	NA	10/31/2318:42	10/26/2309:53	H6J22111	H6J22105	IMJ035W	Diluted Sample
TMW32102023	J142-06T	50	NA	10/31/2318:45	10/26/2309:53	H6J22112	H6J22105	IMJ035W	Diluted Sample
TMW47102023	J142-07T	50	NA	10/31/2318:47	10/26/2309:53	H6J22113	H6J22105	IMJ035W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW14A102023
Lab Samp ID: J142-01G
Lab File ID: H6J22098
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22096

Date Collected: 10/12/23 07:30
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 18:04
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1200	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.64J	5.0	0.62	1.2
Barium	76	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4900	1000	250	500
Chromium	14	5.0	0.50	1.0
Cobalt	0.73J	3.7	0.50	1.0
Copper	180	10	2.5	5.0
Iron	720J	1000	120	250
Lead	1.1J	5.0	0.25	0.50
Magnesium	1100	500	100	250
Manganese	58	5.0	1.2	2.5
Nickel	9.6	5.0	1.2	2.5
Potassium	580J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	1.2J	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW14A102023
Lab Samp ID: J142-01T
Lab File ID: H6J22107
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22105

Date Analyzed: 10/31/23 18:30
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	430000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 07:30
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW14A102023	Date Analyzed:	10/31/23 18:04
Lab Samp ID:	J142-01G	Dilution Factor:	5
Lab File ID:	H6J22098	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1200	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.64J	5.0	0.62	1.2
Barium	76	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	4900	1000	250	500
Chromium	14	5.0	0.50	1.0
Cobalt	0.73J	3.7	0.50	1.0
Copper	180	10	2.5	5.0
Iron	720J	1000	120	250
Lead	1.1J	5.0	0.25	0.50
Magnesium	1100	500	100	250
Manganese	58	5.0	1.2	2.5
Nickel	9.6	5.0	1.2	2.5
Potassium	580J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	1.2J	5.0	0.50	1.0
Sodium	430000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 07:30
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW14A102023	Date Analyzed:	10/31/23 18:30
Lab Samp ID:	J142-01T	Dilution Factor:	50
Lab File ID:	H6J22107	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22105	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1600J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	76	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	5000J	10000	2500	5000
Chromium	88	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	170	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2700J	5000	1000	2500
Manganese	56	50	12	25
Nickel	25J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	430000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW21102023
Lab Samp ID: J142-02G
Lab File ID: H6J22099
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22096

Date Collected: 10/12/23 08:10
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 18:07
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.96J	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	7.6	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6800	500	100	250
Manganese	40	5.0	1.2	2.5
Nickel	4.5J	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	5.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW21102023
Lab Samp ID: J142-02T
Lab File ID: H6J22108
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22105

Date Analyzed: 10/31/23 18:33
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	630000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:10
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW21102023	Date Analyzed:	10/31/23 18:07
Lab Samp ID:	J142-02G	Dilution Factor:	5
Lab File ID:	H6J22099	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.96J	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	7.6	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6800	500	100	250
Manganese	40	5.0	1.2	2.5
Nickel	4.5J	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	5.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	620000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:10
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW21102023	Date Analyzed:	10/31/23 18:33
Lab Samp ID:	J142-02T	Dilution Factor:	50
Lab File ID:	H6J22108	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22105	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	33000	10000	2500	5000
Chromium	83	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8000	5000	1000	2500
Manganese	36J	50	12	25
Nickel	17J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	630000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23 08:20
Project : USACE WINGATE	Date Received: 10/13/23
SDG NO. : 23J142	Date Extracted: 10/26/23 09:53
Sample ID: FDUP10-102023	Date Analyzed: 10/31/23 18:10
Lab Samp ID: J142-03G	Dilution Factor: 5
Lab File ID: H6J22100	Matrix: WATER
Ext Btch ID: IMJ035W	% Moisture: NA
Calib. Ref.: H6J22096	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.73J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	7.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6400	500	100	250
Manganese	43	5.0	1.2	2.5
Nickel	4.0J	5.0	1.2	2.5
Potassium	370J	1000	250	500
Selenium	5.0J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP10-102023	Date Analyzed: 10/31/23 18:36
Lab Samp ID: J142-03T	Dilution Factor: 50
Lab File ID: H6J22109	Matrix: WATER
Ext Btch ID: IMJ035W	% Moisture: NA
Calib. Ref.: H6J22105	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	620000	10000	2500	5000

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:20
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP10-102023	Date Analyzed:	10/31/23 18:10
Lab Samp ID:	J142-03G	Dilution Factor:	5
Lab File ID:	H6J22100	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.73J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	7.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6400	500	100	250
Manganese	43	5.0	1.2	2.5
Nickel	4.0J	5.0	1.2	2.5
Potassium	370J	1000	250	500
Selenium	5.0J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	620000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:20
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP10-102023	Date Analyzed:	10/31/23 18:36
Lab Samp ID:	J142-03T	Dilution Factor:	50
Lab File ID:	H6J22109	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22105	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	14J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	33000	10000	2500	5000
Chromium	79	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8100	5000	1000	2500
Manganese	42J	50	12	25
Nickel	19J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	620000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW38102023
Lab Samp ID: J142-04G
Lab File ID: H6J22101
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22096

Date Collected: 10/12/23 09:00
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 18:12
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.64J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	6.3	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1700	500	100	250
Manganese	47	5.0	1.2	2.5
Nickel	1.6J	5.0	1.2	2.5
Potassium	840J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW38102023
Lab Samp ID: J142-04T
Lab File ID: H6J22110
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22105

Date Analyzed: 10/31/23 18:39
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW38102023	Date Analyzed:	10/31/23 18:12
Lab Samp ID:	J142-04G	Dilution Factor:	5
Lab File ID:	H6J22101	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.64J	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	6.3	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1700	500	100	250
Manganese	47	5.0	1.2	2.5
Nickel	1.6J	5.0	1.2	2.5
Potassium	840J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	780000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW38102023	Date Analyzed:	10/31/23 18:39
Lab Samp ID:	J142-04T	Dilution Factor:	50
Lab File ID:	H6J22110	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22105	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	13000	10000	2500	5000
Chromium	80	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3200J	5000	1000	2500
Manganese	45J	50	12	25
Nickel	17J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	760000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC. Date Collected: 10/12/23 09:55
Project : USACE WINGATE Date Received: 10/13/23
SDG NO. : 23J142 Date Extracted: 10/26/23 09:53
Sample ID: MW22D102023 Date Analyzed: 10/31/23 18:15
Lab Samp ID: J142-05I Dilution Factor: 10
Lab File ID: H6J22102 Matrix: WATER
Ext Btch ID: IMJ035W % Moisture: NA
Calib. Ref.: H6J22096 Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	85000	2000	500	1000
Chromium	15	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	400J	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	17000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	3.6J	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	39	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW22D102023 Date Analyzed: 10/31/23 18:42
Lab Samp ID: J142-05T Dilution Factor: 50
Lab File ID: H6J22111 Matrix: WATER
Ext Btch ID: IMJ035W % Moisture: NA
Calib. Ref.: H6J22105 Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1000000	10000	2500	5000

Sample Amount : 50ml Final Volume:50ml
Prepared by : THuang Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	MW22D102023	Date Analyzed:	10/31/23 18:15
Lab Samp ID:	J142-05I	Dilution Factor:	10
Lab File ID:	H6J22102	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	12	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	85000	2000	500	1000
Chromium	15	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	400J	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	17000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	3.6J	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	39	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1000000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	MW22D102023	Date Analyzed:	10/31/23 18:42
Lab Samp ID:	J142-05T	Dilution Factor:	50
Lab File ID:	H6J22111	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22105	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	85000	10000	2500	5000
Chromium	78	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	19000	5000	1000	2500
Manganese	140	50	12	25
Nickel	18J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	42J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1000000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW32102023
Lab Samp ID: J142-06G
Lab File ID: H6J22103
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22096

Date Collected: 10/12/23 10:30
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 18:18
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	5.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	13000	1000	250	500
Chromium	6.3	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1500	500	100	250
Manganese	31	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	820J	1000	250	500
Selenium	1.7J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW32102023
Lab Samp ID: J142-06T
Lab File ID: H6J22112
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22105

Date Analyzed: 10/31/23 18:45
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID	: TMW32102023	Date Analyzed:	10/31/23 18:18
Lab Samp ID	: J142-06G	Dilution Factor:	5
Lab File ID	: H6J22103	Matrix:	WATER
Ext Btch ID	: IMJ035W	% Moisture:	NA
Calib. Ref.	: H6J22096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	5.6	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	13000	1000	250	500
Chromium	6.3	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1500	500	100	250
Manganese	31	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	820J	1000	250	500
Selenium	1.7J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	770000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW32102023	Date Analyzed:	10/31/23 18:45
Lab Samp ID:	J142-06T	Dilution Factor:	50
Lab File ID:	H6J22112	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22105	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	12000	10000	2500	5000
Chromium	78	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3000J	5000	1000	2500
Manganese	28J	50	12	25
Nickel	17J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	760000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW47102023
Lab Samp ID: J142-07G
Lab File ID: H6J22104
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22096

Date Collected: 10/12/23 11:45
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 18:21
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7100	1000	250	500
Chromium	6.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	840	500	100	250
Manganese	33	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	710J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW47102023
Lab Samp ID: J142-07T
Lab File ID: H6J22113
Ext Btch ID: IMJ035W
Calib. Ref.: H6J22105

Date Analyzed: 10/31/23 18:47
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	550000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW47102023	Date Analyzed:	10/31/23 18:21
Lab Samp ID:	J142-07G	Dilution Factor:	5
Lab File ID:	H6J22104	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7100	1000	250	500
Chromium	6.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	840	500	100	250
Manganese	33	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	710J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	560000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW47102023	Date Analyzed:	10/31/23 18:47
Lab Samp ID:	J142-07T	Dilution Factor:	50
Lab File ID:	H6J22113	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22105	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7300J	10000	2500	5000
Chromium	81	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2400J	5000	1000	2500
Manganese	31J	50	12	25
Nickel	17J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	550000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	MBLK1W	Date Analyzed:	10/31/23 15:32
Lab Samp ID:	IMJ035WB	Dilution Factor:	1
Lab File ID:	H6J22051	Matrix:	WATER
Ext Btch ID:	IMJ035W	% Moisture:	NA
Calib. Ref.:	H6J22049	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMJ036WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IMJ036WL/IMJ036WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples were reported from dilution due to matrix interference caused by high salt concentrations. Dilution was required in order to minimize the risk of the samples depositing salt on the pneumatic nebulizer tip & interface skimmers cones that subsequently leads to the reduction of the instrument's performance. Dilution factor was determined based on historical data of Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : H6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMJ036WB	1	NA	10/31/2314:02	10/26/2309:53	H6J22022	H6J22017	IMJ036W	Method Blank
LCS1W	IMJ036WL	1	NA	10/31/2314:05	10/26/2309:53	H6J22023	H6J22017	IMJ036W	Lab Control Sample (LCS)
LCD1W	IMJ036WC	1	NA	10/31/2314:07	10/26/2309:53	H6J22024	H6J22017	IMJ036W	LCS Duplicate
TMW14A102023	J142-01G	5	NA	10/31/2318:56	10/26/2309:53	H6J22116	H6J22114	IMJ036W	Diluted Sample
TMW21102023	J142-02G	5	NA	10/31/2318:59	10/26/2309:53	H6J22117	H6J22114	IMJ036W	Diluted Sample
FDUP10-102023	J142-03G	5	NA	10/31/2319:02	10/26/2309:53	H6J22118	H6J22114	IMJ036W	Diluted Sample
TMW38102023	J142-04G	5	NA	10/31/2319:05	10/26/2309:53	H6J22119	H6J22114	IMJ036W	Diluted Sample
MW22D102023	J142-05I	10	NA	10/31/2319:08	10/26/2309:53	H6J22120	H6J22114	IMJ036W	Diluted Sample
TMW32102023	J142-06G	5	NA	10/31/2319:11	10/26/2309:53	H6J22121	H6J22114	IMJ036W	Diluted Sample
TMW47102023	J142-07G	5	NA	10/31/2319:14	10/26/2309:53	H6J22122	H6J22114	IMJ036W	Diluted Sample
TMW14A102023	J142-01T	50	NA	10/31/2319:22	10/26/2309:53	H6J22125	H6J22123	IMJ036W	Diluted Sample
TMW21102023	J142-02T	50	NA	10/31/2319:25	10/26/2309:53	H6J22126	H6J22123	IMJ036W	Diluted Sample
FDUP10-102023	J142-03T	50	NA	10/31/2319:28	10/26/2309:53	H6J22127	H6J22123	IMJ036W	Diluted Sample
TMW38102023	J142-04T	50	NA	10/31/2319:31	10/26/2309:53	H6J22128	H6J22123	IMJ036W	Diluted Sample
MW22D102023	J142-05T	50	NA	10/31/2319:34	10/26/2309:53	H6J22129	H6J22123	IMJ036W	Diluted Sample
TMW32102023	J142-06T	50	NA	10/31/2319:37	10/26/2309:53	H6J22130	H6J22123	IMJ036W	Diluted Sample
TMW47102023	J142-07T	50	NA	10/31/2319:40	10/26/2309:53	H6J22131	H6J22123	IMJ036W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW14A102023
Lab Samp ID: J142-01G
Lab File ID: H6J22116
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22114

Date Collected: 10/12/23 07:30
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 18:56
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.69J	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3400	1000	250	500
Chromium	7.0	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	520	500	100	250
Manganese	16	5.0	1.2	2.5
Nickel	3.0J	5.0	1.2	2.5
Potassium	510J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW14A102023
Lab Samp ID: J142-01T
Lab File ID: H6J22125
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22123

Date Analyzed: 10/31/23 19:22
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	450000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 07:30
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW14A102023	Date Analyzed:	10/31/23 18:56
Lab Samp ID:	J142-01G	Dilution Factor:	5
Lab File ID:	H6J22116	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22114	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.69J	5.0	0.62	1.2
Barium	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3400	1000	250	500
Chromium	7.0	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	520	500	100	250
Manganese	16	5.0	1.2	2.5
Nickel	3.0J	5.0	1.2	2.5
Potassium	510J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	430000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 07:30
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW14A102023	Date Analyzed:	10/31/23 19:22
Lab Samp ID:	J142-01T	Dilution Factor:	50
Lab File ID:	H6J22125	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	4100J	10000	2500	5000
Chromium	83	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2100J	5000	1000	2500
Manganese	17J	50	12	25
Nickel	19J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	450000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW21102023
Lab Samp ID: J142-02G
Lab File ID: H6J22117
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22114

Date Collected: 10/12/23 08:10
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 18:59
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.81J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	7.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6400	500	100	250
Manganese	29	5.0	1.2	2.5
Nickel	4.4J	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	5.5	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW21102023
Lab Samp ID: J142-02T
Lab File ID: H6J22126
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22123

Date Analyzed: 10/31/23 19:25
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	650000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:10
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW21102023	Date Analyzed:	10/31/23 18:59
Lab Samp ID:	J142-02G	Dilution Factor:	5
Lab File ID:	H6J22117	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22114	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.81J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	7.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6400	500	100	250
Manganese	29	5.0	1.2	2.5
Nickel	4.4J	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	5.5	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	620000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:10
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW21102023	Date Analyzed:	10/31/23 19:25
Lab Samp ID:	J142-02T	Dilution Factor:	50
Lab File ID:	H6J22126	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	34000	10000	2500	5000
Chromium	82	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8100	5000	1000	2500
Manganese	29J	50	12	25
Nickel	33J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	650000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: FDUP10-102023
Lab Samp ID: J142-03G
Lab File ID: H6J22118
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22114

Date Collected: 10/12/23 08:20
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 19:02
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.82J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	7.4	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6300	500	100	250
Manganese	33	5.0	1.2	2.5
Nickel	4.5J	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	6.0	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FDUP10-102023
Lab Samp ID: J142-03T
Lab File ID: H6J22127
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22123

Date Analyzed: 10/31/23 19:28
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	620000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:20
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP10-102023	Date Analyzed:	10/31/23 19:02
Lab Samp ID:	J142-03G	Dilution Factor:	5
Lab File ID:	H6J22118	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22114	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.82J	5.0	0.62	1.2
Barium	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	34000	1000	250	500
Chromium	7.4	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6300	500	100	250
Manganese	33	5.0	1.2	2.5
Nickel	4.5J	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	6.0	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	650000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 08:20
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	FDUP10-102023	Date Analyzed:	10/31/23 19:28
Lab Samp ID:	J142-03T	Dilution Factor:	50
Lab File ID:	H6J22127	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	33000	10000	2500	5000
Chromium	82	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	8100	5000	1000	2500
Manganese	32J	50	12	25
Nickel	21J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	620000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW38102023
Lab Samp ID: J142-04G
Lab File ID: H6J22119
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22114

Date Collected: 10/12/23 09:00
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 19:05
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	13000	1000	250	500
Chromium	6.4	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1600	500	100	250
Manganese	43	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	800J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW38102023
Lab Samp ID: J142-04T
Lab File ID: H6J22128
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22123

Date Analyzed: 10/31/23 19:31
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	730000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW38102023	Date Analyzed:	10/31/23 19:05
Lab Samp ID:	J142-04G	Dilution Factor:	5
Lab File ID:	H6J22119	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22114	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	13000	1000	250	500
Chromium	6.4	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1600	500	100	250
Manganese	43	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	800J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	720000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:00
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW38102023	Date Analyzed:	10/31/23 19:31
Lab Samp ID:	J142-04T	Dilution Factor:	50
Lab File ID:	H6J22128	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	13000	10000	2500	5000
Chromium	80	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3100J	5000	1000	2500
Manganese	41J	50	12	25
Nickel	16J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	730000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: MW22D102023
Lab Samp ID: J142-05I
Lab File ID: H6J22120
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22114

Date Collected: 10/12/23 09:55
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 19:08
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	11	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	87000	2000	500	1000
Chromium	15	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	17000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	4.2J	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	41	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW22D102023
Lab Samp ID: J142-05T
Lab File ID: H6J22129
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22123

Date Analyzed: 10/31/23 19:34
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 10/12/23 09:55
Project : USACE WINGATE	Date Received: 10/13/23
SDG NO. : 23J142	Date Extracted: 10/26/23 09:53
Sample ID: MW22D102023	Date Analyzed: 10/31/23 19:08
Lab Samp ID: J142-05I	Dilution Factor: 10
Lab File ID: H6J22120	Matrix: WATER
Ext Btch ID: IMJ036W	% Moisture: NA
Calib. Ref.: H6J22114	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	11	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	87000	2000	500	1000
Chromium	15	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	17000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	4.2J	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	41	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1100000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount : 50ml	Final Volume:50ml
Prepared by : THuang	Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 09:55
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	MW22D102023	Date Analyzed:	10/31/23 19:34
Lab Samp ID:	J142-05T	Dilution Factor:	50
Lab File ID:	H6J22129	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	86000	10000	2500	5000
Chromium	82	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	18000	5000	1000	2500
Manganese	130	50	12	25
Nickel	18J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	39J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW32102023
Lab Samp ID: J142-06G
Lab File ID: H6J22121
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22114

Date Collected: 10/12/23 10:30
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 19:11
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	6.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	6.6	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1500	500	100	250
Manganese	31	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	830J	1000	250	500
Selenium	1.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW32102023
Lab Samp ID: J142-06T
Lab File ID: H6J22130
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22123

Date Analyzed: 10/31/23 19:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	770000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID	: TMW32102023	Date Analyzed:	10/31/23 19:11
Lab Samp ID	: J142-06G	Dilution Factor:	5
Lab File ID	: H6J22121	Matrix:	WATER
Ext Btch ID	: IMJ036W	% Moisture:	NA
Calib. Ref.	: H6J22114	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	6.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	14000	1000	250	500
Chromium	6.6	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	1500	500	100	250
Manganese	31	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	830J	1000	250	500
Selenium	1.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	810000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 10:30
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW32102023	Date Analyzed:	10/31/23 19:37
Lab Samp ID:	J142-06T	Dilution Factor:	50
Lab File ID:	H6J22130	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	13000	10000	2500	5000
Chromium	82	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	3100J	5000	1000	2500
Manganese	31J	50	12	25
Nickel	19J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	770000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23J142
Sample ID: TMW47102023
Lab Samp ID: J142-07G
Lab File ID: H6J22122
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22114

Date Collected: 10/12/23 11:45
Date Received: 10/13/23
Date Extracted: 10/26/23 09:53
Date Analyzed: 10/31/23 19:14
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6900	1000	250	500
Chromium	6.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	810	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	710J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW47102023
Lab Samp ID: J142-07T
Lab File ID: H6J22131
Ext Btch ID: IMJ036W
Calib. Ref.: H6J22123

Date Analyzed: 10/31/23 19:40
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	530000	10000	2500	5000

Sample Amount : 50ml
Prepared by : THuang

Final Volume:50ml
Analyzed by:JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW47102023	Date Analyzed:	10/31/23 19:14
Lab Samp ID:	J142-07G	Dilution Factor:	5
Lab File ID:	H6J22122	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22114	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6900	1000	250	500
Chromium	6.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	810	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	710J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	540000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	10/12/23 11:45
Project	: USACE WINGATE	Date Received:	10/13/23
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	TMW47102023	Date Analyzed:	10/31/23 19:40
Lab Samp ID:	J142-07T	Dilution Factor:	50
Lab File ID:	H6J22131	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22123	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	ND	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7200J	10000	2500	5000
Chromium	80	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	2300J	5000	1000	2500
Manganese	31J	50	12	25
Nickel	19J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	530000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	ND	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23J142	Date Extracted:	10/26/23 09:53
Sample ID:	MBLK1W	Date Analyzed:	10/31/23 14:02
Lab Samp ID:	IMJ036WB	Dilution Factor:	1
Lab File ID:	H6J22022	Matrix:	WATER
Ext Btch ID:	IMJ036W	% Moisture:	NA
Calib. Ref.:	H6J22017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	ND	1.0	0.25	0.50
Beryllium	ND	0.50	0.10	0.20
Cadmium	ND	1.0	0.10	0.20
Calcium	ND	200	50	100
Chromium	ND	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	ND	2.0	0.50	1.0
Iron	ND	200	25	50
Lead	ND	1.0	0.050	0.10
Magnesium	ND	100	20	50
Manganese	ND	1.0	0.25	0.50
Nickel	ND	1.0	0.25	0.50
Potassium	ND	200	50	100
Selenium	ND	1.0	0.15	0.30
Silver	ND	1.0	0.10	0.20
Sodium	ND	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	ND	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.

Sample Amount	: 50ml	Final Volume:	50ml
Prepared by	: THuang	Analyzed by:	JChun

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGK004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGK004WL/HGK004WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGK004WB	1	NA	11/02/2316:14	11/02/2311:38	M47K002041	M47K002	23HGK004W	Method Blank
LCS1W	HGK004WL	1	NA	11/02/2316:16	11/02/2311:38	M47K002042	M47K002	23HGK004W	Lab Control Sample (LCS)
LCD1W	HGK004WC	1	NA	11/02/2316:18	11/02/2311:38	M47K002043	M47K002	23HGK004W	LCS Duplicate
TMW14A102023	J142-01	1	NA	11/02/2316:59	11/02/2311:38	M47K002064	M47K002	23HGK004W	Field Sample
TMW21102023	J142-02	1	NA	11/02/2317:01	11/02/2311:38	M47K002065	M47K002	23HGK004W	Field Sample
FDUP10-102023	J142-03	1	NA	11/02/2317:03	11/02/2311:38	M47K002066	M47K002	23HGK004W	Field Sample
TMW38102023	J142-04	1	NA	11/02/2317:04	11/02/2311:38	M47K002067	M47K002	23HGK004W	Field Sample
MW22D102023	J142-05	1	NA	11/02/2317:06	11/02/2311:38	M47K002068	M47K002	23HGK004W	Field Sample
TMW32102023	J142-06	1	NA	11/02/2317:08	11/02/2311:38	M47K002069	M47K002	23HGK004W	Field Sample
TMW47102023	J142-07	1	NA	11/02/2317:13	11/02/2311:38	M47K002072	M47K002	23HGK004W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGK004WB	ND	1	NA	0.50	0.10	0.20	11/02/2316:14	11/02/2311:38	M47K002041	M47K002	23HGK004W	NA	NA
LCS1W	HGK004WL	2.5	1	NA	0.50	0.10	0.20	11/02/2316:16	11/02/2311:38	M47K002042	M47K002	23HGK004W	NA	NA
LCD1W	HGK004WC	2.4	1	NA	0.50	0.10	0.20	11/02/2316:18	11/02/2311:38	M47K002043	M47K002	23HGK004W	NA	NA
TMW14A102023	J142-01	ND	1	NA	0.50	0.10	0.20	11/02/2316:59	11/02/2311:38	M47K002064	M47K002	23HGK004W	10/12/2307:30	10/13/23
TMW21102023	J142-02	ND	1	NA	0.50	0.10	0.20	11/02/2317:01	11/02/2311:38	M47K002065	M47K002	23HGK004W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03	ND	1	NA	0.50	0.10	0.20	11/02/2317:03	11/02/2311:38	M47K002066	M47K002	23HGK004W	10/12/2308:20	10/13/23
TMW38102023	J142-04	ND	1	NA	0.50	0.10	0.20	11/02/2317:04	11/02/2311:38	M47K002067	M47K002	23HGK004W	10/12/2309:00	10/13/23
MW22D102023	J142-05	ND	1	NA	0.50	0.10	0.20	11/02/2317:06	11/02/2311:38	M47K002068	M47K002	23HGK004W	10/12/2309:55	10/13/23
TMW32102023	J142-06	ND	1	NA	0.50	0.10	0.20	11/02/2317:08	11/02/2311:38	M47K002069	M47K002	23HGK004W	10/12/2310:30	10/13/23
TMW47102023	J142-07	ND	1	NA	0.50	0.10	0.20	11/02/2317:13	11/02/2311:38	M47K002072	M47K002	23HGK004W	10/12/2311:45	10/13/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Mercury was not detected in HGK009WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HGK009WL/HGK009WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE

SDG NO. : 23J142
Instrument ID : 47

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGK009WB	1	NA	11/06/2314:34	11/06/2310:51	M47K005012	M47K005	23HGK009W	Method Blank
LCS1W	HGK009WL	1	NA	11/06/2314:36	11/06/2310:51	M47K005013	M47K005	23HGK009W	Lab Control Sample (LCS)
LCD1W	HGK009WC	1	NA	11/06/2314:37	11/06/2310:51	M47K005014	M47K005	23HGK009W	LCS Duplicate
TMW14A102023	J142-01	1	NA	11/06/2314:40	11/06/2310:51	M47K005015	M47K005	23HGK009W	Field Sample
TMW21102023	J142-02	1	NA	11/06/2314:42	11/06/2310:51	M47K005016	M47K005	23HGK009W	Field Sample
FDUP10-102023	J142-03	1	NA	11/06/2314:44	11/06/2310:51	M47K005017	M47K005	23HGK009W	Field Sample
TMW38102023	J142-04	1	NA	11/06/2314:46	11/06/2310:51	M47K005018	M47K005	23HGK009W	Field Sample
MW22D102023	J142-05	1	NA	11/06/2314:49	11/06/2310:51	M47K005019	M47K005	23HGK009W	Field Sample
TMW32102023	J142-06	1	NA	11/06/2314:51	11/06/2310:51	M47K005020	M47K005	23HGK009W	Field Sample
TMW47102023	J142-07	1	NA	11/06/2314:52	11/06/2310:51	M47K005021	M47K005	23HGK009W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142
Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DILT'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	HGK009WB	ND	1	NA	0.50	0.10	0.20	11/06/2314:34	11/06/2310:51	M47K005012	M47K005	23HGK009W	NA	NA
LCS1W	HGK009WL	2.5	1	NA	0.50	0.10	0.20	11/06/2314:36	11/06/2310:51	M47K005013	M47K005	23HGK009W	NA	NA
LCD1W	HGK009WC	2.5	1	NA	0.50	0.10	0.20	11/06/2314:37	11/06/2310:51	M47K005014	M47K005	23HGK009W	NA	NA
TMW14A102023	J142-01	ND	1	NA	0.50	0.10	0.20	11/06/2314:40	11/06/2310:51	M47K005015	M47K005	23HGK009W	10/12/2307:30	10/13/23
TMW21102023	J142-02	ND	1	NA	0.50	0.10	0.20	11/06/2314:42	11/06/2310:51	M47K005016	M47K005	23HGK009W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03	ND	1	NA	0.50	0.10	0.20	11/06/2314:44	11/06/2310:51	M47K005017	M47K005	23HGK009W	10/12/2308:20	10/13/23
TMW38102023	J142-04	ND	1	NA	0.50	0.10	0.20	11/06/2314:46	11/06/2310:51	M47K005018	M47K005	23HGK009W	10/12/2309:00	10/13/23
MW22D102023	J142-05	ND	1	NA	0.50	0.10	0.20	11/06/2314:49	11/06/2310:51	M47K005019	M47K005	23HGK009W	10/12/2309:55	10/13/23
TMW32102023	J142-06	ND	1	NA	0.50	0.10	0.20	11/06/2314:51	11/06/2310:51	M47K005020	M47K005	23HGK009W	10/12/2310:30	10/13/23
TMW47102023	J142-07	ND	1	NA	0.50	0.10	0.20	11/06/2314:52	11/06/2310:51	M47K005021	M47K005	23HGK009W	10/12/2311:45	10/13/23

Note: Detection limits are reported relative to sample result significant figures.

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23J142

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of six(6) water samples were received on 10/13/23 to be analyzed for Perchlorate by HPLC/MS in accordance with Method SW6850 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. PLJ015WB and PLJ016WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed.
- PLJ015WL/PLJ015WC were within LCS limits.
- PLJ016WL/PLJ016WC were within LCS limits.
Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met. Samples J142-02I, -03I and -05I were reported at dilution to minimize the effect of matrix interference on recovery of the internal standard.

SAMPLE RESULTS

METHOD SW6850
PERCHLORATE BY HPLC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : GO

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULT (ug/L)	DIL'N. FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	PLJ015WB	ND	1	NA	0.20	0.050	0.10	10/24/2311:06	NA	23MJ24007	MJ24004	PLJ015W	NA	NA
LCS1W	PLJ015WL	0.21	1	NA	0.20	0.050	0.10	10/24/2311:21	NA	23MJ24008	MJ24004	PLJ015W	NA	NA
LCD1W	PLJ015WC	0.22	1	NA	0.20	0.050	0.10	10/24/2311:36	NA	23MJ24009	MJ24004	PLJ015W	NA	NA
TMW38102023	J142-04	ND	1	NA	0.20	0.050	0.10	10/24/2316:00	NA	23MJ24026	MJ24017	PLJ015W	10/12/2309:00	10/13/23
TMW47102023	J142-07	ND	1	NA	0.20	0.050	0.10	10/24/2316:59	NA	23MJ24030	MJ24028	PLJ015W	10/12/2311:45	10/13/23
MBLK2W	PLJ016WB	ND	1	NA	0.20	0.050	0.10	10/26/2308:59	NA	23MJ26007	MJ26004	PLJ016W	NA	NA
LCS2W	PLJ016WL	0.21	1	NA	0.20	0.050	0.10	10/26/2309:14	NA	23MJ26008	MJ26004	PLJ016W	NA	NA
LCD2W	PLJ016WC	0.19	1	NA	0.20	0.050	0.10	10/26/2309:28	NA	23MJ26009	MJ26004	PLJ016W	NA	NA
TMW21102023	J142-02I	ND	5	NA	1.0	0.25	0.50	10/26/2313:18	NA	23MJ26024	MJ26017	PLJ016W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03I	ND	5	NA	1.0	0.25	0.50	10/26/2313:32	NA	23MJ26025	MJ26017	PLJ016W	10/12/2308:20	10/13/23
MW22D102023	J142-05I	0.63J	5	NA	1.0	0.25	0.50	10/26/2313:47	NA	23MJ26026	MJ26017	PLJ016W	10/12/2309:55	10/13/23
TMW32102023	J142-06I	190	30	NA	6.0	1.5	3.0	10/26/2314:02	NA	23MJ26027	MJ26017	PLJ016W	10/12/2310:30	10/13/23

Note: Detection limits are reported relative to sample result significant figures.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD 9056A
BROMIDE

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Bromide in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Bromide was not detected in ICJ030WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ030WL/ICJ030WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J142-01M/J142-01S - Percent recovery for Bromide(1X) was not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples J142-05I and -06I were reported at 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD 9056A
CHLORIDE-CL

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Chloride-CL in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ054WB and ICJ056WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ054WL/ICJ054WC and ICJ056WL/ICJ056WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Chloride-CL was within MS QC limits in J142-01JM/J142-01JS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD 9056A
FLUORIDE

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Fluoride in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Fluoride-F was not detected in ICJ030WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ030WL/ICJ030WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Fluoride-F was within MS QC limits in J142-01M/J142-01S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples J142-05I and -06I were reported at 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW9056A
NITRATE-N

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Nitrate-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrate was not detected in ICJ030WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ030WL/ICJ030WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Nitrate was within MS QC limits in J142-01M/J142-01S. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Sample J142-06I was reported at 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD SW9056A
NITRITE-N

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Nitrite-N in accordance with Method SW9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Nitrite was not detected in ICJ030WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ030WL/ICJ030WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J142-01M/J142-01S - Percent recovery for Nitrite was not within MS/MSD QC limits. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples J142-05I and -06I were reported at 2X dilution factor due to high conductivity. Sample J142-03I was reported at a 10X dilution factor due to chloride interference. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD 9056A
ORTHOPHOSPHATE-P

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Orthophosphate-P in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Orthophosphate-P was not detected in ICJ030WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICJ030WL/ICJ030WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following was noted: J142-01M/J142-01S - Percent recovery for Orthophosphate-P was not within MS/MSD QC limits. Presence of matrix interference was suspected. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples J142-05I and -06I were reported at 2X dilution factor due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23J142

METHOD 9056A
SULFATE

A total of seven(7) water samples were received on 10/13/23 to be analyzed for Sulfate in accordance with Method 9056A and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two(2) method blanks were analyzed. ICJ054WB and ICJ056WB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of LCS/LCD were analyzed. ICJ054WL/ICJ054WC and ICJ056WL/ICJ056WC were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Sulfate was within MS QC limits in J142-01JM/J142-01JS. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RESULTS

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ030WB	ND	1	NA	0.5	0.13	0.25	10/13/2314:49	NA	AJ14-135	AJ14-133	ICJ030W	NA	NA
LCS1W	ICJ030WL	0.97	1	NA	0.5	0.13	0.25	10/13/2315:09	NA	AJ14-136	AJ14-133	ICJ030W	NA	NA
LCD1W	ICJ030WC	0.97	1	NA	0.5	0.13	0.25	10/13/2315:29	NA	AJ14-137	AJ14-133	ICJ030W	NA	NA
TMW14A102023	J142-01	0.80	1	NA	0.5	0.13	0.25	10/13/2315:49	NA	AJ14-138	AJ14-133	ICJ030W	10/12/2307:30	10/13/23
TMW21102023	J142-02	0.69	1	NA	0.5	0.13	0.25	10/13/2316:10	NA	AJ14-139	AJ14-133	ICJ030W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03	0.69	1	NA	0.5	0.13	0.25	10/13/2316:30	NA	AJ14-140	AJ14-133	ICJ030W	10/12/2308:20	10/13/23
TMW38102023	J142-04	0.41J	1	NA	0.5	0.13	0.25	10/13/2316:50	NA	AJ14-141	AJ14-133	ICJ030W	10/12/2309:00	10/13/23
MW22D102023	J142-05I	1.1	2	NA	1	0.26	0.5	10/13/2317:11	NA	AJ14-142	AJ14-133	ICJ030W	10/12/2309:55	10/13/23
TMW32102023	J142-06I	1.2	2	NA	1	0.26	0.5	10/13/2317:31	NA	AJ14-143	AJ14-133	ICJ030W	10/12/2310:30	10/13/23
TMW47102023	J142-07	0.46J	1	NA	0.5	0.13	0.25	10/13/2317:51	NA	AJ14-144	AJ14-133	ICJ030W	10/12/2311:45	10/13/23
TMW14A102023DUP	J142-01D	0.80	1	NA	0.5	0.13	0.25	10/13/2320:13	NA	AJ14-151	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MS	J142-01M	1.6	1	NA	0.5	0.13	0.25	10/13/2320:33	NA	AJ14-152	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MSD	J142-01S	1.6	1	NA	0.5	0.13	0.25	10/13/2320:54	NA	AJ14-153	AJ14-145	ICJ030W	10/12/2307:30	10/13/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ054WB	ND	1	NA	0.2	0.05	0.1	10/25/2313:14	NA	AJ30-03	AJ30-01	ICJ054W	NA	NA
LCS1W	ICJ054WL	1.9	1	NA	0.2	0.05	0.1	10/25/2313:35	NA	AJ30-04	AJ30-01	ICJ054W	NA	NA
LCD1W	ICJ054WC	1.9	1	NA	0.2	0.05	0.1	10/25/2313:55	NA	AJ30-05	AJ30-01	ICJ054W	NA	NA
TMW14A102023	J142-01J	180	100	NA	20	5	10	10/25/2322:05	NA	AJ30-28	AJ30-25	ICJ054W	10/12/2307:30	10/13/23
TMW14A102023DUP	J142-01JD	180	100	NA	20	5	10	10/25/2322:25	NA	AJ30-29	AJ30-25	ICJ054W	10/12/2307:30	10/13/23
TMW14A102023MS	J142-01JM	350	100	NA	20	5	10	10/25/2322:46	NA	AJ30-30	AJ30-25	ICJ054W	10/12/2307:30	10/13/23
TMW14A102023MSD	J142-01JS	360	100	NA	20	5	10	10/25/2323:06	NA	AJ30-31	AJ30-25	ICJ054W	10/12/2307:30	10/13/23
TMW21102023	J142-02J	61	40	NA	8	2	4	10/25/2323:26	NA	AJ30-32	AJ30-25	ICJ054W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03J	62	40	NA	8	2	4	10/25/2323:46	NA	AJ30-33	AJ30-25	ICJ054W	10/12/2308:20	10/13/23
MW22D102023	J142-05K	220	100	NA	20	5	10	10/26/2300:27	NA	AJ30-35	AJ30-25	ICJ054W	10/12/2309:55	10/13/23
TMW32102023	J142-06J	180	40	NA	8	2	4	10/26/2300:47	NA	AJ30-36	AJ30-25	ICJ054W	10/12/2310:30	10/13/23
TMW47102023	J142-07I	66	40	NA	8	2	4	10/26/2301:48	NA	AJ30-39	AJ30-37	ICJ054W	10/12/2311:45	10/13/23
MBLK2W	ICJ056WB	ND	1	NA	0.2	0.05	0.1	10/26/2314:16	NA	AJ32-03	AJ32-01	ICJ056W	NA	NA
LCS2W	ICJ056WL	1.9	1	NA	0.2	0.05	0.1	10/26/2314:36	NA	AJ32-04	AJ32-01	ICJ056W	NA	NA
LCD2W	ICJ056WC	1.9	1	NA	0.2	0.05	0.1	10/26/2314:56	NA	AJ32-05	AJ32-01	ICJ056W	NA	NA
TMW38102023	J142-04J	260	100	NA	20	5	10	10/27/2301:03	NA	AJ32-35	AJ32-25	ICJ056W	10/12/2309:00	10/13/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ030WB	ND	1	NA	0.1	0.025	0.05	10/13/2314:49	NA	AJ14-135	AJ14-133	ICJ030W	NA	NA
LCS1W	ICJ030WL	0.92	1	NA	0.1	0.025	0.05	10/13/2315:09	NA	AJ14-136	AJ14-133	ICJ030W	NA	NA
LCD1W	ICJ030WC	0.91	1	NA	0.1	0.025	0.05	10/13/2315:29	NA	AJ14-137	AJ14-133	ICJ030W	NA	NA
TMW14A102023	J142-01	0.51	1	NA	0.1	0.025	0.05	10/13/2315:49	NA	AJ14-138	AJ14-133	ICJ030W	10/12/2307:30	10/13/23
TMW21102023	J142-02	0.92	1	NA	0.1	0.025	0.05	10/13/2316:10	NA	AJ14-139	AJ14-133	ICJ030W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03	0.92	1	NA	0.1	0.025	0.05	10/13/2316:30	NA	AJ14-140	AJ14-133	ICJ030W	10/12/2308:20	10/13/23
TMW38102023	J142-04	1.7	1	NA	0.1	0.025	0.05	10/13/2316:50	NA	AJ14-141	AJ14-133	ICJ030W	10/12/2309:00	10/13/23
MW22D102023	J142-05I	0.48	2	NA	0.2	0.05	0.1	10/13/2317:11	NA	AJ14-142	AJ14-133	ICJ030W	10/12/2309:55	10/13/23
TMW32102023	J142-06I	0.67	2	NA	0.2	0.05	0.1	10/13/2317:31	NA	AJ14-143	AJ14-133	ICJ030W	10/12/2310:30	10/13/23
TMW47102023	J142-07	1.8	1	NA	0.1	0.025	0.05	10/13/2317:51	NA	AJ14-144	AJ14-133	ICJ030W	10/12/2311:45	10/13/23
TMW14A102023DUP	J142-01D	0.51	1	NA	0.1	0.025	0.05	10/13/2320:13	NA	AJ14-151	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MS	J142-01M	1.5	1	NA	0.1	0.025	0.05	10/13/2320:33	NA	AJ14-152	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MSD	J142-01S	1.5	1	NA	0.1	0.025	0.05	10/13/2320:54	NA	AJ14-153	AJ14-145	ICJ030W	10/12/2307:30	10/13/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ030WB	ND	1	NA	0.1	0.03	0.06	10/13/2314:49	NA	AJ14-135	AJ14-133	ICJ030W	NA	NA
LCS1W	ICJ030WL	0.96	1	NA	0.1	0.03	0.06	10/13/2315:09	NA	AJ14-136	AJ14-133	ICJ030W	NA	NA
LCD1W	ICJ030WC	0.96	1	NA	0.1	0.03	0.06	10/13/2315:29	NA	AJ14-137	AJ14-133	ICJ030W	NA	NA
TMW14A102023	J142-01	0.062J	1	NA	0.1	0.03	0.06	10/13/2315:49	NA	AJ14-138	AJ14-133	ICJ030W	10/12/2307:30	10/13/23
TMW38102023	J142-04	ND	1	NA	0.1	0.03	0.06	10/13/2316:50	NA	AJ14-141	AJ14-133	ICJ030W	10/12/2309:00	10/13/23
TMW32102023	J142-06I	1.9	2	NA	0.2	0.06	0.12	10/13/2317:31	NA	AJ14-143	AJ14-133	ICJ030W	10/12/2310:30	10/13/23
TMW47102023	J142-07	ND	1	NA	0.1	0.03	0.06	10/13/2317:51	NA	AJ14-144	AJ14-133	ICJ030W	10/12/2311:45	10/13/23
TMW14A102023DUP	J142-01D	ND	1	NA	0.1	0.03	0.06	10/13/2320:13	NA	AJ14-151	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MS	J142-01M	1.0	1	NA	0.1	0.03	0.06	10/13/2320:33	NA	AJ14-152	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MSD	J142-01S	1.0	1	NA	0.1	0.03	0.06	10/13/2320:54	NA	AJ14-153	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW21102023	J142-02I	11	10	NA	1	0.3	0.6	10/13/2321:14	NA	AJ14-154	AJ14-145	ICJ030W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03I	11	10	NA	1	0.3	0.6	10/13/2321:34	NA	AJ14-155	AJ14-145	ICJ030W	10/12/2308:20	10/13/23
MW22D102023	J142-05J	18	20	NA	2	0.6	1.2	10/13/2322:35	NA	AJ14-158	AJ14-156	ICJ030W	10/12/2309:55	10/13/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ030WB	ND	1	NA	0.1	0.03	0.06	10/13/2314:49	NA	AJ14-135	AJ14-133	ICJ030W	NA	NA
LCS1W	ICJ030WL	2.0	1	NA	0.1	0.03	0.06	10/13/2315:09	NA	AJ14-136	AJ14-133	ICJ030W	NA	NA
LCD1W	ICJ030WC	1.9	1	NA	0.1	0.03	0.06	10/13/2315:29	NA	AJ14-137	AJ14-133	ICJ030W	NA	NA
TMW14A102023	J142-01	ND	1	NA	0.1	0.03	0.06	10/13/2315:49	NA	AJ14-138	AJ14-133	ICJ030W	10/12/2307:30	10/13/23
TMW21102023	J142-02	0.075J	1	NA	0.1	0.03	0.06	10/13/2316:10	NA	AJ14-139	AJ14-133	ICJ030W	10/12/2308:10	10/13/23
TMW38102023	J142-04	ND	1	NA	0.1	0.03	0.06	10/13/2316:50	NA	AJ14-141	AJ14-133	ICJ030W	10/12/2309:00	10/13/23
MW22D102023	J142-05I	ND	2	NA	0.2	0.06	0.12	10/13/2317:11	NA	AJ14-142	AJ14-133	ICJ030W	10/12/2309:55	10/13/23
TMW32102023	J142-06I	ND	2	NA	0.2	0.06	0.12	10/13/2317:31	NA	AJ14-143	AJ14-133	ICJ030W	10/12/2310:30	10/13/23
TMW47102023	J142-07	ND	1	NA	0.1	0.03	0.06	10/13/2317:51	NA	AJ14-144	AJ14-133	ICJ030W	10/12/2311:45	10/13/23
TMW14A102023DUP	J142-01D	ND	1	NA	0.1	0.03	0.06	10/13/2320:13	NA	AJ14-151	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MS	J142-01M	2.2	1	NA	0.1	0.03	0.06	10/13/2320:33	NA	AJ14-152	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MSD	J142-01S	2.2	1	NA	0.1	0.03	0.06	10/13/2320:54	NA	AJ14-153	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
FDUP10-102023	J142-03I	0.67J	10	NA	1	0.3	0.6	10/13/2321:34	NA	AJ14-155	AJ14-145	ICJ030W	10/12/2308:20	10/13/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ030WB	ND	1	NA	0.5	0.12	0.25	10/13/2314:49	NA	AJ14-135	AJ14-133	ICJ030W	NA	NA
LCS1W	ICJ030WL	1.9	1	NA	0.5	0.12	0.25	10/13/2315:09	NA	AJ14-136	AJ14-133	ICJ030W	NA	NA
LCD1W	ICJ030WC	1.9	1	NA	0.5	0.12	0.25	10/13/2315:29	NA	AJ14-137	AJ14-133	ICJ030W	NA	NA
TMW14A102023	J142-01	ND	1	NA	0.5	0.12	0.25	10/13/2315:49	NA	AJ14-138	AJ14-133	ICJ030W	10/12/2307:30	10/13/23
TMW21102023	J142-02	ND	1	NA	0.5	0.12	0.25	10/13/2316:10	NA	AJ14-139	AJ14-133	ICJ030W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03	ND	1	NA	0.5	0.12	0.25	10/13/2316:30	NA	AJ14-140	AJ14-133	ICJ030W	10/12/2308:20	10/13/23
TMW38102023	J142-04	ND	1	NA	0.5	0.12	0.25	10/13/2316:50	NA	AJ14-141	AJ14-133	ICJ030W	10/12/2309:00	10/13/23
MW22D102023	J142-05I	ND	2	NA	1	0.25	0.5	10/13/2317:11	NA	AJ14-142	AJ14-133	ICJ030W	10/12/2309:55	10/13/23
TMW32102023	J142-06I	ND	2	NA	1	0.25	0.5	10/13/2317:31	NA	AJ14-143	AJ14-133	ICJ030W	10/12/2310:30	10/13/23
TMW47102023	J142-07	ND	1	NA	0.5	0.12	0.25	10/13/2317:51	NA	AJ14-144	AJ14-133	ICJ030W	10/12/2311:45	10/13/23
TMW14A102023DUP	J142-01D	ND	1	NA	0.5	0.12	0.25	10/13/2320:13	NA	AJ14-151	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MS	J142-01M	1.6	1	NA	0.5	0.12	0.25	10/13/2320:33	NA	AJ14-152	AJ14-145	ICJ030W	10/12/2307:30	10/13/23
TMW14A102023MSD	J142-01S	1.6	1	NA	0.5	0.12	0.25	10/13/2320:54	NA	AJ14-153	AJ14-145	ICJ030W	10/12/2307:30	10/13/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23J142

Matrix : WATER
InstrumentID : D7

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	DFxPREP FACTOR	MOIST (%)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATE
MBLK1W	ICJ054WB	ND	1	NA	0.5	0.13	0.25	10/25/2313:14	NA	AJ30-03	AJ30-01	ICJ054W	NA	NA
LCS1W	ICJ054WL	4.7	1	NA	0.5	0.13	0.25	10/25/2313:35	NA	AJ30-04	AJ30-01	ICJ054W	NA	NA
LCD1W	ICJ054WC	4.7	1	NA	0.5	0.13	0.25	10/25/2313:55	NA	AJ30-05	AJ30-01	ICJ054W	NA	NA
TMW14A102023	J142-01J	350	100	NA	50	13	25	10/25/2322:05	NA	AJ30-28	AJ30-25	ICJ054W	10/12/2307:30	10/13/23
TMW14A102023DUP	J142-01JD	360	100	NA	50	13	25	10/25/2322:25	NA	AJ30-29	AJ30-25	ICJ054W	10/12/2307:30	10/13/23
TMW14A102023MS	J142-01JM	790	100	NA	50	13	25	10/25/2322:46	NA	AJ30-30	AJ30-25	ICJ054W	10/12/2307:30	10/13/23
TMW14A102023MSD	J142-01JS	800	100	NA	50	13	25	10/25/2323:06	NA	AJ30-31	AJ30-25	ICJ054W	10/12/2307:30	10/13/23
TMW21102023	J142-02J	520	40	NA	20	5.2	10	10/25/2323:26	NA	AJ30-32	AJ30-25	ICJ054W	10/12/2308:10	10/13/23
FDUP10-102023	J142-03J	520	40	NA	20	5.2	10	10/25/2323:46	NA	AJ30-33	AJ30-25	ICJ054W	10/12/2308:20	10/13/23
TMW38102023	J142-04I	950	50	NA	25	6.5	12	10/26/2300:07	NA	AJ30-34	AJ30-25	ICJ054W	10/12/2309:00	10/13/23
MW22D102023	J142-05K	1200	100	NA	50	13	25	10/26/2300:27	NA	AJ30-35	AJ30-25	ICJ054W	10/12/2309:55	10/13/23
TMW47102023	J142-07I	760	40	NA	20	5.2	10	10/26/2301:48	NA	AJ30-39	AJ30-37	ICJ054W	10/12/2311:45	10/13/23
MBLK2W	ICJ056WB	ND	1	NA	0.5	0.13	0.25	10/26/2314:16	NA	AJ32-03	AJ32-01	ICJ056W	NA	NA
LCS2W	ICJ056WL	4.8	1	NA	0.5	0.13	0.25	10/26/2314:36	NA	AJ32-04	AJ32-01	ICJ056W	NA	NA
LCD2W	ICJ056WC	4.8	1	NA	0.5	0.13	0.25	10/26/2314:56	NA	AJ32-05	AJ32-01	ICJ056W	NA	NA
TMW32102023	J142-06K	1000	100	NA	50	13	25	10/27/2301:24	NA	AJ32-36	AJ32-25	ICJ056W	10/12/2310:30	10/13/23