List of Well IDs and Corresponding SDG Numbers and PDF Page Numbers

Well ID	SDG No.	PDF Page No.
BGMW01	23D208	22
BGMW02	23D208	22
BGMW03	23D208	20
BGMW07	23D213	283
	23D280	1206
BGMW08	23D213	283
	23D249	745
BGMW09	23D205	3
	23D213	284
BGMW10	23D208	20
BGMW11	23D225	518
BGMW12	23D205	3
	23D213	285
BGMW13S	23D286	1224
BGMW13D	23D286	1225
FW31	23D301	1815
MW01	23D208	21
MW02	23D208	21
MW03	23D249	745
	23D259	1069
MW18D	23D301	1816
MW20	23D301	1816
MW22D	23D322	2090
MW23	23D280	1206
	23D292	1473
MW24	23D208	21
MW25	23D258	764
MW26	23D280	1206
	23D292	1473
MW27	23D280	1206
	23D292	1474
MW28	23D208	21
MW29	23D258	762
MW30	23D301	1814
MW31	23D301	1814
MW32	23D213	283
	23D249	745
MW33	23D280	1206
	23D292	1472
MW34	23D280	1206
	23D292	1472
MW35	23D280	1206
	23D292	1475
MW36S	23D280	1206
	23D292	1473
MW36D	23D280	1206
	23D292	1472
MW37	23D286	1223
MW38	23D322	2089
MW39	23D322	2089
SMW01	23D225	517
TMW01	23D249	745
	23D259	1069
TMW02	23D258	764
TMW03	23D280	1206
	23D292	1475
TMW04	23D258	763
TMW06	23D301	1815
TMW07	23D258	762
TMW08	23D225	518
TMW10	23D249	745
	23D259	1069
TMW13	23D301	1816
TMW14A	23D258	764
TMW15	23D301	1814
TMW16	23D213	285
TMW17	23D258	765
TMW18	23D213	284
	23D249	745
TMW19	23D213	285
TMW21	23D322	2090
TMW22	23D258	763
TMW23	23D258	762
TMW24	23D280	1206
	23D292	1474
TMW25	23D322	2089
TMW26	23D225	517
TMW27	23D225	519
TMW28	23D280	1206
	23D292	1473
TMW29	23D258	763
TMW30	23D225	517

List of Well IDs and Corresponding SDG Numbers and PDF Page Numbers

Well ID	SDG No.	PDF Page No.
TMW31S	23D225	518
TMW31D	23D286	1225
TMW32	23D322	2089
TMW33	23D258	764
TMW34	23D301	1816
TMW35	23D301	1815
TMW36	23D205	3
	23D213	284
TMW37	23D208	20
TMW38	23D322	2090
TMW39S	23D249	745
	23D259	1069
TMW39D	23D286	1224
TMW40D	23D286	1224
TMW41	23D258	762
TMW43	23D286	1223
TMW44	23D208	21
TMW45	23D286	1224
TMW46	23D208	21

Well ID	SDG No.	PDF Page No.
TMW47	23D322	2090
TMW48	23D286	1224
TMW49	23D301	1815
TMW50	23D225	517
TMW51	23D258	764
TMW52	23D286	1223
TMW53	23D280	1206
	23D292	1474
TMW55	23D258	763
TMW57	23D280	1206
	23D292	1473
TMW58	23D213	284
TMW59	23D280	1206
	23D292	1474
TMW61	23D280	1206
	23D292	1474
TMW62	23D258	763
TMW63	23D225	518
TMW64	23D301	1815

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

Date: 05-12-2023
EMAX Batch No.: 23D205

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 04/19/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
BGMW07042023	D205-01	04/17/23	WATER	CANCELLED
MW32042023	D205-02	04/17/23	WATER	CANCELLED
BGMW08042023	D205-03	04/17/23	WATER	CANCELLED
TMW18042023	D205-04	04/17/23	WATER	CANCELLED
TMW58042023	D205-05	04/17/23	WATER	CANCELLED
BGMW09042023	D205-06	04/17/23	WATER	ANIONS BY IC
BGMW09042023D	D205-07	04/17/23	WATER	CANCELLED
TMW36042023	D205-08	04/17/23	WATER	ANIONS BY IC
BGMW12042023	D205-09	04/17/23	WATER	ANIONS BY IC
BGMW07042023MS	D205-01M	04/17/23	WATER	CANCELLED
BGMW07042023MSD	D205-01S	04/17/23	WATER	CANCELLED

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 CA002912022-24
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

ANIONS BY IC

SDG#: 23D205

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D205

METHOD 9056A
BROMIDE

A total of three(3) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 : 23D205

METHOD 9056A
CHLORIDE-CL

A total of three(3) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 : 23D205

METHOD 9056A
FLUORIDE

A total of three(3) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 : 23D205

METHOD SW9056A
NITRATE-N

A total of three(3) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 : 23D205

METHOD SW9056A
NITRITE-N

A total of three(3) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 : 23D205

METHOD 9056A
ORTHOPHOSPHATE-P

A total of three(3) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 : 23D205

METHOD 9056A
SULFATE

A total of three(3) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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. : 23D205

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	ICD016WB	ND	1	NA	0.5	0.13	0.25	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	0.96	1	NA	0.5	0.13	0.25	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	0.96	1	NA	0.5	0.13	0.25	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW09042023	D205-06	0.38J	1	NA	0.5	0.13	0.25	04/19/2310:24	NA	AD16-06	AD16-01	ICD016W	04/17/2310:25	04/19/23
TMW36042023	D205-08	0.39J	1	NA	0.5	0.13	0.25	04/19/2310:44	NA	AD16-07	AD16-01	ICD016W	04/17/2311:30	04/19/23
BGMW12042023	D205-09	0.53	1	NA	0.5	0.13	0.25	04/19/2311:05	NA	AD16-08	AD16-01	ICD016W	04/17/2312:50	04/19/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D205

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	ICD016WB	ND	1	NA	0.2	0.05	0.1	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	1.9	1	NA	0.2	0.05	0.1	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	1.9	1	NA	0.2	0.05	0.1	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW09042023	D205-06I	480	100	NA	20	5	10	04/19/2320:53	NA	AD16-37	AD16-35	ICD016W	04/17/2310:25	04/19/23
TMW36042023	D205-08I	130	20	NA	4	1	2	04/19/2321:34	NA	AD16-39	AD16-35	ICD016W	04/17/2311:30	04/19/23
BGMW12042023	D205-09I	85	20	NA	4	1	2	04/19/2322:14	NA	AD16-41	AD16-35	ICD016W	04/17/2312:50	04/19/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D205

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	ICD016WB	ND	1	NA	0.1	0.025	0.05	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	0.96	1	NA	0.1	0.025	0.05	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	0.96	1	NA	0.1	0.025	0.05	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW09042023	D205-06	0.86	1	NA	0.1	0.025	0.05	04/19/2310:24	NA	AD16-06	AD16-01	ICD016W	04/17/2310:25	04/19/23
TMW36042023	D205-08	0.68	1	NA	0.1	0.025	0.05	04/19/2310:44	NA	AD16-07	AD16-01	ICD016W	04/17/2311:30	04/19/23
BGMW12042023	D205-09	1.7	1	NA	0.1	0.025	0.05	04/19/2311:05	NA	AD16-08	AD16-01	ICD016W	04/17/2312:50	04/19/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D205

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	ICD016WB	ND	1	NA	0.1	0.03	0.06	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	1.0	1	NA	0.1	0.03	0.06	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	1.0	1	NA	0.1	0.03	0.06	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW09042023	D205-06	0.71	1	NA	0.1	0.03	0.06	04/19/2310:24	NA	AD16-06	AD16-01	ICD016W	04/17/2310:25	04/19/23
TMW36042023	D205-08	0.073J	1	NA	0.1	0.03	0.06	04/19/2310:44	NA	AD16-07	AD16-01	ICD016W	04/17/2311:30	04/19/23
BGMW12042023	D205-09	ND	1	NA	0.1	0.03	0.06	04/19/2311:05	NA	AD16-08	AD16-01	ICD016W	04/17/2312:50	04/19/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D205

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	ICD016WB	ND	1	NA	0.1	0.03	0.06	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	2.0	1	NA	0.1	0.03	0.06	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	2.0	1	NA	0.1	0.03	0.06	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW09042023	D205-06	ND	1	NA	0.1	0.03	0.06	04/19/2310:24	NA	AD16-06	AD16-01	ICD016W	04/17/2310:25	04/19/23
TMW36042023	D205-08	ND	1	NA	0.1	0.03	0.06	04/19/2310:44	NA	AD16-07	AD16-01	ICD016W	04/17/2311:30	04/19/23
BGMW12042023	D205-09	ND	1	NA	0.1	0.03	0.06	04/19/2311:05	NA	AD16-08	AD16-01	ICD016W	04/17/2312:50	04/19/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D205
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	ICD016WB	ND	1	NA	0.5	0.12	0.25	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	1.9	1	NA	0.5	0.12	0.25	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	1.9	1	NA	0.5	0.12	0.25	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW09042023	D205-06	ND	1	NA	0.5	0.12	0.25	04/19/2310:24	NA	AD16-06	AD16-01	ICD016W	04/17/2310:25	04/19/23
TMW36042023	D205-08	ND	1	NA	0.5	0.12	0.25	04/19/2310:44	NA	AD16-07	AD16-01	ICD016W	04/17/2311:30	04/19/23
BGMW12042023	D205-09	ND	1	NA	0.5	0.12	0.25	04/19/2311:05	NA	AD16-08	AD16-01	ICD016W	04/17/2312:50	04/19/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D205

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	ICD016WB	ND	1	NA	0.5	0.13	0.25	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	4.7	1	NA	0.5	0.13	0.25	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	4.7	1	NA	0.5	0.13	0.25	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW09042023	D205-06J	1800	200	NA	100	26	50	04/19/2321:13	NA	AD16-38	AD16-35	ICD016W	04/17/2310:25	04/19/23
TMW36042023	D205-08J	970	100	NA	50	13	25	04/19/2321:54	NA	AD16-40	AD16-35	ICD016W	04/17/2311:30	04/19/23
BGMW12042023	D205-09J	500	100	NA	50	13	25	04/19/2322:35	NA	AD16-42	AD16-35	ICD016W	04/17/2312:50	04/19/23

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

Date: 06-27-2023
EMAX Batch No.: 23D208

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 04/19/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
BGMW03042023	D208-01	04/18/23	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
TMW37042023	D208-02	04/18/23	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
BGMW10042023	D208-03	04/18/23	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
BGMW10042023D	D208-04	04/18/23	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
TMW44042023	D208-05	04/18/23	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
TMW46042023	D208-06	04/18/23	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
MW24042023	D208-07	04/18/23	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
MW02042023	D208-08	04/18/23	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 TPH-DRO ANIONS BY IC
MW01042023	D208-09	04/18/23	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 TPH-DRO ANIONS BY IC
MW28042023	D208-10	04/18/23	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
BGMW02042023	D208-11	04/18/23	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
BGMW01042023	D208-12	04/18/23	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
QC18042023EB01	D208-13	04/18/23	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
QC18042023TB02	D208-14	04/18/23	WATER	VOCS BY B260C 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,

X.....
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 CA002912022-24
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#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of fourteen(14) water samples were received on 04/19/23 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 four(4)CCVs (Data File IDs: RDY832, RDY850, REC031 and REC051) associated with this SDG. All calibration requirements were satisfied. Refer Note that "Minimum Response Factor" for all target analytes were within method recommended response factor 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. VO67E03B and VOF5D32B 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. VO67E03L/VO67E03Y and VOF5D32L/VOF5D32C 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
VOLATILE ORGANICS BY GC/MS

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

SDG NO. : 23D208
Instrument ID : F5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOF5D32L	1	NA	04/28/2306:59	04/28/2306:59	RDY833	RDY818	VOF5D32	Lab Control Sample (LCS)
LCD1W	VOF5D32C	1	NA	04/28/2307:24	04/28/2307:24	RDY834	RDY818	VOF5D32	LCS Duplicate
MBLK1W	VOF5D32B	1	NA	04/28/2308:13	04/28/2308:13	RDY836	RDY818	VOF5D32	Method Blank
BGMW03042023	23D208-01	1	NA	04/28/2308:38	04/28/2308:38	RDY837	RDY818	VOF5D32	Field Sample
TMW37042023	23D208-02	1	NA	04/28/2309:03	04/28/2309:03	RDY838	RDY818	VOF5D32	Field Sample
BGMW10042023	23D208-03	1	NA	04/28/2309:28	04/28/2309:28	RDY839	RDY818	VOF5D32	Field Sample
BGMW10042023D	23D208-04	1	NA	04/28/2309:53	04/28/2309:53	RDY840	RDY818	VOF5D32	Field Sample
TMW44042023	23D208-05	1	NA	04/28/2310:18	04/28/2310:18	RDY841	RDY818	VOF5D32	Field Sample
TMW46042023	23D208-06	1	NA	04/28/2310:43	04/28/2310:43	RDY842	RDY818	VOF5D32	Field Sample
MW24042023	23D208-07	1	NA	04/28/2311:08	04/28/2311:08	RDY843	RDY818	VOF5D32	Field Sample
MW02042023	23D208-08	1	NA	04/28/2311:33	04/28/2311:33	RDY844	RDY818	VOF5D32	Field Sample
MW01042023	23D208-09	1	NA	04/28/2311:58	04/28/2311:58	RDY845	RDY818	VOF5D32	Field Sample
MW28042023	23D208-10	1	NA	04/28/2312:23	04/28/2312:23	RDY846	RDY818	VOF5D32	Field Sample
LCS2W!	VO67E03L	1	NA	05/02/2307:28	05/02/2307:28	REC032	RDC593	VO67E03	Lab Control Sample (LCS)
MBLK2W!	VO67E03B	1	NA	05/02/2308:44	05/02/2308:44	REC035	RDC593	VO67E03	Method Blank
BGMW02042023!	23D208-11	1	NA	05/02/2309:10	05/02/2309:10	REC036	RDC593	VO67E03	Field Sample
BGMW01042023!	23D208-12	1	NA	05/02/2309:35	05/02/2309:35	REC037	RDC593	VO67E03	Field Sample
QC18042023EB01!	23D208-13	1	NA	05/02/2310:01	05/02/2310:01	REC038	RDC593	VO67E03	Field Sample
QC18042023TB02!	23D208-14	1	NA	05/02/2310:27	05/02/2310:27	REC039	RDC593	VO67E03	Field Sample
LCD2W!	VO67E03Y	1	NA	05/02/2313:52	05/02/2313:52	REC047	RDC593	VO67E03	LCS Duplicate

! Instrument ID : 67
FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:20
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/28/23 08:38
Sample ID	: BGMW03042023	Date Analyzed:	04/28/23 08:38
Lab Samp ID:	23D208-01	Dilution Factor:	1
Lab File ID:	RDY837	Matrix:	WATER
Ext Btch ID:	VOF5D32	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	9.35	10.0	94	85-114
Toluene-d8	9.94	10.0	99	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 07:30
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/28/23 09:03
Sample ID : TMW37042023	Date Analyzed: 04/28/23 09:03
Lab Samp ID: 23D208-02	Dilution Factor: 1
Lab File ID: RDY838	Matrix: WATER
Ext Btch ID: VOF5D32	% Moisture: NA
Calib. Ref.: RDY818	Instrument ID: F5

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	9.97	10.0	100	81-118
4-Bromofluorobenzene	9.47	10.0	95	85-114
Toluene-d8	9.89	10.0	99	89-112
Dibromofluoromethane	9.88	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/28/23 09:28
Sample ID	: BGMW10042023	Date Analyzed:	04/28/23 09:28
Lab Samp ID:	23D208-03	Dilution Factor:	1
Lab File ID:	RDY839	Matrix:	WATER
Ext Btch ID:	VOF5D32	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	9.27	10.0	93	85-114
Toluene-d8	9.84	10.0	98	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/28/23 09:53
Sample ID	: BGMW10042023D	Date Analyzed:	04/28/23 09:53
Lab Samp ID:	23D208-04	Dilution Factor:	1
Lab File ID:	RDY840	Matrix:	WATER
Ext Btch ID:	VOF5D32	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	9.38	10.0	94	85-114
Toluene-d8	9.99	10.0	100	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 08:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/28/23 10:18
Sample ID	: TMW44042023	Date Analyzed:	04/28/23 10:18
Lab Samp ID:	23D208-05	Dilution Factor:	1
Lab File ID:	RDY841	Matrix:	WATER
Ext Btch ID:	VOF5D32	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	10.0	10.0	100	81-118
4-Bromofluorobenzene	9.25	10.0	92	85-114
Toluene-d8	10.3	10.0	103	89-112
Dibromofluoromethane	9.94	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/28/23 10:43
Sample ID	: TMW46042023	Date Analyzed:	04/28/23 10:43
Lab Samp ID:	23D208-06	Dilution Factor:	1
Lab File ID:	RDY842	Matrix:	WATER
Ext Btch ID:	VOF5D32	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	9.37	10.0	94	85-114
Toluene-d8	10.3	10.0	103	89-112
Dibromofluoromethane	9.90	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 09:00
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/28/23 11:08
Sample ID : MW24042023	Date Analyzed: 04/28/23 11:08
Lab Samp ID: 23D208-07	Dilution Factor: 1
Lab File ID: RDY843	Matrix: WATER
Ext Btch ID: VOF5D32	% Moisture: NA
Calib. Ref.: RDY818	Instrument ID: F5

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	9.29	10.0	93	85-114
Toluene-d8	10.3	10.0	103	89-112
Dibromofluoromethane	9.97	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/28/23 11:33
Sample ID	: MW02042023	Date Analyzed:	04/28/23 11:33
Lab Samp ID:	23D208-08	Dilution Factor:	1
Lab File ID:	RDY844	Matrix:	WATER
Ext Btch ID:	VOF5D32	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	8.98	10.0	90	85-114
Toluene-d8	9.90	10.0	99	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 09:55
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/28/23 11:58
Sample ID : MW01042023	Date Analyzed: 04/28/23 11:58
Lab Samp ID: 23D208-09	Dilution Factor: 1
Lab File ID: RDY845	Matrix: WATER
Ext Btch ID: VOF5D32	% Moisture: NA
Calib. Ref.: RDY818	Instrument ID: F5

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	0.16J	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	8.90	10.0	89	85-114
Toluene-d8	10.0	10.0	100	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/28/23 12:23
Sample ID	: MW28042023	Date Analyzed:	04/28/23 12:23
Lab Samp ID:	23D208-10	Dilution Factor:	1
Lab File ID:	RDY846	Matrix:	WATER
Ext Btch ID:	VOF5D32	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	5.0J	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	9.28	10.0	93	85-114
Toluene-d8	9.90	10.0	99	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	05/02/23 09:10
Sample ID	: BGMW02042023	Date Analyzed:	05/02/23 09:10
Lab Samp ID:	23D208-11	Dilution Factor:	1
Lab File ID:	REC036	Matrix:	WATER
Ext Btch ID:	V067E03	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.69	10.0	97	81-118
4-Bromofluorobenzene	9.91	10.0	99	85-114
Toluene-d8	9.73	10.0	97	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 13:00
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 05/02/23 09:35
Sample ID : BGMW01042023	Date Analyzed: 05/02/23 09:35
Lab Samp ID: 23D208-12	Dilution Factor: 1
Lab File ID: REC037	Matrix: WATER
Ext Btch ID: V067E03	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.46	10.0	95	81-118
4-Bromofluorobenzene	9.86	10.0	99	85-114
Toluene-d8	9.73	10.0	97	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 14:00
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 05/02/23 10:01
Sample ID : QC18042023EB01	Date Analyzed: 05/02/23 10:01
Lab Samp ID: 23D208-13	Dilution Factor: 1
Lab File ID: REC038	Matrix: WATER
Ext Btch ID: V067E03	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	0.76J	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	0.89J	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	0.33J	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	11.0	10.0	110	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 08:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	05/02/23 10:27
Sample ID	: QC18042023TB02	Date Analyzed:	05/02/23 10:27
Lab Samp ID:	23D208-14	Dilution Factor:	1
Lab File ID:	REC039	Matrix:	WATER
Ext Btch ID:	V067E03	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	11.0	10.0	110	85-114
Toluene-d8	11.0	10.0	110	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : VLu
Analyzed by : VLu
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#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

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

A total of eleven(11) water samples were received on 04/19/23 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: RDJ389, RDJ390, RDJ419, RDJ420, RDH389, RDH390, RDH424 and RDH425) 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. SVD029WB - 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. SVD029WL/SVD029WC 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 2-Fluorophenol and Phenol-D5 in D208-03 and Phenol-D5 in D208-07; 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.

Sample D208-05 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 : 23D208

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

A total of eleven(11) water samples were received on 04/19/23 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: RDH390, RDH424, RDJ390 and RDJ419) 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. SVD029WB - 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. CLD029WL/CLD029WC 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 D208-05 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 : 23D208

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

A total of eleven(11) water samples were received on 04/19/23 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: RDH391, RDH423, RDJ391 and RDJ418) 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. SVD029WB - 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. CLD029WL/CLD029WC 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 D208-05 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. : 23D208
Instrument ID : E7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
BGMW03042023	23D208-01	1	NA	04/27/2316:05	04/24/2316:30	RDH412	RCH015	23SVD029W	Field Sample
TMW37042023	23D208-02	1	NA	04/27/2316:24	04/24/2316:30	RDH413	RCH015	23SVD029W	Field Sample
BGMW10042023	23D208-03	1	NA	04/27/2316:42	04/24/2316:30	RDH414	RCH015	23SVD029W	Field Sample
BGMW10042023D	23D208-04	1	NA	04/27/2317:01	04/24/2316:30	RDH415	RCH015	23SVD029W	Field Sample
TMW44042023	23D208-05	2	NA	04/27/2317:20	04/24/2316:30	RDH416	RCH015	23SVD029W	Field Sample
TMW46042023	23D208-06	1	NA	04/27/2317:39	04/24/2316:30	RDH417	RCH015	23SVD029W	Field Sample
MW24042023	23D208-07	1	NA	04/27/2317:57	04/24/2316:30	RDH418	RCH015	23SVD029W	Field Sample
MW28042023	23D208-10	1	NA	04/27/2318:16	04/24/2316:30	RDH419	RCH015	23SVD029W	Field Sample
BGMW02042023	23D208-11	1	NA	04/27/2318:35	04/24/2316:30	RDH420	RCH015	23SVD029W	Field Sample
8GMW01042023	23D208-12	1	NA	04/27/2318:53	04/24/2316:30	RDH421	RCH015	23SVD029W	Field Sample
QC18042023EB01	23D208-13	1	NA	04/27/2319:12	04/24/2316:30	RDH422	RCH015	23SVD029W	Field Sample
LCS1W!	SVD029WL	1	NA	04/27/2311:06	04/24/2316:30	RDJ395	RCJ011	23SVD029W	Lab Control Sample (LCS)
LCD1W!	SVD029WC	1	NA	04/27/2311:25	04/24/2316:30	RDJ396	RCJ011	23SVD029W	LCS Duplicate
MBLK1W!	SVD029WB	1	NA	04/27/2312:21	04/24/2316:30	RDJ399	RCJ011	23SVD029W	Method Blank

! Instrument ID : E4
FN - Filename
% Moist - Percent Moisture

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

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

SDG NO. : 23D208
Instrument ID : E7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
BGMW03042023	23D208-01	1	NA	04/27/2316:05	04/24/2316:30	RDH412	RCH028	23SVD029W	Field Sample
TMW37042023	23D208-02	1	NA	04/27/2316:24	04/24/2316:30	RDH413	RCH028	23SVD029W	Field Sample
BGMW10042023	23D208-03	1	NA	04/27/2316:42	04/24/2316:30	RDH414	RCH028	23SVD029W	Field Sample
BGMW10042023D	23D208-04	1	NA	04/27/2317:01	04/24/2316:30	RDH415	RCH028	23SVD029W	Field Sample
TMW44042023	23D208-05	2	NA	04/27/2317:20	04/24/2316:30	RDH416	RCH028	23SVD029W	Field Sample
TMW46042023	23D208-06	1	NA	04/27/2317:39	04/24/2316:30	RDH417	RCH028	23SVD029W	Field Sample
MW24042023	23D208-07	1	NA	04/27/2317:57	04/24/2316:30	RDH418	RCH028	23SVD029W	Field Sample
MW28042023	23D208-10	1	NA	04/27/2318:16	04/24/2316:30	RDH419	RCH028	23SVD029W	Field Sample
BGMW02042023	23D208-11	1	NA	04/27/2318:35	04/24/2316:30	RDH420	RCH028	23SVD029W	Field Sample
BGMW01042023	23D208-12	1	NA	04/27/2318:53	04/24/2316:30	RDH421	RCH028	23SVD029W	Field Sample
QC18042023EB01	23D208-13	1	NA	04/27/2319:12	04/24/2316:30	RDH422	RCH028	23SVD029W	Field Sample
LCS1W!	CLD029WL	1	NA	04/27/2311:44	04/24/2316:30	RDJ397	RCJ498	23SVD029W	Lab Control Sample (LCS)
LCD1W!	CLD029WC	1	NA	04/27/2312:02	04/24/2316:30	RDJ398	RCJ498	23SVD029W	LCS Duplicate
MBLK1W!	SVD029WB	1	NA	04/27/2312:21	04/24/2316:30	RDJ399	RCJ498	23SVD029W	Method Blank

! Instrument ID : E4
FN - Filename
% Moist - Percent Moisture

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

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

SDG NO. : 23D208
Instrument ID : E7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
BGMW03042023	23D208-01	1	NA	04/27/2316:05	04/24/2316:30	RDH412	RCH007	23SVD029W	Field Sample
TMW37042023	23D208-02	1	NA	04/27/2316:24	04/24/2316:30	RDH413	RCH007	23SVD029W	Field Sample
BGMW10042023	23D208-03	1	NA	04/27/2316:42	04/24/2316:30	RDH414	RCH007	23SVD029W	Field Sample
BGMW10042023D	23D208-04	1	NA	04/27/2317:01	04/24/2316:30	RDH415	RCH007	23SVD029W	Field Sample
TMW44042023	23D208-05	2	NA	04/27/2317:20	04/24/2316:30	RDH416	RCH007	23SVD029W	Field Sample
TMW46042023	23D208-06	1	NA	04/27/2317:39	04/24/2316:30	RDH417	RCH007	23SVD029W	Field Sample
MW24042023	23D208-07	1	NA	04/27/2317:57	04/24/2316:30	RDH418	RCH007	23SVD029W	Field Sample
MW28042023	23D208-10	1	NA	04/27/2318:16	04/24/2316:30	RDH419	RCH007	23SVD029W	Field Sample
BGMW02042023	23D208-11	1	NA	04/27/2318:35	04/24/2316:30	RDH420	RCH007	23SVD029W	Field Sample
BGMW01042023	23D208-12	1	NA	04/27/2318:53	04/24/2316:30	RDH421	RCH007	23SVD029W	Field Sample
QC18042023EB01	23D208-13	1	NA	04/27/2319:12	04/24/2316:30	RDH422	RCH007	23SVD029W	Field Sample
LCS1W!	CLD029WL	1	NA	04/27/2311:44	04/24/2316:30	RDJ397	RCJ025	23SVD029W	Lab Control Sample (LCS)
LCD1W!	CLD029WC	1	NA	04/27/2312:02	04/24/2316:30	RDJ398	RCJ025	23SVD029W	LCS Duplicate
MBLK1W!	SVD029WB	1	NA	04/27/2312:21	04/24/2316:30	RDJ399	RCJ025	23SVD029W	Method Blank

! Instrument ID : E4
FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208
Sample ID : BGMW03042023
Lab Samp ID: 23D208-01
Lab File ID: RDH412
Ext Btch ID: 23SVD029W
Calib. Ref.: RCH015

Date Collected: 04/18/23 07:20
Date Received: 04/19/23
Date Extracted: 04/24/23 16:30
Date Analyzed: 04/27/23 16:05
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E7

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	41.0	66.6	62	43-140
2-Fluorobiphenyl	12.4	22.2	56	44-119
2-Fluorophenol	35.5	66.6	53	19-119
Nitrobenzene-d5	12.6	22.2	57	44-120
Phenol-d5	41.6	66.6	63	40-130
Terphenyl-d14	15.5	22.2	70	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: RCH007 DCC Ref: RDH390

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:20
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW03042023	Date Analyzed:	04/27/23 16:05
Lab Samp ID:	23D208-01	Dilution Factor:	1
Lab File ID:	RDH412	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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:	04/18/23 07:20
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW03042023	Date Analyzed:	04/27/23 16:05
Lab Samp ID:	23D208-01	Dilution Factor:	1
Lab File ID:	RDH412	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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: 04/18/23 07:30
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/24/23 16:30
Sample ID : TMW37042023	Date Analyzed: 04/27/23 16:24
Lab Samp ID: 23D208-02	Dilution Factor: 1
Lab File ID: RDH413	Matrix: WATER
Ext Btch ID: 23SVD029W	% Moisture: NA
Calib. Ref.: RCH015	Instrument ID: E7

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	31.9	72.0	44	43-140
2-Fluorobiphenyl	10.5	24.0	44	44-119
2-Fluorophenol	26.9	72.0	37	19-119
Nitrobenzene-d5	12.0	24.0	50	44-120
Phenol-d5	32.8	72.0	46	40-130
Terphenyl-d14	17.9	24.0	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: RCH007 DCC Ref: RDH390
* Out of QC Limits

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:	04/18/23 07:30
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: TMW37042023	Date Analyzed:	04/27/23 16:24
Lab Samp ID:	23D208-02	Dilution Factor:	1
Lab File ID:	RDH413	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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:	04/18/23 07:30
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: TMW37042023	Date Analyzed:	04/27/23 16:24
Lab Samp ID:	23D208-02	Dilution Factor:	1
Lab File ID:	RDH413	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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.
Project : USACE WINGATE
Batch No. : 23D208
Sample ID : BGMW10042023
Lab Samp ID: 23D208-03
Lab File ID: RDH414
Ext Btch ID: 23SVD029W
Calib. Ref.: RCH015

Date Collected: 04/18/23 07:40
Date Received: 04/19/23
Date Extracted: 04/24/23 16:30
Date Analyzed: 04/27/23 16:42
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E7

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	33.1	65.4	51	43-140
2-Fluorobiphenyl	12.4	21.8	57	44-119
2-Fluorophenol	9.85	65.4	15*	19-119
Nitrobenzene-d5	12.2	21.8	56	44-120
Phenol-d5	20.7	65.4	32*	40-130
Terphenyl-d14	16.8	21.8	77	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: RCH007 DCC Ref: RDH390
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW10042023	Date Analyzed:	04/27/23 16:42
Lab Samp ID:	23D208-03	Dilution Factor:	1
Lab File ID:	RDH414	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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:	04/18/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW10042023	Date Analyzed:	04/27/23 16:42
Lab Samp ID:	23D208-03	Dilution Factor:	1
Lab File ID:	RDH414	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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: 04/18/23 07:50
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D20B	Date Extracted: 04/24/23 16:30
Sample ID : BGMW10042023D	Date Analyzed: 04/27/23 17:01
Lab Samp ID: 23D208-04	Dilution Factor: 1
Lab File ID: RDH415	Matrix: WATER
Ext Btch ID: 23SVD029W	% Moisture: NA
Calib. Ref.: RCH015	Instrument ID: E7

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	41.1	70.8	58	43-140
2-Fluorobiphenyl	12.9	23.6	54	44-119
2-Fluorophenol	31.9	70.8	45	19-119
Nitrobenzene-d5	13.6	23.6	57	44-120
Phenol-d5	38.9	70.8	55	40-130
Terphenyl-d14	17.1	23.6	73	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: RCH007 DCC Ref: RDH390

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:	04/18/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW10042023D	Date Analyzed:	04/27/23 17:01
Lab Samp ID:	23D208-04	Dilution Factor:	1
Lab File ID:	RDH415	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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:	04/18/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW10042023D	Date Analyzed:	04/27/23 17:01
Lab Samp ID:	23D208-04	Dilution Factor:	1
Lab File ID:	RDH415	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208
Sample ID : TMW44042023
Lab Samp ID: 23D208-05
Lab File ID: RDH416
Ext Btch ID: 23SVD029W
Calib. Ref.: RCH015

Date Collected: 04/18/23 08:10
Date Received: 04/19/23
Date Extracted: 04/24/23 16:30
Date Analyzed: 04/27/23 17:20
Dilution Factor: 2
Matrix: WATER
% Moisture: NA
Instrument ID: E7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	48	12	24
1,2-Dichlorobenzene	ND	24	6.0	12
1,2-Diphenylhydrazine	ND	24	6.0	12
1,3-Dichlorobenzene	ND	24	6.0	12
1,4-Dichlorobenzene	ND	24	6.0	12
2,4,5-Trichlorophenol	ND	24	6.0	12
2,4,6-Trichlorophenol	ND	24	6.0	12
2,4-Dichlorophenol	ND	24	6.0	12
2,4-Dimethylphenol	ND	24	6.0	12
2,4-Dinitrophenol	ND	48	6.0	12
2,4-Dinitrotoluene	ND	24	6.0	12
2,6-Dinitrotoluene	ND	24	6.0	12
2-Chloronaphthalene	ND	24	6.0	12
2-Chlorophenol	ND	24	6.0	12
2-Methylnaphthalene	ND	24	6.0	12
2-Methylphenol	ND	24	6.0	12
2-Nitroaniline	ND	24	6.0	12
2-Nitrophenol	ND	24	6.0	12
3,3'-Dichlorobenzidine	ND	24	6.0	12
3/4-Methylphenol	ND	24	6.0	12
3-Nitroaniline	ND	24	6.0	12
4,6-Dinitro-2-methylphenol	ND	48	6.0	12
4-Bromophenyl phenyl ether	ND	24	6.0	12
4-Chloro-3-methylphenol	ND	24	6.0	12
4-Chloroaniline	ND	48	12	24
4-Chlorophenyl-phenyl ether	ND	24	6.0	12
4-Nitroaniline	ND	24	6.0	12
4-Nitrophenol	ND	48	6.0	12
Acenaphthene	ND	24	6.0	12
Acenaphthylene	ND	24	6.0	12
Anthracene	ND	24	6.0	12
Benzo(a)anthracene	ND	24	6.0	12
Benzo(a)pyrene	ND	24	6.0	12
Benzo(b)fluoranthene	ND	24	6.0	12
Benzo(g,h,i)perylene	ND	24	6.0	12
Benzo(k)fluoranthene	ND	24	6.0	12
Benzoic Acid	ND	240	48	96
Benzyl Alcohol	ND	24	6.0	12
bis(2-Chloroisopropyl) ether	ND	24	6.0	12
bis(2-Chloroethoxy)methane	ND	24	6.0	12
bis(2-Chloroethyl) ether	ND	24	6.0	12
bis(2-Ethylhexyl) phthalate	ND	48	12	24
Butylbenzylphthalate	ND	24	6.0	12
Carbazole	ND	24	6.0	12
Chrysene	ND	24	6.0	12
Dibenzo(a,h)anthracene	ND	24	6.0	12
Dibenzofuran	ND	24	6.0	12
Diethylphthalate	ND	24	6.0	12
Dimethylphthalate	ND	24	6.0	12
Di-n-butyl phthalate	ND	24	6.0	12
Di-n-octyl phthalate	ND	24	6.0	12
Fluoranthene	ND	24	6.0	12
Fluorene	ND	24	6.0	12
Hexachlorobenzene	ND	24	6.0	12
Hexachlorobutadiene	ND	24	6.0	12
Hexachloroethane	ND	24	6.0	12
Indeno(1,2,3-cd)pyrene	ND	24	6.0	12
Isophorone	ND	24	6.0	12
Naphthalene	ND	24	6.0	12
Nitrobenzene	ND	24	6.0	12
N-Nitrosodimethylamine	ND	24	6.0	12
n-Nitroso-di-n-propylamine	ND	24	6.0	12
n-Nitrosodiphenylamine	ND	24	6.0	12
Pentachlorophenol	ND	48	6.0	12
Phenanthrene	ND	24	6.0	12
Phenol	ND	24	6.0	12
Pyrene	ND	24	6.0	12
Hexachlorocyclopentadiene	ND	24	6.0	12
Benzidine	ND	96	24	48
2,3,4,6-Tetrachlorophenol	ND	24	6.0	12
2,6-Dichlorophenol	ND	24	6.0	12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	44.2	72.0	61	43-140
2-Fluorobiphenyl	16.0	24.0	67	44-119
2-Fluorophenol	35.7	72.0	50	19-119
Nitrobenzene-d5	16.6	24.0	69	44-120
Phenol-d5	44.5	72.0	62	40-130
Terphenyl-d14	19.2	24.0	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.
Sample Amount : 830ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 08:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: TMW44042023	Date Analyzed:	04/27/23 17:20
Lab Samp ID:	23D208-05	Dilution Factor:	2
Lab File ID:	RDH416	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	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 3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 08:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: TMW44042023	Date Analyzed:	04/27/23 17:20
Lab Samp ID:	23D208-05	Dilution Factor:	2
Lab File ID:	RDH416	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	48	12	24
Benzaldehyde	ND	48	12	24

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.
Project : USACE WINGATE
Batch No. : 23D208
Sample ID : TMW46042023
Lab Samp ID: 23D208-06
Lab File ID: RDH417
Ext Btch ID: 23SVD029W
Calib. Ref.: RCH015

Date Collected: 04/18/23 09:00
Date Received: 04/19/23
Date Extracted: 04/24/23 16:30
Date Analyzed: 04/27/23 17:39
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E7

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	51.6	73.8	70	43-140
2-Fluorobiphenyl	18.6	24.6	75	44-119
2-Fluorophenol	35.9	73.8	49	19-119
Nitrobenzene-d5	17.0	24.6	69	44-120
Phenol-d5	47.1	73.8	64	40-130
Terphenyl-d14	20.1	24.6	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: TMW46042023	Date Analyzed:	04/27/23 17:39
Lab Samp ID:	23D208-06	Dilution Factor:	1
Lab File ID:	RDH417	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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	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:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: TMW46042023	Date Analyzed:	04/27/23 17:39
Lab Samp ID:	23D208-06	Dilution Factor:	1
Lab File ID:	RDH417	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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 : POreto Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: MW24042023	Date Analyzed:	04/27/23 17:57
Lab Samp ID:	23D208-07	Dilution Factor:	1
Lab File ID:	RDH418	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	32.5	62.4	52	43-140
2-Fluorobiphenyl	11.1	20.8	53	44-119
2-Fluorophenol	14.1	62.4	23	19-119
Nitrobenzene-d5	11.1	20.8	53	44-120
Phenol-d5	23.4	62.4	37*	40-130
Terphenyl-d14	15.7	20.8	76	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: RCH007 DCC Ref: RDH390
* Out of QC Limits

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:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: MW24042023	Date Analyzed:	04/27/23 17:57
Lab Samp ID:	23D208-07	Dilution Factor:	1
Lab File ID:	RDH418	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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 : POreto Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: MW24042023	Date Analyzed:	04/27/23 17:57
Lab Samp ID:	23D208-07	Dilution Factor:	1
Lab File ID:	RDH418	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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	: POreto	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208
Sample ID : MW28042023
Lab Samp ID: 23D208-10
Lab File ID: RDH419
Ext Btch ID: 23SVD029W
Calib. Ref.: RCH015

Date Collected: 04/18/23 11:10
Date Received: 04/19/23
Date Extracted: 04/24/23 16:30
Date Analyzed: 04/27/23 18:16
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E7

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	50.1	69.0	73	43-140
2-Fluorobiphenyl	13.4	23.0	58	44-119
2-Fluorophenol	33.5	69.0	49	19-119
Nitrobenzene-d5	12.7	23.0	55	44-120
Phenol-d5	40.2	69.0	58	40-130
Terphenyl-d14	15.1	23.0	66	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: RCH007 DCC Ref: RDH390

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: MW28042023	Date Analyzed:	04/27/23 18:16
Lab Samp ID:	23D208-10	Dilution Factor:	1
Lab File ID:	RDH419	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: MW28042023	Date Analyzed:	04/27/23 18:16
Lab Samp ID:	23D208-10	Dilution Factor:	1
Lab File ID:	RDH419	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW02042023	Date Analyzed:	04/27/23 18:35
Lab Samp ID:	23D208-11	Dilution Factor:	1
Lab File ID:	RDH420	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	38.6	63.0	61	43-140
2-Fluorobiphenyl	14.8	21.0	70	44-119
2-Fluorophenol	32.9	63.0	52	19-119
Nitrobenzene-d5	14.1	21.0	67	44-120
Phenol-d5	38.3	63.0	61	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: RCH007 DCC Ref: RDH390

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:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW02042023	Date Analyzed:	04/27/23 18:35
Lab Samp ID:	23D208-11	Dilution Factor:	1
Lab File ID:	RDH420	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW02042023	Date Analyzed:	04/27/23 18:35
Lab Samp ID:	23D208-11	Dilution Factor:	1
Lab File ID:	RDH420	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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.
Project : USACE WINGATE
Batch No. : 23D208
Sample ID : BGMW01042023
Lab Samp ID: 23D208-12
Lab File ID: RDH421
Ext Btch ID: 23SVD029W
Calib. Ref.: RCH015

Date Collected: 04/18/23 13:00
Date Received: 04/19/23
Date Extracted: 04/24/23 16:30
Date Analyzed: 04/27/23 18:53
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E7

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	41.9	66.6	63	43-140
2-Fluorobiphenyl	12.7	22.2	57	44-119
2-Fluorophenol	29.6	66.6	44	19-119
Nitrobenzene-d5	12.1	22.2	54	44-120
Phenol-d5	37.3	66.6	56	40-130
Terphenyl-d14	16.8	22.2	76	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: RCH007 DCC Ref: RDH390

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 13:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW01042023	Date Analyzed:	04/27/23 18:53
Lab Samp ID:	23D208-12	Dilution Factor:	1
Lab File ID:	RDH421	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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:	04/18/23 13:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: BGMW01042023	Date Analyzed:	04/27/23 18:53
Lab Samp ID:	23D208-12	Dilution Factor:	1
Lab File ID:	RDH421	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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: 04/18/23 14:00
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/24/23 16:30
Sample ID : QC18042023EB01	Date Analyzed: 04/27/23 19:12
Lab Samp ID: 23D208-13	Dilution Factor: 1
Lab File ID: RDH422	Matrix: WATER
Ext Btch ID: 23SVD029W	% Moisture: NA
Calib. Ref.: RCH015	Instrument ID: E7

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	35.0	69.0	51	43-140
2-Fluorobiphenyl	11.0	23.0	48	44-119
2-Fluorophenol	30.2	69.0	44	19-119
Nitrobenzene-d5	11.8	23.0	51	44-120
Phenol-d5	34.7	69.0	50	40-130
Terphenyl-d14	17.6	23.0	76	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: RCH007 DCC Ref: RDH390

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:	04/18/23 14:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: QC18042023EB01	Date Analyzed:	04/27/23 19:12
Lab Samp ID:	23D208-13	Dilution Factor:	1
Lab File ID:	RDH422	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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:	04/18/23 14:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/24/23 16:30
Sample ID	: QC18042023EB01	Date Analyzed:	04/27/23 19:12
Lab Samp ID:	23D208-13	Dilution Factor:	1
Lab File ID:	RDH422	Matrix:	WATER
Ext Btch ID:	23SVD029W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E7

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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

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

SDG#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

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

A total of six(6) water samples were received on 04/19/23 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. VGH7D10B - 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. VGH7D10L/VGH7D10C 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
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D208
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	VGH7D10B	1	NA	04/19/2313:21	04/19/2313:21	AD19004A	AD19003A	23VGH7D10	Method Blank
LCS1W	VGH7D10L	1	NA	04/19/2314:00	04/19/2314:00	AD19005A	AD19003A	23VGH7D10	Lab Control Sample (LCS)
LCD1W	VGH7D10C	1	NA	04/19/2314:38	04/19/2314:38	AD19006A	AD19003A	23VGH7D10	LCS Duplicate
TMW46042023	D208-06	1	NA	04/19/2319:06	04/19/2319:06	AD19013A	AD19012A	23VGH7D10	Field Sample
MW02042023	D208-08	1	NA	04/19/2319:45	04/19/2319:45	AD19014A	AD19012A	23VGH7D10	Field Sample
MW01042023	D208-09	1	NA	04/19/2320:23	04/19/2320:23	AD19015A	AD19012A	23VGH7D10	Field Sample
MW28042023	D208-10	1	NA	04/19/2321:01	04/19/2321:01	AD19016A	AD19012A	23VGH7D10	Field Sample
QC18042023EB01	D208-13	1	NA	04/19/2321:39	04/19/2321:39	AD19017A	AD19012A	23VGH7D10	Field Sample
QC18042023TB02	D208-14	1	NA	04/19/2322:18	04/19/2322:18	AD19018A	AD19012A	23VGH7D10	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:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/19/23 19:06
Sample ID	: TMW46042023	Date Analyzed:	04/19/23 19:06
Lab Samp ID:	D208-06	Dilution Factor:	1
Lab File ID:	AD19013A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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	37.9	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:	04/18/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/19/23 19:45
Sample ID	: MW02042023	Date Analyzed:	04/19/23 19:45
Lab Samp ID:	D208-08	Dilution Factor:	1
Lab File ID:	AD19014A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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:	04/18/23 09:55
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/19/23 20:23
Sample ID	: MW01042023	Date Analyzed:	04/19/23 20:23
Lab Samp ID:	D208-09	Dilution Factor:	1
Lab File ID:	AD19015A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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	36.5	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: 04/18/23 11:10
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/19/23 21:01
Sample ID : MW28042023	Date Analyzed: 04/19/23 21:01
Lab Samp ID: D208-10	Dilution Factor: 1
Lab File ID: AD19016A	Matrix: WATER
Ext Btch ID: 23VGH7D10	% Moisture: NA
Calib. Ref.: AD19012A	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	36.8	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:	04/18/23 14:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/19/23 21:39
Sample ID	: QC18042023EB01	Date Analyzed:	04/19/23 21:39
Lab Samp ID:	D208-13	Dilution Factor:	1
Lab File ID:	AD19017A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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:	04/18/23 08:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/19/23 22:18
Sample ID	: QC18042023TB02	Date Analyzed:	04/19/23 22:18
Lab Samp ID:	D208-14	Dilution Factor:	1
Lab File ID:	AD19018A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of five(5) water samples were received on 04/19/23 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. DSD025WB - 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. DSD025WL/DSD025WC 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. : 23D208
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	DSD025WB	1	NA	04/22/2302:51	04/20/2316:30	LD21042A	LD21039A	23DSD025W	Method Blank
LCS1W	DSD025WL	1	NA	04/22/2303:10	04/20/2316:30	LD21043A	LD21039A	23DSD025W	Lab Control Sample (LCS)
LCD1W	DSD025WC	1	NA	04/22/2303:28	04/20/2316:30	LD21044A	LD21039A	23DSD025W	LCS Duplicate
TMW46042023	D208-06	1	NA	04/22/2308:23	04/20/2316:30	LD21060A	LD21056A	23DSD025W	Field Sample
MW02042023	D208-08	1	NA	04/22/2308:42	04/20/2316:30	LD21061A	LD21056A	23DSD025W	Field Sample
MW01042023	D208-09	1	NA	04/22/2309:00	04/20/2316:30	LD21062A	LD21056A	23DSD025W	Field Sample
MW28042023	D208-10	1	NA	04/22/2309:19	04/20/2316:30	LD21063A	LD21056A	23DSD025W	Field Sample
QC18042023EB01	D208-13	1	NA	04/22/2309:37	04/20/2316:30	LD21064A	LD21056A	23DSD025W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/20/23 16:30
Sample ID	: TMW46042023	Date Analyzed:	04/22/23 08:23
Lab Samp ID:	23D208-06	Dilution Factor:	1
Lab File ID:	LD21060A	Matrix:	WATER
Ext Btch ID:	23DSD025W	% Moisture:	NA
Calib. Ref.:	LD21056A	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	0.954	1.06	90	60-130
Hexacosane	0.274	0.265	104	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:	04/18/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/20/23 16:30
Sample ID	: MW02042023	Date Analyzed:	04/22/23 08:42
Lab Samp ID:	23D208-08	Dilution Factor:	1
Lab File ID:	LD21061A	Matrix:	WATER
Ext Btch ID:	23DSD025W	% Moisture:	NA
Calib. Ref.:	LD21056A	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	0.837	1.01	83	60-130
Hexacosane	0.245	0.253	97	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:	04/18/23 09:55
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/20/23 16:30
Sample ID	: MW01042023	Date Analyzed:	04/22/23 09:00
Lab Samp ID:	23D208-09	Dilution Factor:	1
Lab File ID:	LD21062A	Matrix:	WATER
Ext Btch ID:	23DSD025W	% Moisture:	NA
Calib. Ref.:	LD21056A	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	0.868	1.00	87	60-130
Hexacosane	0.247	0.250	99	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: 04/18/23 11:10
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/20/23 16:30
Sample ID : MW28042023	Date Analyzed: 04/22/23 09:19
Lab Samp ID: 23D208-10	Dilution Factor: 1
Lab File ID: LD21063A	Matrix: WATER
Ext Btch ID: 23DSD025W	% Moisture: NA
Calib. Ref.: LD21056A	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	0.866	0.980	88	60-130
Hexacosane	0.268	0.245	109	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:	04/18/23 14:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/20/23 16:30
Sample ID	: QC18042023EB01	Date Analyzed:	04/22/23 09:37
Lab Samp ID:	23D208-13	Dilution Factor:	1
Lab File ID:	LD21064A	Matrix:	WATER
Ext Btch ID:	23DSD025W	% Moisture:	NA
Calib. Ref.:	LD21056A	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	0.903	1.06	85	60-130
Hexacosane	0.258	0.265	97	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#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW3520C/8081B
PESTICIDES

A total of thirteen(13) water samples were received on 04/19/23 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. CPD028WB - 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. CPD028WL/CPD028WC 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. : 23D208
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	CPD028WB	1	NA	04/24/2318:23	04/23/2310:15	RD24008	RD24003	23CPD028W	Method Blank
LCS1W	CPD028WL	1	NA	04/24/2318:43	04/23/2310:15	RD24009	RD24003	23CPD028W	Lab Control Sample (LCS)
LCD1W	CPD028WC	1	NA	04/24/2319:03	04/23/2310:15	RD24010	RD24003	23CPD028W	LCS Duplicate
BGMW03042023	D208-01	1	NA	04/25/2302:35	04/23/2310:15	RD24032	RD24030	23CPD028W	Field Sample
TMW37042023	D208-02	1	NA	04/25/2302:56	04/23/2310:15	RD24033	RD24030	23CPD028W	Field Sample
BGMW10042023	D208-03	1	NA	04/25/2303:17	04/23/2310:15	RD24034	RD24030	23CPD028W	Field Sample
BGMW10042023D	D208-04	1	NA	04/25/2303:37	04/23/2310:15	RD24035	RD24030	23CPD028W	Field Sample
TMW44042023	D208-05	1	NA	04/25/2303:58	04/23/2310:15	RD24036	RD24030	23CPD028W	Field Sample
TMW46042023	D208-06	1	NA	04/25/2304:18	04/23/2310:15	RD24037	RD24030	23CPD028W	Field Sample
MW24042023	D208-07	1	NA	04/25/2304:39	04/23/2310:15	RD24038	RD24030	23CPD028W	Field Sample
MW02042023	D208-08	1	NA	04/25/2304:59	04/23/2310:15	RD24039	RD24030	23CPD028W	Field Sample
MW01042023	D208-09	1	NA	04/25/2305:20	04/23/2310:15	RD24040	RD24030	23CPD028W	Field Sample
MW28042023	D208-10	1	NA	04/25/2305:41	04/23/2310:15	RD24041	RD24030	23CPD028W	Field Sample
BGMW02042023	D208-11	1	NA	04/25/2307:03	04/23/2310:15	RD24045	RD24043	23CPD028W	Field Sample
BGMW01042023	D208-12	1	NA	04/25/2307:23	04/23/2310:15	RD24046	RD24043	23CPD028W	Field Sample
QC18042023EB01	D208-13	1	NA	04/25/2307:44	04/23/2310:15	RD24047	RD24043	23CPD028W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 07:20
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : BGMW03042023	Date Analyzed: 04/25/23 02:35
Lab Samp ID: D208-01	Dilution Factor: 1
Lab File ID: RD24032	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	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	(0.279) | 0.272	0.421	66	44-124
Decachlorobiphenyl	(0.361) | 0.342	0.421	86	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.: RD24031

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 07:30
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : TMW37042023	Date Analyzed: 04/25/23 02:56
Lab Samp ID: D208-02	Dilution Factor: 1
Lab File ID: RD24033	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	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	(0.348) | 0.340	0.482	72	44-124
Decachlorobiphenyl	(0.405) | 0.383	0.482	84	30-135

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

Sample Amount : 830ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24031	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 07:40
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : BGMW10042023	Date Analyzed: 04/25/23 03:17
Lab Samp ID: D208-03	Dilution Factor: 1
Lab File ID: RD24034	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	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	(0.292) | 0.286	0.426	69	44-124
Decachlorobiphenyl	(0.369) | 0.348	0.426	87	30-135

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

Sample Amount : 940ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RD24031

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 07:50
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : BGMW10042023D	Date Analyzed: 04/25/23 03:37
Lab Samp ID: D208-04	Dilution Factor: 1
Lab File ID: RD24035	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	Instrument ID: F9

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	1.2	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	(0.345) | 0.336	0.465	74	44-124
Decachlorobiphenyl	(0.378) | 0.369	0.465	81	30-135

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

Sample Amount : 860ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column | Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24031	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 08:10
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : TMW44042023	Date Analyzed: 04/25/23 03:58
Lab Samp ID: D208-05	Dilution Factor: 1
Lab File ID: RD24036	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	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	(0.287) | 0.277	0.421	68	44-124
Decachlorobiphenyl	(0.328) | 0.316	0.421	78	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.: RD24031

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D208	Date Extracted:	04/23/23 10:15
Sample ID	: TMW46042023	Date Analyzed:	04/25/23 04:18
Lab Samp ID:	D208-06	Dilution Factor:	1
Lab File ID:	RD24037	Matrix:	WATER
Ext Btch ID:	23CPD028W	% Moisture:	NA
Calib. Ref.:	RD24030	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	(0.292) | 0.288	0.430	68	44-124
Decachlorobiphenyl	(0.345) | 0.329	0.430	80	30-135

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

Sample Amount	: 930ml	Final Volume	: 10ml
Prepared by	: POreto	Analyzed by	: EKim
Result Quantified	: First column | Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RD24031		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 09:00
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : MW24042023	Date Analyzed: 04/25/23 04:39
Lab Samp ID: D208-07	Dilution Factor: 1
Lab File ID: RD24038	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.023	0.046
gamma-BHC (Lindane)	(ND) | ND	0.11	0.023	0.046
beta-BHC	(ND) | ND	0.11	0.023	0.046
Heptachlor	(ND) | ND	0.11	0.023	0.046
delta-BHC	(ND) | ND	0.11	0.023	0.046
Aldrin	(ND) | ND	0.11	0.023	0.046
Heptachlor Epoxide	(ND) | ND	0.11	0.023	0.046
gamma-Chlordane	(ND) | ND	0.11	0.023	0.046
alpha-Chlordane	(ND) | ND	0.11	0.023	0.046
Endosulfan I	(ND) | ND	0.11	0.023	0.046
4,4'-DDE	(ND) | ND	0.11	0.023	0.046
Dieldrin	(ND) | ND	0.11	0.023	0.046
Endrin	(ND) | ND	0.11	0.023	0.046
4,4'-DDD	(ND) | ND	0.11	0.023	0.046
Endosulfan II	(ND) | ND	0.11	0.023	0.046
4,4'-DDT	(ND) | ND	0.11	0.023	0.046
Endrin Aldehyde	(ND) | ND	0.11	0.023	0.046
Endosulfan Sulfate	(ND) | ND	0.11	0.023	0.046
Methoxychlor	(ND) | ND	1.1	0.11	0.23
Toxaphene	(ND) | ND	2.3	0.28	0.57
Endrin Ketone	(ND) | ND	0.11	0.023	0.046

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.336) | 0.329	0.455	74	44-124
Decachlorobiphenyl	(0.371) | 0.355	0.455	82	30-135

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

Sample Amount : 880ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RD24031

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 09:10
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : MW02042023	Date Analyzed: 04/25/23 04:59
Lab Samp ID: D208-08	Dilution Factor: 1
Lab File ID: RD24039	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	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	(0.300) | 0.293	0.449	67	44-124
Decachlorobiphenyl	(0.343) | 0.332	0.449	77	30-135

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

Sample Amount : 890ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column | Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24031	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 09:55
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : MW01042023	Date Analyzed: 04/25/23 05:20
Lab Samp ID: D208-09	Dilution Factor: 1
Lab File ID: RD24040	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	Instrument ID: F9

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	1.2	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	(0.313) | 0.300	0.465	67	44-124
Decachlorobiphenyl	(0.366) | 0.351	0.465	79	30-135

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

Sample Amount : 860ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24031	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 11:10
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : MW28042023	Date Analyzed: 04/25/23 05:41
Lab Samp ID: D208-10	Dilution Factor: 1
Lab File ID: RD24041	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24030	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	0.318 | (0.328)	0.482	68	44-124
Decachlorobiphenyl	(0.370) | 0.366	0.482	77	30-135

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

Sample Amount : 830ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RD24031

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 11:10
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : BGMW02042023	Date Analyzed: 04/25/23 07:03
Lab Samp ID: D208-11	Dilution Factor: 1
Lab File ID: RD24045	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24043	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	(0.268) | 0.259	0.400	67	44-124
Decachlorobiphenyl	(0.322) | 0.308	0.400	80	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.: RD24044	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 13:00
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : BGMW01042023	Date Analyzed: 04/25/23 07:23
Lab Samp ID: D208-12	Dilution Factor: 1
Lab File ID: RD24046	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24043	Instrument ID: F9

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	(0.300) | 0.288	0.460	65	44-124
Decachlorobiphenyl	(0.376) | 0.362	0.460	82	30-135

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

Sample Amount : 870ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RD24044

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 14:00
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID : QC18042023EB01	Date Analyzed: 04/25/23 07:44
Lab Samp ID: D208-13	Dilution Factor: 1
Lab File ID: RD24047	Matrix: WATER
Ext Btch ID: 23CPD028W	% Moisture: NA
Calib. Ref.: RD24043	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	(0.308) | 0.305	0.430	72	44-124
Decachlorobiphenyl	(0.355) | 0.341	0.430	83	30-135

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

Sample Amount : 930ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24044	

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW3520C/8082A
PCBS

A total of four(4) water samples were received on 04/19/23 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. CPD028WB - 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. 60D028WL/60D028WC 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. : 23D208
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	CPD028WB	1	NA	04/25/2318:31	04/23/2310:15	KD25023A	KD25017A	CPD028W	Method Blank
LCS1W	60D028WL	1	NA	04/25/2318:51	04/23/2310:15	KD25024A	KD25017A	CPD028W	Lab Control Sample (LCS)
LCD1W	60D028WC	1	NA	04/25/2319:10	04/23/2310:15	KD25025A	KD25017A	CPD028W	LCS Duplicate
BGMW10042023	D208-03	1.06	NA	04/25/2319:30	04/23/2310:15	KD25026A	KD25017A	CPD028W	Field Sample
BGMW10042023D	D208-04	1.16	NA	04/25/2319:50	04/23/2310:15	KD25027A	KD25017A	CPD028W	Field Sample
MW28042023	D208-10	1.20	NA	04/25/2320:10	04/23/2310:15	KD25028A	KD25017A	CPD028W	Field Sample
QC18042023EB01	D208-13	1.08	NA	04/25/2320:30	04/23/2310:15	KD25029A	KD25017A	CPD028W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID: BGMW10042023	Date Analyzed: 04/25/23 19:30
Lab Samp ID: D208-03	Dilution Factor: 1.06
Lab File ID: KD25026A	Matrix : WATER
Ext Btch ID: CPD028W	% Moisture : NA
Calib. Ref.: KD25017A	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	(0.5701)|0.5145	0.4240	(134)|121	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID: BGMW10042023D	Date Analyzed: 04/25/23 19:50
Lab Samp ID: D208-04	Dilution Factor: 1.16
Lab File ID: KD25027A	Matrix : WATER
Ext Btch ID: CPD028W	% Moisture : NA
Calib. Ref.: KD25017A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.2	0.29	0.58
PCB-1221	(ND)|ND	1.2	0.29	0.58
PCB-1232	(ND)|ND	1.2	0.29	0.58
PCB-1242	(ND)|ND	1.2	0.29	0.58
PCB-1248	(ND)|ND	1.2	0.29	0.58
PCB-1254	(ND)|ND	1.2	0.29	0.58
PCB-1260	(ND)|ND	1.2	0.29	0.58

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.6185)|0.5492	0.4640	(133)|118	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID: MW28042023	Date Analyzed: 04/25/23 20:10
Lab Samp ID: D208-10	Dilution Factor: 1.20
Lab File ID: KD25028A	Matrix : WATER
Ext Btch ID: CPD028W	% Moisture : NA
Calib. Ref.: KD25017A	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	(0.6471)|0.5601	0.4800	(135)|117	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/23/23 10:15
Sample ID: QC18042023EB01	Date Analyzed: 04/25/23 20:30
Lab Samp ID: D208-13	Dilution Factor: 1.08
Lab File ID: KD25029A	Matrix : WATER
Ext Btch ID: CPD028W	% Moisture : NA
Calib. Ref.: KD25017A	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	(0.5778)|0.5223	0.4320	(134)|121	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#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD 8151A
HERBICIDES

A total of four(4) water samples were received on 04/19/23 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. HED004WB - 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. HED004WL/HED004WC 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.

Dalapon results were reported from channel A due to contamination observed in channel B.

LAB CHRONICLE
HERBICIDES

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

SDG NO. : 23D208
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	HED004WB	1	NA	04/27/2318:41	04/20/2312:00	WD27003A	WD27002A	HED004W	Method Blank
LCS1W	HED004WL	1	NA	04/27/2319:09	04/20/2312:00	WD27004A	WD27002A	HED004W	Lab Control Sample (LCS)
LCD1W	HED004WC	1	NA	04/27/2319:37	04/20/2312:00	WD27005A	WD27002A	HED004W	LCS Duplicate
BGMW10042023	D208-03	1	NA	04/27/2320:06	04/20/2312:00	WD27006A	WD27002A	HED004W	Field Sample
BGMW10042023D	D208-04	1	NA	04/27/2320:34	04/20/2312:00	WD27007A	WD27002A	HED004W	Field Sample
MW28042023	D208-10	1	NA	04/27/2321:03	04/20/2312:00	WD27008A	WD27002A	HED004W	Field Sample
QC18042023EB01	D208-13	1	NA	04/27/2321:31	04/20/2312:00	WD27009A	WD27002A	HED004W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/20/23 12:00
Sample ID: BGMW10042023	Date Analyzed: 04/27/23 20:06
Lab Samp ID: D208-03	Dilution Factor: 1
Lab File ID: WD27006A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27002A	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) | 1.2	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	(ND) | ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.806 | (9.495)	10.00	88.1 | (95.0)	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/20/23 12:00
Sample ID: BGMW10042023D	Date Analyzed: 04/27/23 20:34
Lab Samp ID: D208-04	Dilution Factor: 1
Lab File ID: WD27007A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27002A	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) | 0.93J	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	8.710 | (9.422)	10.00	87.1 | (94.2)	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/20/23 12:00
Sample ID: MW28042023	Date Analyzed: 04/27/23 21:03
Lab Samp ID: D208-10	Dilution Factor: 1
Lab File ID: WD27008A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27002A	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	(ND) | ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.529 | (9.206)	10.00	85.3 | (92.1)	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/20/23 12:00
Sample ID: QC18042023EB01	Date Analyzed: 04/27/23 21:31
Lab Samp ID: D208-13	Dilution Factor: 1
Lab File ID: WD27009A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27002A	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) | 0.59J	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	(0.14J) | 0.14J	1.0	0.10	0.20
MCPA	(ND) | ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.864 | (9.440)	10.00	88.6 | (94.4)	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#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW8330B
EXPLOSIVES

A total of thirteen(13) water samples were received on 04/19/23 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. EXD011WB - 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. EXD011WL/EXD011WC 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 : 23D208

METHOD SW8330B
EXPLOSIVES

A total of thirteen(13) water samples were received on 04/19/23 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. EXD011WB - 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. 35D011WL/35D011WC 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. : 23D208
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	EXD011WB	1	NA	05/15/2313:59	04/21/2311:30	XE15004A	XE15002A	EXD011W	Method Blank
LCS1W	EXD011WL	1	NA	05/15/2314:56	04/21/2311:30	XE15005A	XE15002A	EXD011W	Lab Control Sample (LCS)
LCD1W	EXD011WC	1	NA	05/15/2315:44	04/21/2311:30	XE15006A	XE15002A	EXD011W	LCS Duplicate
BGMW03042023	D208-01	1	NA	05/15/2318:25	04/21/2311:30	XE15009A	XE15002A	EXD011W	Field Sample
TMW37042023	D208-02	1	NA	05/15/2319:14	04/21/2311:30	XE15010A	XE15002A	EXD011W	Field Sample
BGMW10042023	D208-03	1	NA	05/15/2320:10	04/21/2311:30	XE15011A	XE15002A	EXD011W	Field Sample
BGMW10042023D	D208-04	1	NA	05/15/2320:58	04/21/2311:30	XE15012A	XE15002A	EXD011W	Field Sample
TMW44042023	D208-05	1	NA	05/15/2321:55	04/21/2311:30	XE15013A	XE15002A	EXD011W	Field Sample
TMW46042023	D208-06	1	NA	05/16/2300:28	04/21/2311:30	XE15016A	XE15014A	EXD011W	Field Sample
MW24042023	D208-07	1	NA	05/16/2301:24	04/21/2311:30	XE15017A	XE15014A	EXD011W	Field Sample
MW02042023	D208-08	1	NA	05/16/2302:13	04/21/2311:30	XE15018A	XE15014A	EXD011W	Field Sample
MW01042023	D208-09	1	NA	05/16/2303:09	04/21/2311:30	XE15019A	XE15014A	EXD011W	Field Sample
MW28042023	D208-10	1	NA	05/16/2303:57	04/21/2311:30	XE15020A	XE15014A	EXD011W	Field Sample
BGMW02042023	D208-11	1	NA	05/16/2304:54	04/21/2311:30	XE15021A	XE15014A	EXD011W	Field Sample
BGMW01042023	D208-12	1	NA	05/16/2305:42	04/21/2311:30	XE15022A	XE15014A	EXD011W	Field Sample
QC18042023EB01	D208-13	1	NA	05/16/2306:39	04/21/2311:30	XE15023A	XE15014A	EXD011W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D208
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	EXD011WB	1	NA	05/15/2313:59	04/21/2311:30	XE15004A	XE15003A	EXD011W	Method Blank
LCS1W	35D011WL	1	NA	05/15/2316:41	04/21/2311:30	XE15007A	XE15003A	EXD011W	Lab Control Sample (LCS)
LCD1W	35D011WC	1	NA	05/15/2317:29	04/21/2311:30	XE15008A	XE15003A	EXD011W	LCS Duplicate
BGMW03042023	D208-01	1	NA	05/15/2318:25	04/21/2311:30	XE15009A	XE15003A	EXD011W	Field Sample
TMW37042023	D208-02	1	NA	05/15/2319:14	04/21/2311:30	XE15010A	XE15003A	EXD011W	Field Sample
BGMW10042023	D208-03	1	NA	05/15/2320:10	04/21/2311:30	XE15011A	XE15003A	EXD011W	Field Sample
BGMW10042023D	D208-04	1	NA	05/15/2320:58	04/21/2311:30	XE15012A	XE15003A	EXD011W	Field Sample
TMW44042023	D208-05	1	NA	05/15/2321:55	04/21/2311:30	XE15013A	XE15003A	EXD011W	Field Sample
TMW46042023	D208-06	1	NA	05/16/2300:28	04/21/2311:30	XE15016A	XE15015A	EXD011W	Field Sample
MW24042023	D208-07	1	NA	05/16/2301:24	04/21/2311:30	XE15017A	XE15015A	EXD011W	Field Sample
MW02042023	D208-08	1	NA	05/16/2302:13	04/21/2311:30	XE15018A	XE15015A	EXD011W	Field Sample
MW01042023	D208-09	1	NA	05/16/2303:09	04/21/2311:30	XE15019A	XE15015A	EXD011W	Field Sample
MW28042023	D208-10	1	NA	05/16/2303:57	04/21/2311:30	XE15020A	XE15015A	EXD011W	Field Sample
BGMW02042023	D208-11	1	NA	05/16/2304:54	04/21/2311:30	XE15021A	XE15015A	EXD011W	Field Sample
BGMW01042023	D208-12	1	NA	05/16/2305:42	04/21/2311:30	XE15022A	XE15015A	EXD011W	Field Sample
QC18042023EB01	D208-13	1	NA	05/16/2306:39	04/21/2311:30	XE15023A	XE15015A	EXD011W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW03042023	Date Analyzed: 05/15/23 18:25
Lab Samp ID: D208-01	Dilution Factor: 1
Lab File ID: XE15009A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW03042023	Date Analyzed: 05/15/23 18:25
Lab Samp ID: D208-01	Dilution Factor: 1
Lab File ID: XE15009A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15003A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW37042023	Date Analyzed: 05/15/23 19:14
Lab Samp ID: D208-02	Dilution Factor: 1
Lab File ID: XE15010A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW37042023	Date Analyzed: 05/15/23 19:14
Lab Samp ID: D208-02	Dilution Factor: 1
Lab File ID: XE15010A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15003A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW10042023	Date Analyzed: 05/15/23 20:10
Lab Samp ID: D208-03	Dilution Factor: 1
Lab File ID: XE15011A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW10042023	Date Analyzed: 05/15/23 20:10
Lab Samp ID: D208-03	Dilution Factor: 1
Lab File ID: XE15011A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15003A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW10042023D	Date Analyzed: 05/15/23 20:58
Lab Samp ID: D208-04	Dilution Factor: 1
Lab File ID: XE15012A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15002A	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	93.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW10042023D	Date Analyzed: 05/15/23 20:58
Lab Samp ID: D208-04	Dilution Factor: 1
Lab File ID: XE15012A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15003A	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	93.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW44042023	Date Analyzed: 05/15/23 21:55
Lab Samp ID: D208-05	Dilution Factor: 1
Lab File ID: XE15013A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15002A	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	95.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW44042023	Date Analyzed: 05/15/23 21:55
Lab Samp ID: D208-05	Dilution Factor: 1
Lab File ID: XE15013A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15003A	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	95.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW46042023	Date Analyzed: 05/16/23 00:28
Lab Samp ID: D208-06	Dilution Factor: 1
Lab File ID: XE15016A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15014A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW46042023	Date Analyzed: 05/16/23 00:28
Lab Samp ID: D208-06	Dilution Factor: 1
Lab File ID: XE15016A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15015A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW24042023	Date Analyzed: 05/16/23 01:24
Lab Samp ID: D208-07	Dilution Factor: 1
Lab File ID: XE15017A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15014A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW24042023	Date Analyzed: 05/16/23 01:24
Lab Samp ID: D208-07	Dilution Factor: 1
Lab File ID: XE15017A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15015A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW02042023	Date Analyzed: 05/16/23 02:13
Lab Samp ID: D208-08	Dilution Factor: 1
Lab File ID: XE15018A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15014A	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	99.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW02042023	Date Analyzed: 05/16/23 02:13
Lab Samp ID: D208-08	Dilution Factor: 1
Lab File ID: XE15018A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15015A	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	99.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW01042023	Date Analyzed: 05/16/23 03:09
Lab Samp ID: D208-09	Dilution Factor: 1
Lab File ID: XE15019A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15014A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW01042023	Date Analyzed: 05/16/23 03:09
Lab Samp ID: D208-09	Dilution Factor: 1
Lab File ID: XE15019A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15015A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW28042023	Date Analyzed: 05/16/23 03:57
Lab Samp ID: D208-10	Dilution Factor: 1
Lab File ID: XE15020A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15014A	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	3.58	4.000	89.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW28042023	Date Analyzed: 05/16/23 03:57
Lab Samp ID: D208-10	Dilution Factor: 1
Lab File ID: XE15020A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15015A	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	3.58	4.000	89.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW02042023	Date Analyzed: 05/16/23 04:54
Lab Samp ID: D208-11	Dilution Factor: 1
Lab File ID: XE15021A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15014A	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	3.57	4.000	89.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW02042023	Date Analyzed: 05/16/23 04:54
Lab Samp ID: D208-11	Dilution Factor: 1
Lab File ID: XE15021A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15015A	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	3.57	4.000	89.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW01042023	Date Analyzed: 05/16/23 05:42
Lab Samp ID: D208-12	Dilution Factor: 1
Lab File ID: XE15022A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15014A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW01042023	Date Analyzed: 05/16/23 05:42
Lab Samp ID: D208-12	Dilution Factor: 1
Lab File ID: XE15022A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15015A	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	95.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: QC18042023EB01	Date Analyzed: 05/16/23 06:39
Lab Samp ID: D208-13	Dilution Factor: 1
Lab File ID: XE15023A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15014A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: QC18042023EB01	Date Analyzed: 05/16/23 06:39
Lab Samp ID: D208-13	Dilution Factor: 1
Lab File ID: XE15023A	Matrix : WATER
Ext Btch ID: EXD011W	% Moisture : NA
Calib. Ref.: XE15015A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW8332
NITROGLYCERIN AND PETN

A total of thirteen(13) water samples were received on 04/19/23 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. EXD010WB - 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. EXD010WL/EXD010WC 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. : 23D208
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	EXD010WB	1	NA	05/15/2312:26	04/21/2311:30	NE15003A	NE15002A	EXD010W	Method Blank
LCS1W	EXD010WL	1	NA	05/15/2312:53	04/21/2311:30	NE15006A	NE15002A	EXD010W	Lab Control Sample (LCS)
LCD1W	EXD010WC	1	NA	05/15/2312:44	04/21/2311:30	NE15005A	NE15002A	EXD010W	LCS Duplicate
BGMW03042023	D208-01	1	NA	05/15/2313:02	04/21/2311:30	NE15007A	NE15002A	EXD010W	Field Sample
TMW37042023	D208-02	1	NA	05/15/2313:11	04/21/2311:30	NE15008A	NE15002A	EXD010W	Field Sample
BGMW10042023	D208-03	1	NA	05/15/2313:20	04/21/2311:30	NE15009A	NE15002A	EXD010W	Field Sample
BGMW10042023D	D208-04	1	NA	05/15/2313:29	04/21/2311:30	NE15010A	NE15002A	EXD010W	Field Sample
TMW44042023	D208-05	1	NA	05/15/2313:39	04/21/2311:30	NE15011A	NE15002A	EXD010W	Field Sample
TMW46042023	D208-06	1	NA	05/15/2313:48	04/21/2311:30	NE15012A	NE15002A	EXD010W	Field Sample
MW24042023	D208-07	1	NA	05/15/2313:57	04/21/2311:30	NE15013A	NE15002A	EXD010W	Field Sample
MW02042023	D208-08	1	NA	05/15/2314:06	04/21/2311:30	NE15014A	NE15002A	EXD010W	Field Sample
MW01042023	D208-09	1	NA	05/15/2314:15	04/21/2311:30	NE15015A	NE15002A	EXD010W	Field Sample
MW28042023	D208-10	1	NA	05/15/2315:22	04/21/2311:30	NE15017A	NE15016A	EXD010W	Field Sample
BGMW02042023	D208-11	1	NA	05/15/2315:31	04/21/2311:30	NE15018A	NE15016A	EXD010W	Field Sample
BGMW01042023	D208-12	1	NA	05/15/2315:40	04/21/2311:30	NE15019A	NE15016A	EXD010W	Field Sample
QC18042023EB01	D208-13	1	NA	05/15/2315:49	04/21/2311:30	NE15020A	NE15016A	EXD010W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW03042023	Date Analyzed: 05/15/23 13:02
Lab Samp ID: D208-01	Dilution Factor: 1
Lab File ID: NE15007A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW37042023	Date Analyzed: 05/15/23 13:11
Lab Samp ID: D208-02	Dilution Factor: 1
Lab File ID: NE15008A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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	576	500.0	115	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW10042023	Date Analyzed: 05/15/23 13:20
Lab Samp ID: D208-03	Dilution Factor: 1
Lab File ID: NE15009A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW10042023D	Date Analyzed: 05/15/23 13:29
Lab Samp ID: D208-04	Dilution Factor: 1
Lab File ID: NE15010A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW44042023	Date Analyzed: 05/15/23 13:39
Lab Samp ID: D208-05	Dilution Factor: 1
Lab File ID: NE15011A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: TMW46042023	Date Analyzed: 05/15/23 13:48
Lab Samp ID: D208-06	Dilution Factor: 1
Lab File ID: NE15012A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW24042023	Date Analyzed: 05/15/23 13:57
Lab Samp ID: D208-07	Dilution Factor: 1
Lab File ID: NE15013A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW02042023	Date Analyzed: 05/15/23 14:06
Lab Samp ID: D208-08	Dilution Factor: 1
Lab File ID: NE15014A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW01042023	Date Analyzed: 05/15/23 14:15
Lab Samp ID: D208-09	Dilution Factor: 1
Lab File ID: NE15015A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15002A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: MW28042023	Date Analyzed: 05/15/23 15:22
Lab Samp ID: D208-10	Dilution Factor: 1
Lab File ID: NE15017A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15016A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW02042023	Date Analyzed: 05/15/23 15:31
Lab Samp ID: D208-11	Dilution Factor: 1
Lab File ID: NE15018A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15016A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: BGMW01042023	Date Analyzed: 05/15/23 15:40
Lab Samp ID: D208-12	Dilution Factor: 1
Lab File ID: NE15019A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15016A	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: 04/18/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D208	Date Extracted: 04/21/23 11:30
Sample ID: QC18042023EB01	Date Analyzed: 05/15/23 15:49
Lab Samp ID: D208-13	Dilution Factor: 1
Lab File ID: NE15020A	Matrix : WATER
Ext Btch ID: EXD010W	% Moisture : NA
Calib. Ref.: NE15016A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW6020A
METALS BY ICP-MS

A total of thirteen(13) water samples were received on 04/19/23 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. Zinc(6.3J <1/2 LOQ) was detected at trace level in IMD038WB. 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. IMD038WL/IMD038WC 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: D208-01M/D208-01S - Percent recoveries for Calcium(19X), Sodium(193X) 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 D208-04 to D208-13 were reported from re-analysis due to CCB> ½ LOQ for Calcium.

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. : 23D208
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
BGMW03042023	D208-01A	5	NA	06/22/2313:23	04/24/2311:39	H6F21041	H6F21036	IMD038W	Analytical Spike Sample
BGMW03042023	D208-01G	5	NA	06/22/2313:26	04/24/2311:39	H6F21042	H6F21036	IMD038W	Diluted Sample
BGMW03042023	D208-01J	25	NA	06/22/2313:29	04/24/2311:39	H6F21043	H6F21036	IMD038W	Diluted Sample
BGMW03042023MS	D208-01M	5	NA	06/22/2313:32	04/24/2311:39	H6F21044	H6F21036	IMD038W	Matrix Spike Sample (MS)
BGMW03042023MSD	D208-01S	5	NA	06/22/2313:35	04/24/2311:39	H6F21045	H6F21036	IMD038W	MS Duplicate (MSD)
TMW37042023	D208-02G	5	NA	06/22/2313:38	04/24/2311:39	H6F21046	H6F21036	IMD038W	Diluted Sample
BGMW10042023	D208-03G	5	NA	06/22/2313:41	04/24/2311:39	H6F21047	H6F21036	IMD038W	Diluted Sample
BGMW03042023	D208-01A	50	NA	06/22/2314:24	04/24/2311:39	H6F21062	H6F21060	IMD038W	Analytical Spike Sample
BGMW03042023	D208-01T	50	NA	06/22/2314:27	04/24/2311:39	H6F21063	H6F21060	IMD038W	Diluted Sample
BGMW03042023	D208-01J	250	NA	06/22/2314:30	04/24/2311:39	H6F21064	H6F21060	IMD038W	Diluted Sample
BGMW03042023MS	D208-01M	50	NA	06/22/2314:33	04/24/2311:39	H6F21065	H6F21060	IMD038W	Matrix Spike Sample (MS)
BGMW03042023MSD	D208-01S	50	NA	06/22/2314:36	04/24/2311:39	H6F21066	H6F21060	IMD038W	MS Duplicate (MSD)
TMW37042023	D208-02T	50	NA	06/22/2314:39	04/24/2311:39	H6F21067	H6F21060	IMD038W	Diluted Sample
BGMW10042023	D208-03T	50	NA	06/22/2314:42	04/24/2311:39	H6F21068	H6F21060	IMD038W	Diluted Sample
BGMW10042023D	D208-04T	50	NA	06/22/2314:45	04/24/2311:39	H6F21069	H6F21060	IMD038W	Diluted Sample
TMW44042023	D208-05T	50	NA	06/22/2314:48	04/24/2311:39	H6F21070	H6F21060	IMD038W	Diluted Sample
TMW46042023	D208-06T	50	NA	06/22/2314:51	04/24/2311:39	H6F21071	H6F21060	IMD038W	Diluted Sample
MW24042023	D208-07T	50	NA	06/22/2314:59	04/24/2311:39	H6F21074	H6F21072	IMD038W	Diluted Sample
MW02042023	D208-08T	50	NA	06/22/2315:02	04/24/2311:39	H6F21075	H6F21072	IMD038W	Diluted Sample
MW01042023	D208-09T	50	NA	06/22/2315:05	04/24/2311:39	H6F21076	H6F21072	IMD038W	Diluted Sample
MW28042023	D208-10T	50	NA	06/22/2315:08	04/24/2311:39	H6F21077	H6F21072	IMD038W	Diluted Sample
BGMW02042023	D208-11T	50	NA	06/22/2315:11	04/24/2311:39	H6F21078	H6F21072	IMD038W	Diluted Sample
BGMW01042023	D208-12T	50	NA	06/22/2315:14	04/24/2311:39	H6F21079	H6F21072	IMD038W	Diluted Sample
MBLK1W	IMD038WB	1	NA	06/22/2318:21	04/24/2311:39	H6F21141	H6F21133	IMD038W	Method Blank
LCS1W	IMD038WL	1	NA	06/22/2318:24	04/24/2311:39	H6F21142	H6F21133	IMD038W	Lab Control Sample (LCS)
LCD1W	IMD038WC	1	NA	06/22/2318:27	04/24/2311:39	H6F21143	H6F21133	IMD038W	LCS Duplicate
BGMW10042023D	D208-04G	5	NA	06/23/2315:27	04/24/2311:39	H6F22048	H6F22046	IMD038W	Diluted Sample
TMW44042023	D208-05G	5	NA	06/23/2315:30	04/24/2311:39	H6F22049	H6F22046	IMD038W	Diluted Sample
TMW46042023	D208-06I	10	NA	06/23/2315:33	04/24/2311:39	H6F22050	H6F22046	IMD038W	Diluted Sample
MW24042023	D208-07G	5	NA	06/23/2315:36	04/24/2311:39	H6F22051	H6F22046	IMD038W	Diluted Sample
MW02042023	D208-08G	5	NA	06/23/2315:39	04/24/2311:39	H6F22052	H6F22046	IMD038W	Diluted Sample
MW01042023	D208-09G	5	NA	06/23/2315:42	04/24/2311:39	H6F22053	H6F22046	IMD038W	Diluted Sample
MW28042023	D208-10G	5	NA	06/23/2315:45	04/24/2311:39	H6F22054	H6F22046	IMD038W	Diluted Sample
BGMW02042023	D208-11G	5	NA	06/23/2315:48	04/24/2311:39	H6F22055	H6F22046	IMD038W	Diluted Sample
BGMW01042023	D208-12G	5	NA	06/23/2315:51	04/24/2311:39	H6F22056	H6F22046	IMD038W	Diluted Sample
QC18042023EB01	D208-13N	1	NA	06/23/2315:54	04/24/2311:39	H6F22057	H6F22046	IMD038W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:20
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW03042023	Date Analyzed:	06/22/23 13:26
Lab Samp ID:	D208-01G	Dilution Factor:	5
Lab File ID:	H6F21042	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21036	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	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	57000	1000	250	500
Chromium	0.53J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	0.27J	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	20	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	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	10	5.0	1.2	2.5
Zinc	84J	100	25	50

Sample ID:	BGMW03042023	Date Analyzed:	06/22/23 14:27
Lab Samp ID:	D208-01T	Dilution Factor:	50
Lab File ID:	H6F21063	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21060	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:20
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW03042023	Date Analyzed:	06/22/23 13:26
Lab Samp ID:	D208-01G	Dilution Factor:	5
Lab File ID:	H6F21042	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21036	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	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	57000	1000	250	500
Chromium	0.53J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	0.27J	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	20	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	10	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	10	5.0	1.2	2.5
Zinc	84J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:20
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW03042023	Date Analyzed:	06/22/23 14:27
Lab Samp ID:	D208-01T	Dilution Factor:	50
Lab File ID:	H6F21063	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21060	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	58000	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	31J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	8.9J	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	760J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW37042023
Lab Samp ID: D208-02G
Lab File ID: H6F21046
Ext Btch ID: IMD038W
Calib. Ref.: H6F21036

Date Collected: 04/18/23 07:30
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/22/23 13:38
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	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	5500	1000	250	500
Chromium	12	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	140J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	640	500	100	250
Manganese	7.4	5.0	1.2	2.5
Nickel	26	5.0	1.2	2.5
Potassium	610J	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	3.1J	5.0	1.2	2.5
Zinc	35J	100	25	50

Sample ID: TMW37042023
Lab Samp ID: D208-02T
Lab File ID: H6F21067
Ext Btch ID: IMD038W
Calib. Ref.: H6F21060

Date Analyzed: 06/22/23 14:39
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	560000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 07:30
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D208	Date Extracted: 04/24/23 11:39
Sample ID: TMW37042023	Date Analyzed: 06/22/23 13:38
Lab Samp ID: D208-02G	Dilution Factor: 5
Lab File ID: H6F21046	Matrix: WATER
Ext Btch ID: IMD038W	% Moisture: NA
Calib. Ref.: H6F21036	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	5500	1000	250	500
Chromium	12	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	140J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	640	500	100	250
Manganese	7.4	5.0	1.2	2.5
Nickel	26	5.0	1.2	2.5
Potassium	610J	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	3.1J	5.0	1.2	2.5
Zinc	35J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:30
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	TMW37042023	Date Analyzed:	06/22/23 14:39
Lab Samp ID:	D208-02T	Dilution Factor:	50
Lab File ID:	H6F21067	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21060	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	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	13J	50	12	25
Nickel	27J	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	1100	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 07:40
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D208	Date Extracted: 04/24/23 11:39
Sample ID: BGMW10042023	Date Analyzed: 06/22/23 13:41
Lab Samp ID: D208-03G	Dilution Factor: 5
Lab File ID: H6F21047	Matrix: WATER
Ext Btch ID: IMD038W	% Moisture: NA
Calib. Ref.: H6F21036	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	6.6	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	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	16	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: BGMW10042023	Date Analyzed: 06/22/23 14:42
Lab Samp ID: D208-03T	Dilution Factor: 50
Lab File ID: H6F21068	Matrix: WATER
Ext Btch ID: IMD038W	% Moisture: NA
Calib. Ref.: H6F21060	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	630000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW10042023	Date Analyzed:	06/22/23 13:41
Lab Samp ID:	D208-03G	Dilution Factor:	5
Lab File ID:	H6F21047	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21036	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	6.6	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	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	16	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW10042023	Date Analyzed:	06/22/23 14:42
Lab Samp ID:	D208-03T	Dilution Factor:	50
Lab File ID:	H6F21068	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21060	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	9400J	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	20J	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	1100	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW10042023D	Date Analyzed:	06/23/23 15:27
Lab Samp ID:	D208-04G	Dilution Factor:	5
Lab File ID:	H6F22048	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	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	7.1	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	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	950	500	100	250
Manganese	21	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	960J	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	30J	100	25	50

Sample ID:	BGMW10042023D	Date Analyzed:	06/22/23 14:45
Lab Samp ID:	D208-04T	Dilution Factor:	50
Lab File ID:	H6F21069	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21060	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	630000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW10042023D	Date Analyzed:	06/23/23 15:27
Lab Samp ID:	D208-04G	Dilution Factor:	5
Lab File ID:	H6F22048	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	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	7.1	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	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	950	500	100	250
Manganese	21	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	960J	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	30J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW10042023D	Date Analyzed:	06/22/23 14:45
Lab Samp ID:	D208-04T	Dilution Factor:	50
Lab File ID:	H6F21069	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21060	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	ND	5000	1000	2500
Manganese	26J	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	1100	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW44042023
Lab Samp ID: D208-05G
Lab File ID: H6F22049
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 08:10
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:30
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	140J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.84J	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	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	0.26J	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	56	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	300J	1000	250	500
Selenium	2.9J	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: TMW44042023
Lab Samp ID: D208-05T
Lab File ID: H6F21070
Ext Btch ID: IMD038W
Calib. Ref.: H6F21060

Date Analyzed: 06/22/23 14:48
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	770000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 08:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	TMW44042023	Date Analyzed:	06/23/23 15:30
Lab Samp ID:	D208-05G	Dilution Factor:	5
Lab File ID:	H6F22049	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	140J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.84J	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	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	0.26J	5.0	0.25	0.50
Magnesium	12000	500	100	250
Manganese	56	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	300J	1000	250	500
Selenium	2.9J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW44042023
Lab Samp ID: D208-05T
Lab File ID: H6F21070
Ext Btch ID: IMD038W
Calib. Ref.: H6F21060

Date Collected: 04/18/23 08:10
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/22/23 14:48
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	19J	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	58	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	1000	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW46042023
Lab Samp ID: D208-06I
Lab File ID: H6F22050
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 09:00
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:33
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	100000	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	23000	1000	200	500
Manganese	56	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	3.6J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW46042023
Lab Samp ID: D208-06T
Lab File ID: H6F21071
Ext Btch ID: IMD038W
Calib. Ref.: H6F21060

Date Analyzed: 06/22/23 14:51
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	TMW46042023	Date Analyzed:	06/23/23 15:33
Lab Samp ID:	D208-06I	Dilution Factor:	10
Lab File ID:	H6F22050	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	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	100000	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	23000	1000	200	500
Manganese	56	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	3.6J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	TMW46042023	Date Analyzed:	06/22/23 14:51
Lab Samp ID:	D208-06T	Dilution Factor:	50
Lab File ID:	H6F21071	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21060	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	97000	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	36J	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	1000	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 09:00
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D208	Date Extracted: 04/24/23 11:39
Sample ID: MW24042023	Date Analyzed: 06/23/23 15:36
Lab Samp ID: D208-07G	Dilution Factor: 5
Lab File ID: H6F22051	Matrix: WATER
Ext Btch ID: IMD038W	% Moisture: NA
Calib. Ref.: H6F22046	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	0.95J	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	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	2000	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	460	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	770J	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: MW24042023	Date Analyzed: 06/22/23 14:59
Lab Samp ID: D208-07T	Dilution Factor: 50
Lab File ID: H6F21074	Matrix: WATER
Ext Btch ID: IMD038W	% Moisture: NA
Calib. Ref.: H6F21072	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW24042023
Lab Samp ID: D208-07G
Lab File ID: H6F22051
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 09:00
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:36
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	0.95J	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	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	2000	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	460	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	770J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 09:00
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D208	Date Extracted: 04/24/23 11:39
Sample ID: MW24042023	Date Analyzed: 06/22/23 14:59
Lab Samp ID: D208-07T	Dilution Factor: 50
Lab File ID: H6F21074	Matrix: WATER
Ext Btch ID: IMD038W	% Moisture: NA
Calib. Ref.: H6F21072	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	270	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	34000	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	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	1000	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW02042023
Lab Samp ID: D208-08G
Lab File ID: H6F22052
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 09:10
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:39
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	31	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	92000	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	20000	500	100	250
Manganese	55	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	4.2J	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	45J	100	25	50

Sample ID: MW02042023
Lab Samp ID: D208-08T
Lab File ID: H6F21075
Ext Btch ID: IMD038W
Calib. Ref.: H6F21072

Date Analyzed: 06/22/23 15:02
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW02042023
Lab Samp ID: D208-08G
Lab File ID: H6F22052
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 09:10
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:39
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	31	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	92000	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	20000	500	100	250
Manganese	55	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	4.2J	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	45J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	MW02042023	Date Analyzed:	06/22/23 15:02
Lab Samp ID:	D208-08T	Dilution Factor:	50
Lab File ID:	H6F21075	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21072	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	92000	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	58	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	1100	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW01042023
Lab Samp ID: D208-09G
Lab File ID: H6F22053
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 09:55
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:42
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	350J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.67J	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	33000	1000	250	500
Chromium	0.57J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.7J	10	2.5	5.0
Iron	240J	1000	120	250
Lead	0.52J	5.0	0.25	0.50
Magnesium	7300	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	4.6J	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	42J	100	25	50

Sample ID: MW01042023
Lab Samp ID: D208-09T
Lab File ID: H6F21076
Ext Btch ID: IMD038W
Calib. Ref.: H6F21072

Date Analyzed: 06/22/23 15:05
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:55
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	MW01042023	Date Analyzed:	06/23/23 15:42
Lab Samp ID:	D208-09G	Dilution Factor:	5
Lab File ID:	H6F22053	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	350J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.67J	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	33000	1000	250	500
Chromium	0.57J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.7J	10	2.5	5.0
Iron	240J	1000	120	250
Lead	0.52J	5.0	0.25	0.50
Magnesium	7300	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	4.6J	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	2.8J	5.0	1.2	2.5
Zinc	42J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:55
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	MW01042023	Date Analyzed:	06/22/23 15:05
Lab Samp ID:	D208-09T	Dilution Factor:	50
Lab File ID:	H6F21076	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21072	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	7500	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	830000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	1100	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW28042023
Lab Samp ID: D208-10G
Lab File ID: H6F22054
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 11:10
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:45
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	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	87000	1000	250	500
Chromium	1.1J	5.0	0.50	1.0
Cobalt	0.80J	3.7	0.50	1.0
Copper	32	10	2.5	5.0
Iron	580J	1000	120	250
Lead	0.94J	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	160	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	18	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.5	5.0	1.2	2.5
Zinc	29J	100	25	50

Sample ID: MW28042023
Lab Samp ID: D208-10T
Lab File ID: H6F21077
Ext Btch ID: IMD038W
Calib. Ref.: H6F21072

Date Analyzed: 06/22/23 15:08
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	MW28042023	Date Analyzed:	06/23/23 15:45
Lab Samp ID:	D208-10G	Dilution Factor:	5
Lab File ID:	H6F22054	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.6J	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	87000	1000	250	500
Chromium	1.1J	5.0	0.50	1.0
Cobalt	0.80J	3.7	0.50	1.0
Copper	32	10	2.5	5.0
Iron	580J	1000	120	250
Lead	0.94J	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	160	5.0	1.2	2.5
Nickel	1.5J	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	18	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	5.5	5.0	1.2	2.5
Zinc	29J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	MW28042023	Date Analyzed:	06/22/23 15:08
Lab Samp ID:	D208-10T	Dilution Factor:	50
Lab File ID:	H6F21077	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21072	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	89000	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	170	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	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	1000	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW02042023	Date Analyzed:	06/23/23 15:48
Lab Samp ID:	D208-11G	Dilution Factor:	5
Lab File ID:	H6F22055	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	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	0.92J	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	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	71000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	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	7.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	BGMW02042023	Date Analyzed:	06/22/23 15:11
Lab Samp ID:	D208-11T	Dilution Factor:	50
Lab File ID:	H6F21078	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21072	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW02042023	Date Analyzed:	06/23/23 15:48
Lab Samp ID:	D208-11G	Dilution Factor:	5
Lab File ID:	H6F22055	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	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	0.92J	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	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	71000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	1000	250	500
Selenium	28	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW02042023	Date Analyzed:	06/22/23 15:11
Lab Samp ID:	D208-11T	Dilution Factor:	50
Lab File ID:	H6F21078	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F21072	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	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	73000	5000	1000	2500
Manganese	120	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	790000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	1000	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: BGMW01042023
Lab Samp ID: D208-12G
Lab File ID: H6F22056
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 13:00
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:51
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	0.91J	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	65000	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	36000	500	100	250
Manganese	380	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	380J	1000	250	500
Selenium	6.8	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: BGMW01042023
Lab Samp ID: D208-12T
Lab File ID: H6F21079
Ext Btch ID: IMD038W
Calib. Ref.: H6F21072

Date Analyzed: 06/22/23 15:14
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	910000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 13:00
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 11:39
Sample ID:	BGMW01042023	Date Analyzed:	06/23/23 15:51
Lab Samp ID:	D208-12G	Dilution Factor:	5
Lab File ID:	H6F22056	Matrix:	WATER
Ext Btch ID:	IMD038W	% Moisture:	NA
Calib. Ref.:	H6F22046	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	0.91J	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	65000	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	36000	500	100	250
Manganese	380	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	380J	1000	250	500
Selenium	6.8	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	5.2	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 13:00
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D208	Date Extracted: 04/24/23 11:39
Sample ID: BGMW01042023	Date Analyzed: 06/22/23 15:14
Lab Samp ID: D208-12T	Dilution Factor: 50
Lab File ID: H6F21079	Matrix: WATER
Ext Btch ID: IMD038W	% Moisture: NA
Calib. Ref.: H6F21072	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	64000	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	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	910000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	1000	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: QC18042023EB01
Lab Samp ID: D208-13N
Lab File ID: H6F22057
Ext Btch ID: IMD038W
Calib. Ref.: H6F22046

Date Collected: 04/18/23 14:00
Date Received: 04/19/23
Date Extracted: 04/24/23 11:39
Date Analyzed: 06/23/23 15:54
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	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	0.23J	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	94J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: NA
Project : USACE WINGATE	Date Received: NA
SDG NO. : 23D208	Date Extracted: 04/24/23 11:39
Sample ID: MBLK1W	Date Analyzed: 06/22/23 18:21
Lab Samp ID: IMD038WB	Dilution Factor: 1
Lab File ID: H6F21141	Matrix: WATER
Ext Btch ID: IMD038W	% Moisture: NA
Calib. Ref.: H6F21133	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	6.3J	20	5.0	10

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

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of thirteen(13) water samples were received on 04/19/23 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. IMD040WB - 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. IMD040WL/IMD040WC 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: D208-01M/D208-01S - Percent recoveries for Calcium(16X), Sodium(198X) and Zinc were not within MS/MSD QC limits. Percent recovery for Magnesium was not within MS. 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. : 23D208
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	IMD040WB	1	NA	06/22/2315:24	04/24/2315:03	H6F21082	H6F21080	IMD040W	Method Blank
LCS1W	IMD040WL	1	NA	06/22/2315:27	04/24/2315:03	H6F21083	H6F21080	IMD040W	Lab Control Sample (LCS)
LCD1W	IMD040WC	1	NA	06/22/2315:30	04/24/2315:03	H6F21084	H6F21080	IMD040W	LCS Duplicate
BGMW03042023	D208-01A	5	NA	06/22/2315:33	04/24/2315:03	H6F21085	H6F21080	IMD040W	Analytical Spike Sample
BGMW03042023	D208-01G	5	NA	06/22/2315:36	04/24/2315:03	H6F21086	H6F21080	IMD040W	Diluted Sample
BGMW03042023	D208-01J	25	NA	06/22/2315:39	04/24/2315:03	H6F21087	H6F21080	IMD040W	Diluted Sample
BGMW03042023MS	D208-01M	5	NA	06/22/2315:42	04/24/2315:03	H6F21088	H6F21080	IMD040W	Matrix Spike Sample (MS)
BGMW03042023MSD	D208-01S	5	NA	06/22/2315:45	04/24/2315:03	H6F21089	H6F21080	IMD040W	MS Duplicate (MSD)
TMW37042023	D208-02G	5	NA	06/22/2315:48	04/24/2315:03	H6F21090	H6F21080	IMD040W	Diluted Sample
BGMW10042023	D208-03G	5	NA	06/22/2315:51	04/24/2315:03	H6F21091	H6F21080	IMD040W	Diluted Sample
BGMW10042023D	D208-04G	5	NA	06/22/2316:00	04/24/2315:03	H6F21094	H6F21092	IMD040W	Diluted Sample
TMW44042023	D208-05G	5	NA	06/22/2316:02	04/24/2315:03	H6F21095	H6F21092	IMD040W	Diluted Sample
TMW46042023	D208-06I	10	NA	06/22/2316:05	04/24/2315:03	H6F21096	H6F21092	IMD040W	Diluted Sample
MW24042023	D208-07G	5	NA	06/22/2316:08	04/24/2315:03	H6F21097	H6F21092	IMD040W	Diluted Sample
MW02042023	D208-08G	5	NA	06/22/2316:11	04/24/2315:03	H6F21098	H6F21092	IMD040W	Diluted Sample
MW01042023	D208-09G	5	NA	06/22/2316:14	04/24/2315:03	H6F21099	H6F21092	IMD040W	Diluted Sample
MW28042023	D208-10G	5	NA	06/22/2316:17	04/24/2315:03	H6F21100	H6F21092	IMD040W	Diluted Sample
BGMW02042023	D208-11G	5	NA	06/22/2316:20	04/24/2315:03	H6F21101	H6F21092	IMD040W	Diluted Sample
BGMW01042023	D208-12G	5	NA	06/22/2316:23	04/24/2315:03	H6F21102	H6F21092	IMD040W	Diluted Sample
QC18042023EB01	D208-13N	1	NA	06/22/2316:26	04/24/2315:03	H6F21103	H6F21092	IMD040W	Field Sample
TMW37042023	D208-02T	50	NA	06/22/2316:53	04/24/2315:03	H6F21111	H6F21104	IMD040W	Diluted Sample
BGMW10042023	D208-03T	50	NA	06/22/2316:56	04/24/2315:03	H6F21112	H6F21104	IMD040W	Diluted Sample
BGMW10042023D	D208-04T	50	NA	06/22/2316:59	04/24/2315:03	H6F21113	H6F21104	IMD040W	Diluted Sample
TMW44042023	D208-05T	50	NA	06/22/2317:02	04/24/2315:03	H6F21114	H6F21104	IMD040W	Diluted Sample
TMW46042023	D208-06T	50	NA	06/22/2317:05	04/24/2315:03	H6F21115	H6F21104	IMD040W	Diluted Sample
MW24042023	D208-07T	50	NA	06/22/2317:13	04/24/2315:03	H6F21118	H6F21116	IMD040W	Diluted Sample
MW02042023	D208-08T	50	NA	06/22/2317:16	04/24/2315:03	H6F21119	H6F21116	IMD040W	Diluted Sample
MW01042023	D208-09T	50	NA	06/22/2317:20	04/24/2315:03	H6F21120	H6F21116	IMD040W	Diluted Sample
MW28042023	D208-10T	50	NA	06/22/2317:23	04/24/2315:03	H6F21121	H6F21116	IMD040W	Diluted Sample
BGMW02042023	D208-11T	50	NA	06/22/2317:26	04/24/2315:03	H6F21122	H6F21116	IMD040W	Diluted Sample
BGMW01042023	D208-12T	50	NA	06/22/2317:29	04/24/2315:03	H6F21123	H6F21116	IMD040W	Diluted Sample
BGMW03042023	D208-01A	50	NA	06/23/2319:45	04/24/2315:03	H6F22133	H6F22131	IMD040W	Analytical Spike Sample
BGMW03042023	D208-01T	50	NA	06/23/2319:48	04/24/2315:03	H6F22134	H6F22131	IMD040W	Diluted Sample
BGMW03042023	D208-01J	250	NA	06/23/2319:51	04/24/2315:03	H6F22135	H6F22131	IMD040W	Diluted Sample
BGMW03042023MS	D208-01M	50	NA	06/23/2319:54	04/24/2315:03	H6F22136	H6F22131	IMD040W	Matrix Spike Sample (MS)
BGMW03042023MSD	D208-01S	50	NA	06/23/2319:57	04/24/2315:03	H6F22137	H6F22131	IMD040W	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. : 23D208
Sample ID: BGMW03042023
Lab Samp ID: D208-01G
Lab File ID: H6F21086
Ext Btch ID: IMD040W
Calib. Ref.: H6F21080

Date Collected: 04/18/23 07:20
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 15:36
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	1.9J	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	48000	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	11000	500	100	250
Manganese	7.8	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	14	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: BGMW03042023
Lab Samp ID: D208-01T
Lab File ID: H6F22134
Ext Btch ID: IMD040W
Calib. Ref.: H6F22131

Date Analyzed: 06/23/23 19:48
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	590000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/18/23 07:20
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D208	Date Extracted: 04/24/23 15:03
Sample ID: BGMW03042023	Date Analyzed: 06/22/23 15:36
Lab Samp ID: D208-01G	Dilution Factor: 5
Lab File ID: H6F21086	Matrix: WATER
Ext Btch ID: IMD040W	% Moisture: NA
Calib. Ref.: H6F21080	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	20	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	48000	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	11000	500	100	250
Manganese	7.8	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	14	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:20
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	BGMW03042023	Date Analyzed:	06/23/23 19:48
Lab Samp ID:	D208-01T	Dilution Factor:	50
Lab File ID:	H6F22134	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F22131	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	47000	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	15J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW37042023
Lab Samp ID: D208-02G
Lab File ID: H6F21090
Ext Btch ID: IMD040W
Calib. Ref.: H6F21080

Date Collected: 04/18/23 07:30
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 15:48
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	7.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6400	1000	250	500
Chromium	4.8J	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	700	500	100	250
Manganese	13	5.0	1.2	2.5
Nickel	36	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	1.9J	5.0	1.2	2.5
Zinc	26J	100	25	50

Sample ID: TMW37042023
Lab Samp ID: D208-02T
Lab File ID: H6F21111
Ext Btch ID: IMD040W
Calib. Ref.: H6F21104

Date Analyzed: 06/22/23 16:53
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW37042023
Lab Samp ID: D208-02G
Lab File ID: H6F21090
Ext Btch ID: IMD040W
Calib. Ref.: H6F21080

Date Collected: 04/18/23 07:30
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 15:48
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	7.0	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	6400	1000	250	500
Chromium	4.8J	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	700	500	100	250
Manganese	13	5.0	1.2	2.5
Nickel	36	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	580000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.9J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW37042023
Lab Samp ID: D208-02T
Lab File ID: H6F21111
Ext Btch ID: IMD040W
Calib. Ref.: H6F21104

Date Collected: 04/18/23 07:30
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:53
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	5500J	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	33J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: BGMW10042023
Lab Samp ID: D208-03G
Lab File ID: H6F21091
Ext Btch ID: IMD040W
Calib. Ref.: H6F21080

Date Collected: 04/18/23 07:40
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 15:51
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	6.1	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	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	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: BGMW10042023
Lab Samp ID: D208-03T
Lab File ID: H6F21112
Ext Btch ID: IMD040W
Calib. Ref.: H6F21104

Date Analyzed: 06/22/23 16:56
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	620000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	BGMW10042023	Date Analyzed:	06/22/23 15:51
Lab Samp ID:	D208-03G	Dilution Factor:	5
Lab File ID:	H6F21091	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21080	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	6.1	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	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	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	BGMW10042023	Date Analyzed:	06/22/23 16:56
Lab Samp ID:	D208-03T	Dilution Factor:	50
Lab File ID:	H6F21112	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21104	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	7000J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: BGMW10042023D
Lab Samp ID: D208-04G
Lab File ID: H6F21094
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 07:50
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:00
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	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	8000	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	910	500	100	250
Manganese	16	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	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW10042023D
Lab Samp ID: D208-04T
Lab File ID: H6F21113
Ext Btch ID: IMD040W
Calib. Ref.: H6F21104

Date Analyzed: 06/22/23 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	630000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	BGMW10042023D	Date Analyzed:	06/22/23 16:00
Lab Samp ID:	D208-04G	Dilution Factor:	5
Lab File ID:	H6F21094	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21092	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	8000	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	910	500	100	250
Manganese	16	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	BGMW10042023D	Date Analyzed:	06/22/23 16:59
Lab Samp ID:	D208-04T	Dilution Factor:	50
Lab File ID:	H6F21113	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21104	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	6900J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW44042023
Lab Samp ID: D208-05G
Lab File ID: H6F21095
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 08:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:02
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	0.67J	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	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	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	ND	5.0	1.2	2.5
Potassium	380J	1000	250	500
Selenium	2.3J	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: TMW44042023
Lab Samp ID: D208-05T
Lab File ID: H6F21114
Ext Btch ID: IMD040W
Calib. Ref.: H6F21104

Date Analyzed: 06/22/23 17:02
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW44042023
Lab Samp ID: D208-05G
Lab File ID: H6F21095
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 08:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:02
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	0.67J	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	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	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	ND	5.0	1.2	2.5
Potassium	380J	1000	250	500
Selenium	2.3J	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW44042023
Lab Samp ID: D208-05T
Lab File ID: H6F21114
Ext Btch ID: IMD040W
Calib. Ref.: H6F21104

Date Collected: 04/18/23 08:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 17:02
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	14J	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	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW46042023
Lab Samp ID: D208-06I
Lab File ID: H6F21096
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 09:00
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:05
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	9.3J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	97000	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	ND	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: TMW46042023
Lab Samp ID: D208-06T
Lab File ID: H6F21115
Ext Btch ID: IMD040W
Calib. Ref.: H6F21104

Date Analyzed: 06/22/23 17:05
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW46042023
Lab Samp ID: D208-06I
Lab File ID: H6F21096
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 09:00
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:05
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	9.3J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	97000	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	ND	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: TMW46042023
Lab Samp ID: D208-06T
Lab File ID: H6F21115
Ext Btch ID: IMD040W
Calib. Ref.: H6F21104

Date Collected: 04/18/23 09:00
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 17:05
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	96000	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	120	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW24042023
Lab Samp ID: D208-07G
Lab File ID: H6F21097
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 09:00
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:08
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	0.87J	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	32000	1000	250	500
Chromium	0.54J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	1500	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	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	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW24042023
Lab Samp ID: D208-07T
Lab File ID: H6F21118
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Analyzed: 06/22/23 17:13
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	260000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:00
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	MW24042023	Date Analyzed:	06/22/23 16:08
Lab Samp ID:	D208-07G	Dilution Factor:	5
Lab File ID:	H6F21097	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21092	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	0.87J	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	32000	1000	250	500
Chromium	0.54J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	1500	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	790J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW24042023
Lab Samp ID: D208-07T
Lab File ID: H6F21118
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Collected: 04/18/23 09:00
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 17:13
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	250	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	1600J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW02042023
Lab Samp ID: D208-08G
Lab File ID: H6F21098
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 09:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:11
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	ND	5.0	0.62	1.2
Barium	31	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	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	20000	500	100	250
Manganese	48	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	4.0J	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	58J	100	25	50

Sample ID: MW02042023
Lab Samp ID: D208-08T
Lab File ID: H6F21119
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Analyzed: 06/22/23 17:16
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	590000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW02042023
Lab Samp ID: D208-08G
Lab File ID: H6F21098
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 09:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:11
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	ND	5.0	0.62	1.2
Barium	31	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	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	20000	500	100	250
Manganese	48	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	4.0J	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	58J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Final Volume:50ml
Prepared by : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	MW02042023	Date Analyzed:	06/22/23 17:16
Lab Samp ID:	D208-08T	Dilution Factor:	50
Lab File ID:	H6F21119	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21116	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	92000	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	50J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW01042023
Lab Samp ID: D208-09G
Lab File ID: H6F21099
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 09:55
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:14
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	14	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	7200	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	5.6	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	30J	100	25	50

Sample ID: MW01042023
Lab Samp ID: D208-09T
Lab File ID: H6F21120
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Analyzed: 06/22/23 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	800000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW01042023
Lab Samp ID: D208-09G
Lab File ID: H6F21099
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 09:55
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:14
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	14	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	7200	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	5.6	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	1.6J	5.0	1.2	2.5
Zinc	30J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 09:55
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	MW01042023	Date Analyzed:	06/22/23 17:20
Lab Samp ID:	D208-09T	Dilution Factor:	50
Lab File ID:	H6F21120	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21116	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	130	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	35000	10000	2500	5000
Chromium	36J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	4600J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	7300	5000	1000	2500
Manganese	28J	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	900J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW28042023
Lab Samp ID: D208-10G
Lab File ID: H6F21100
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 11:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:17
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	29	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	11	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	3.1J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	750J	1000	250	500
Selenium	18	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: MW28042023
Lab Samp ID: D208-10T
Lab File ID: H6F21121
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Analyzed: 06/22/23 17:23
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW28042023
Lab Samp ID: D208-10G
Lab File ID: H6F21100
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 11:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:17
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	29	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	11	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	3.1J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	750J	1000	250	500
Selenium	18	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: MW28042023
Lab Samp ID: D208-10T
Lab File ID: H6F21121
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Collected: 04/18/23 11:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 17:23
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	26J	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	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: BGMW02042023
Lab Samp ID: D208-11G
Lab File ID: H6F21101
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 11:10
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:20
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	0.72J	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	51000	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	72000	500	100	250
Manganese	39	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	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	7.1	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW02042023
Lab Samp ID: D208-11T
Lab File ID: H6F21122
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Analyzed: 06/22/23 17:26
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	BGMW02042023	Date Analyzed:	06/22/23 16:20
Lab Samp ID:	D208-11G	Dilution Factor:	5
Lab File ID:	H6F21101	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21092	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	14	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	ND	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	72000	500	100	250
Manganese	39	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	1000	250	500
Selenium	28	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 11:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	BGMW02042023	Date Analyzed:	06/22/23 17:26
Lab Samp ID:	D208-11T	Dilution Factor:	50
Lab File ID:	H6F21122	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21116	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	70000	5000	1000	2500
Manganese	37J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: BGMW01042023
Lab Samp ID: D208-12G
Lab File ID: H6F21102
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 13:00
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:23
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	0.75J	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	64000	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	36000	500	100	250
Manganese	400	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	6.5	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW01042023
Lab Samp ID: D208-12T
Lab File ID: H6F21123
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Analyzed: 06/22/23 17:29
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	920000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/18/23 13:00
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	BGMW01042023	Date Analyzed:	06/22/23 16:23
Lab Samp ID:	D208-12G	Dilution Factor:	5
Lab File ID:	H6F21102	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21092	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	0.75J	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	64000	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	36000	500	100	250
Manganese	400	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	6.5	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	890000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: BGMW01042023
Lab Samp ID: D208-12T
Lab File ID: H6F21123
Ext Btch ID: IMD040W
Calib. Ref.: H6F21116

Date Collected: 04/18/23 13:00
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 17:29
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	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	64000	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	38000	5000	1000	2500
Manganese	400	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	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D208
Sample ID: QC18042023EB01
Lab Samp ID: D208-13N
Lab File ID: H6F21103
Ext Btch ID: IMD040W
Calib. Ref.: H6F21092

Date Collected: 04/18/23 14:00
Date Received: 04/19/23
Date Extracted: 04/24/23 15:03
Date Analyzed: 06/22/23 16:26
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	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	0.58J	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	93J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D208	Date Extracted:	04/24/23 15:03
Sample ID:	MBLK1W	Date Analyzed:	06/22/23 15:24
Lab Samp ID:	IMD040WB	Dilution Factor:	1
Lab File ID:	H6F21082	Matrix:	WATER
Ext Btch ID:	IMD040W	% Moisture:	NA
Calib. Ref.:	H6F21080	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	: CKaing	Analyzed by:	THuang

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23D208

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of thirteen(13) water samples were received on 04/19/23 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 PLD010WB. 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. PLD010WL/PLD010WC 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 D208-01I, -05I, -06I, -07I, -08I, -09I and -10I 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. : 23D208

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	PLD010WB	ND	1	NA	0.20	0.050	0.10	04/27/2311:58	NA	23MD27007	MD27004	PLD010W	NA	NA
LCS1W	PLD010WL	0.23	1	NA	0.20	0.050	0.10	04/27/2312:13	NA	23MD27008	MD27004	PLD010W	NA	NA
LCD1W	PLD010WC	0.21	1	NA	0.20	0.050	0.10	04/27/2312:29	NA	23MD27009	MD27004	PLD010W	NA	NA
TMW37042023	D208-02	ND	1	NA	0.20	0.050	0.10	04/27/2313:03	NA	23MD27011	MD27004	PLD010W	04/18/2307:30	04/19/23
BGMW10042023	D208-03	ND	1	NA	0.20	0.050	0.10	04/27/2313:18	NA	23MD27012	MD27004	PLD010W	04/18/2307:40	04/19/23
BGMW10042023D	D208-04	ND	1	NA	0.20	0.050	0.10	04/27/2313:33	NA	23MD27013	MD27004	PLD010W	04/18/2307:50	04/19/23
QC18042023EB01	D208-13	ND	1	NA	0.20	0.050	0.10	04/27/2316:15	NA	23MD27023	MD27017	PLD010W	04/18/2314:00	04/19/23
BGMW03042023	D208-01I	ND	5	NA	1.0	0.25	0.50	04/27/2316:30	NA	23MD27024	MD27017	PLD010W	04/18/2307:20	04/19/23
TMW44042023	D208-05I	ND	5	NA	1.0	0.25	0.50	04/27/2318:27	NA	23MD27029	MD27028	PLD010W	04/18/2308:10	04/19/23
TMW46042023	D208-06I	ND	5	NA	1.0	0.25	0.50	04/27/2318:42	NA	23MD27030	MD27028	PLD010W	04/18/2309:00	04/19/23
MW24042023	D208-07I	ND	5	NA	1.0	0.25	0.50	04/27/2318:56	NA	23MD27031	MD27028	PLD010W	04/18/2309:00	04/19/23
MW02042023	D208-08I	ND	5	NA	1.0	0.25	0.50	04/27/2319:11	NA	23MD27032	MD27028	PLD010W	04/18/2309:10	04/19/23
MW01042023	D208-09I	ND	5	NA	1.0	0.25	0.50	04/27/2319:26	NA	23MD27033	MD27028	PLD010W	04/18/2309:55	04/19/23
MW28042023	D208-10I	ND	5	NA	1.0	0.25	0.50	04/27/2319:40	NA	23MD27034	MD27028	PLD010W	04/18/2311:10	04/19/23
BGMW02042023	D208-11I	0.49J	5	NA	1.0	0.25	0.50	04/27/2319:55	NA	23MD27035	MD27028	PLD010W	04/18/2311:10	04/19/23
BGMW01042023	D208-12I	0.82J	5	NA	1.0	0.25	0.50	04/27/2320:09	NA	23MD27036	MD27028	PLD010W	04/18/2313:00	04/19/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D208

METHOD 9056A
BROMIDE

A total of thirteen(13) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 D208-06I 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 : 23D208

METHOD 9056A
CHLORIDE-CL

A total of thirteen(13) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 : 23D208

METHOD 9056A
FLUORIDE

A total of thirteen(13) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 D208-06I 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 : 23D208

METHOD SW9056A
NITRATE-N

A total of thirteen(13) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 : 23D208

METHOD SW9056A
NITRITE-N

A total of thirteen(13) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 D208-06I 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 : 23D208

METHOD 9056A
ORTHOPHOSPHATE-P

A total of thirteen(13) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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 D208-06I 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 : 23D208

METHOD 9056A
SULFATE

A total of thirteen(13) water samples were received on 04/19/23 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 ICD016WB. 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. ICD016WL/ICD016WC 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
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208

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	ICD016WB	ND	1	NA	0.2	0.05	0.1	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	1.9	1	NA	0.2	0.05	0.1	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	1.9	1	NA	0.2	0.05	0.1	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
QC18042023EB01	D208-13	0.14J	1	NA	0.2	0.05	0.1	04/19/2317:30	NA	AD16-27	AD16-25	ICD016W	04/18/2314:00	04/19/23
BGMW03042023	D208-01I	180	25	NA	5	1.2	2.5	04/20/2300:57	NA	AD16-49	AD16-47	ICD016W	04/18/2307:20	04/19/23
TMW37042023	D208-02I	210	25	NA	5	1.2	2.5	04/20/2301:37	NA	AD16-51	AD16-47	ICD016W	04/18/2307:30	04/19/23
BGMW10042023	D208-03I	77	10	NA	2	0.5	1	04/20/2302:18	NA	AD16-53	AD16-47	ICD016W	04/18/2307:40	04/19/23
BGMW10042023D	D208-04I	79	10	NA	2	0.5	1	04/20/2302:58	NA	AD16-55	AD16-47	ICD016W	04/18/2307:50	04/19/23
TMW44042023	D208-05J	110	20	NA	4	1	2	04/20/2303:39	NA	AD16-57	AD16-47	ICD016W	04/18/2308:10	04/19/23
TMW46042023	D208-06K	240	50	NA	10	2.5	5	04/20/2305:00	NA	AD16-61	AD16-59	ICD016W	04/18/2309:00	04/19/23
MW24042023	D208-07I	110	20	NA	4	1	2	04/20/2305:41	NA	AD16-63	AD16-59	ICD016W	04/18/2309:00	04/19/23
MW02042023	D208-08I	37	10	NA	2	0.5	1	04/20/2306:01	NA	AD16-64	AD16-59	ICD016W	04/18/2309:10	04/19/23
MW01042023	D208-09J	50	10	NA	2	0.5	1	04/20/2306:42	NA	AD16-66	AD16-59	ICD016W	04/18/2309:55	04/19/23
MW28042023	D208-10J	150	20	NA	4	1	2	04/20/2307:22	NA	AD16-68	AD16-59	ICD016W	04/18/2311:10	04/19/23
BGMW02042023	D208-11J	320	40	NA	8	2	4	04/20/2308:03	NA	AD16-70	AD16-59	ICD016W	04/18/2311:10	04/19/23
BGMW01042023	D208-12K	400	100	NA	20	5	10	04/20/2309:44	NA	AD16-75	AD16-71	ICD016W	04/18/2313:00	04/19/23

METHOD 9056A
BROMIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208

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	ICD016WB	ND	1	NA	0.5	0.13	0.25	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	0.96	1	NA	0.5	0.13	0.25	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	0.96	1	NA	0.5	0.13	0.25	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW03042023	D208-01	0.98	1	NA	0.5	0.13	0.25	04/19/2311:25	NA	AD16-09	AD16-01	ICD016W	04/18/2307:20	04/19/23
TMW37042023	D208-02	0.50	1	NA	0.5	0.13	0.25	04/19/2311:45	NA	AD16-10	AD16-01	ICD016W	04/18/2307:30	04/19/23
BGMW10042023	D208-03	0.39J	1	NA	0.5	0.13	0.25	04/19/2312:06	NA	AD16-11	AD16-01	ICD016W	04/18/2307:40	04/19/23
BGMW10042023D	D208-04	0.38J	1	NA	0.5	0.13	0.25	04/19/2312:26	NA	AD16-12	AD16-01	ICD016W	04/18/2307:50	04/19/23
TMW44042023	D208-05	0.67	1	NA	0.5	0.13	0.25	04/19/2313:27	NA	AD16-15	AD16-13	ICD016W	04/18/2308:10	04/19/23
TMW46042023	D208-06I	1.3	2	NA	1	0.26	0.5	04/19/2314:28	NA	AD16-18	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW24042023	D208-07	0.48J	1	NA	0.5	0.13	0.25	04/19/2314:48	NA	AD16-19	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW02042023	D208-08	0.33J	1	NA	0.5	0.13	0.25	04/19/2315:08	NA	AD16-20	AD16-13	ICD016W	04/18/2309:10	04/19/23
MW01042023	D208-09	0.38J	1	NA	0.5	0.13	0.25	04/19/2315:29	NA	AD16-21	AD16-13	ICD016W	04/18/2309:55	04/19/23
MW28042023	D208-10	0.50J	1	NA	0.5	0.13	0.25	04/19/2315:49	NA	AD16-22	AD16-13	ICD016W	04/18/2311:10	04/19/23
BGMW02042023	D208-11	1.5	1	NA	0.5	0.13	0.25	04/19/2316:09	NA	AD16-23	AD16-13	ICD016W	04/18/2311:10	04/19/23
BGMW01042023	D208-12	1.6	1	NA	0.5	0.13	0.25	04/19/2316:29	NA	AD16-24	AD16-13	ICD016W	04/18/2313:00	04/19/23
QC18042023EB01	D208-13	ND	1	NA	0.5	0.13	0.25	04/19/2317:30	NA	AD16-27	AD16-25	ICD016W	04/18/2314:00	04/19/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208

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	ICD016WB	ND	1	NA	0.1	0.025	0.05	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	0.96	1	NA	0.1	0.025	0.05	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	0.96	1	NA	0.1	0.025	0.05	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW03042023	D208-01	3.6	1	NA	0.1	0.025	0.05	04/19/2311:25	NA	AD16-09	AD16-01	ICD016W	04/18/2307:20	04/19/23
TMW37042023	D208-02	0.94	1	NA	0.1	0.025	0.05	04/19/2311:45	NA	AD16-10	AD16-01	ICD016W	04/18/2307:30	04/19/23
BGMW10042023	D208-03	0.63	1	NA	0.1	0.025	0.05	04/19/2312:06	NA	AD16-11	AD16-01	ICD016W	04/18/2307:40	04/19/23
BGMW10042023D	D208-04	0.63	1	NA	0.1	0.025	0.05	04/19/2312:26	NA	AD16-12	AD16-01	ICD016W	04/18/2307:50	04/19/23
TMW44042023	D208-05	0.96	1	NA	0.1	0.025	0.05	04/19/2313:27	NA	AD16-15	AD16-13	ICD016W	04/18/2308:10	04/19/23
TMW46042023	D208-06I	0.36	2	NA	0.2	0.05	0.1	04/19/2314:28	NA	AD16-18	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW24042023	D208-07	1.0	1	NA	0.1	0.025	0.05	04/19/2314:48	NA	AD16-19	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW02042023	D208-08	0.39	1	NA	0.1	0.025	0.05	04/19/2315:08	NA	AD16-20	AD16-13	ICD016W	04/18/2309:10	04/19/23
MW01042023	D208-09	0.77	1	NA	0.1	0.025	0.05	04/19/2315:29	NA	AD16-21	AD16-13	ICD016W	04/18/2309:55	04/19/23
MW28042023	D208-10	0.54	1	NA	0.1	0.025	0.05	04/19/2315:49	NA	AD16-22	AD16-13	ICD016W	04/18/2311:10	04/19/23
BGMW02042023	D208-11	0.34	1	NA	0.1	0.025	0.05	04/19/2316:09	NA	AD16-23	AD16-13	ICD016W	04/18/2311:10	04/19/23
BGMW01042023	D208-12	1.1	1	NA	0.1	0.025	0.05	04/19/2316:29	NA	AD16-24	AD16-13	ICD016W	04/18/2313:00	04/19/23
QC18042023EB01	D208-13	ND	1	NA	0.1	0.025	0.05	04/19/2317:30	NA	AD16-27	AD16-25	ICD016W	04/18/2314:00	04/19/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208

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	ICD016WB	ND	1	NA	0.1	0.03	0.06	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	1.0	1	NA	0.1	0.03	0.06	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	1.0	1	NA	0.1	0.03	0.06	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW03042023	D208-01	0.45	1	NA	0.1	0.03	0.06	04/19/2311:25	NA	AD16-09	AD16-01	ICD016W	04/18/2307:20	04/19/23
TMW37042023	D208-02	0.083J	1	NA	0.1	0.03	0.06	04/19/2311:45	NA	AD16-10	AD16-01	ICD016W	04/18/2307:30	04/19/23
BGMW10042023	D208-03	0.066J	1	NA	0.1	0.03	0.06	04/19/2312:06	NA	AD16-11	AD16-01	ICD016W	04/18/2307:40	04/19/23
BGMW10042023D	D208-04	0.081J	1	NA	0.1	0.03	0.06	04/19/2312:26	NA	AD16-12	AD16-01	ICD016W	04/18/2307:50	04/19/23
MW24042023	D208-07	ND	1	NA	0.1	0.03	0.06	04/19/2314:48	NA	AD16-19	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW02042023	D208-08	0.90	1	NA	0.1	0.03	0.06	04/19/2315:08	NA	AD16-20	AD16-13	ICD016W	04/18/2309:10	04/19/23
QC18042023EB01	D208-13	ND	1	NA	0.1	0.03	0.06	04/19/2317:30	NA	AD16-27	AD16-25	ICD016W	04/18/2314:00	04/19/23
TMW44042023	D208-05I	52	50	NA	5	1.5	3	04/19/2318:11	NA	AD16-29	AD16-25	ICD016W	04/18/2308:10	04/19/23
TMW46042023	D208-06J	77	100	NA	10	3	6	04/19/2318:31	NA	AD16-30	AD16-25	ICD016W	04/18/2309:00	04/19/23
MW01042023	D208-09I	3.7	5	NA	0.5	0.15	0.3	04/19/2318:51	NA	AD16-31	AD16-25	ICD016W	04/18/2309:55	04/19/23
MW28042023	D208-10I	9.1	10	NA	1	0.3	0.6	04/19/2319:12	NA	AD16-32	AD16-25	ICD016W	04/18/2311:10	04/19/23
BGMW02042023	D208-11I	14	20	NA	2	0.6	1.2	04/19/2319:32	NA	AD16-33	AD16-25	ICD016W	04/18/2311:10	04/19/23
BGMW01042023	D208-12I	8.1	10	NA	1	0.3	0.6	04/19/2319:52	NA	AD16-34	AD16-25	ICD016W	04/18/2313:00	04/19/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208

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	ICD016WB	ND	1	NA	0.1	0.03	0.06	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	2.0	1	NA	0.1	0.03	0.06	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	2.0	1	NA	0.1	0.03	0.06	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW03042023	D208-01	0.098J	1	NA	0.1	0.03	0.06	04/19/2311:25	NA	AD16-09	AD16-01	ICD016W	04/18/2307:20	04/19/23
TMW37042023	D208-02	ND	1	NA	0.1	0.03	0.06	04/19/2311:45	NA	AD16-10	AD16-01	ICD016W	04/18/2307:30	04/19/23
BGMW10042023	D208-03	ND	1	NA	0.1	0.03	0.06	04/19/2312:06	NA	AD16-11	AD16-01	ICD016W	04/18/2307:40	04/19/23
BGMW10042023D	D208-04	ND	1	NA	0.1	0.03	0.06	04/19/2312:26	NA	AD16-12	AD16-01	ICD016W	04/18/2307:50	04/19/23
TMW44042023	D208-05	0.076J	1	NA	0.1	0.03	0.06	04/19/2313:27	NA	AD16-15	AD16-13	ICD016W	04/18/2308:10	04/19/23
TMW46042023	D208-06I	ND	2	NA	0.2	0.06	0.12	04/19/2314:28	NA	AD16-18	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW24042023	D208-07	ND	1	NA	0.1	0.03	0.06	04/19/2314:48	NA	AD16-19	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW02042023	D208-08	ND	1	NA	0.1	0.03	0.06	04/19/2315:08	NA	AD16-20	AD16-13	ICD016W	04/18/2309:10	04/19/23
MW01042023	D208-09	ND	1	NA	0.1	0.03	0.06	04/19/2315:29	NA	AD16-21	AD16-13	ICD016W	04/18/2309:55	04/19/23
MW28042023	D208-10	ND	1	NA	0.1	0.03	0.06	04/19/2315:49	NA	AD16-22	AD16-13	ICD016W	04/18/2311:10	04/19/23
BGMW02042023	D208-11	ND	1	NA	0.1	0.03	0.06	04/19/2316:09	NA	AD16-23	AD16-13	ICD016W	04/18/2311:10	04/19/23
BGMW01042023	D208-12	0.15	1	NA	0.1	0.03	0.06	04/19/2316:29	NA	AD16-24	AD16-13	ICD016W	04/18/2313:00	04/19/23
QC18042023EB01	D208-13	ND	1	NA	0.1	0.03	0.06	04/19/2317:30	NA	AD16-27	AD16-25	ICD016W	04/18/2314:00	04/19/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208

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	ICD016WB	ND	1	NA	0.5	0.12	0.25	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	1.9	1	NA	0.5	0.12	0.25	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	1.9	1	NA	0.5	0.12	0.25	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
BGMW03042023	D208-01	ND	1	NA	0.5	0.12	0.25	04/19/2311:25	NA	AD16-09	AD16-01	ICD016W	04/18/2307:20	04/19/23
TMW37042023	D208-02	ND	1	NA	0.5	0.12	0.25	04/19/2311:45	NA	AD16-10	AD16-01	ICD016W	04/18/2307:30	04/19/23
BGMW10042023	D208-03	ND	1	NA	0.5	0.12	0.25	04/19/2312:06	NA	AD16-11	AD16-01	ICD016W	04/18/2307:40	04/19/23
BGMW10042023D	D208-04	ND	1	NA	0.5	0.12	0.25	04/19/2312:26	NA	AD16-12	AD16-01	ICD016W	04/18/2307:50	04/19/23
TMW44042023	D208-05	ND	1	NA	0.5	0.12	0.25	04/19/2313:27	NA	AD16-15	AD16-13	ICD016W	04/18/2308:10	04/19/23
TMW46042023	D208-06I	ND	2	NA	1	0.25	0.5	04/19/2314:28	NA	AD16-18	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW24042023	D208-07	0.34J	1	NA	0.5	0.12	0.25	04/19/2314:48	NA	AD16-19	AD16-13	ICD016W	04/18/2309:00	04/19/23
MW02042023	D208-08	ND	1	NA	0.5	0.12	0.25	04/19/2315:08	NA	AD16-20	AD16-13	ICD016W	04/18/2309:10	04/19/23
MW01042023	D208-09	ND	1	NA	0.5	0.12	0.25	04/19/2315:29	NA	AD16-21	AD16-13	ICD016W	04/18/2309:55	04/19/23
MW28042023	D208-10	ND	1	NA	0.5	0.12	0.25	04/19/2315:49	NA	AD16-22	AD16-13	ICD016W	04/18/2311:10	04/19/23
BGMW02042023	D208-11	ND	1	NA	0.5	0.12	0.25	04/19/2316:09	NA	AD16-23	AD16-13	ICD016W	04/18/2311:10	04/19/23
BGMW01042023	D208-12	ND	1	NA	0.5	0.12	0.25	04/19/2316:29	NA	AD16-24	AD16-13	ICD016W	04/18/2313:00	04/19/23
QC18042023EB01	D208-13	ND	1	NA	0.5	0.12	0.25	04/19/2317:30	NA	AD16-27	AD16-25	ICD016W	04/18/2314:00	04/19/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D208

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	ICD016WB	ND	1	NA	0.5	0.13	0.25	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	4.7	1	NA	0.5	0.13	0.25	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	4.7	1	NA	0.5	0.13	0.25	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
MW24042023	D208-07	1.6	1	NA	0.5	0.13	0.25	04/19/2314:48	NA	AD16-19	AD16-13	ICD016W	04/18/2309:00	04/19/23
QC18042023EB01	D208-13	0.22J	1	NA	0.5	0.13	0.25	04/19/2317:30	NA	AD16-27	AD16-25	ICD016W	04/18/2314:00	04/19/23
BGMW03042023	D208-01J	490	100	NA	50	13	25	04/20/2301:17	NA	AD16-50	AD16-47	ICD016W	04/18/2307:20	04/19/23
TMW37042023	D208-02J	610	100	NA	50	13	25	04/20/2301:58	NA	AD16-52	AD16-47	ICD016W	04/18/2307:30	04/19/23
BGMW10042023	D208-03J	880	200	NA	100	26	50	04/20/2302:38	NA	AD16-54	AD16-47	ICD016W	04/18/2307:40	04/19/23
BGMW10042023D	D208-04J	880	200	NA	100	26	50	04/20/2303:19	NA	AD16-56	AD16-47	ICD016W	04/18/2307:50	04/19/23
TMW44042023	D208-05K	700	200	NA	100	26	50	04/20/2303:59	NA	AD16-58	AD16-47	ICD016W	04/18/2308:10	04/19/23
TMW46042023	D208-06T	1800	200	NA	100	26	50	04/20/2305:20	NA	AD16-62	AD16-59	ICD016W	04/18/2309:00	04/19/23
MW02042023	D208-08J	740	100	NA	50	13	25	04/20/2306:21	NA	AD16-65	AD16-59	ICD016W	04/18/2309:10	04/19/23
MW01042023	D208-09K	910	100	NA	50	13	25	04/20/2307:02	NA	AD16-67	AD16-59	ICD016W	04/18/2309:55	04/19/23
MW28042023	D208-10K	1300	100	NA	50	13	25	04/20/2307:43	NA	AD16-69	AD16-59	ICD016W	04/18/2311:10	04/19/23
BGMW02042023	D208-11K	1100	100	NA	50	13	25	04/20/2309:04	NA	AD16-73	AD16-71	ICD016W	04/18/2311:10	04/19/23
BGMW01042023	D208-12K	1200	100	NA	50	13	25	04/20/2309:44	NA	AD16-75	AD16-71	ICD016W	04/18/2313:00	04/19/23

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

Date: 07-06-2023
EMAX Batch No.: 23D213

Attn: Jeff Ockerman

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

Subject: Laboratory Report
Project: USACE WINGATE

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Enclosed is the Laboratory report for samples received on 04/19/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
BGMW07042023	D213-01	04/17/23	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)
MW32042023	D213-02	04/17/23	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)
BGMW08042023	D213-03	04/17/23	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)

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

Sample ID	Control #	Col Date	Matrix	Analysis
TMW18042023	D213-04	04/17/23	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
TMW58042023	D213-05	04/17/23	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)
BGMW09042023	D213-06	04/17/23	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)
BGMW09042023D	D213-07	04/17/23	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)
TMW36042023	D213-08	04/17/23	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
BGMW12042023	D213-09	04/17/23	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)
TMW16042023	D213-10	04/17/23	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
TMW19042023	D213-11	04/17/23	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
QC17042023TB01	D213-12	04/17/23	WATER	VOCS BY 8260C TPH GASOLINE
BGMW07042023MS	D213-01M	04/17/23	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)
BGMW07042023MSD	D213-01S	04/17/23	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)

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 CA002912022-24
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#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of twelve(12) water samples were received on 04/19/23 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, one(1) method blank was analyzed. VO67D26B - 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. VO67D26L/VO67D26C 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: 23D213-01M/23D213-01S - Percent recovery for Styrene(unstable in acidic matrix) was not within MS/MSD QC limits. Percent recoveries for Chloroethane and Methylcyclohexane were not within MS QC limit. 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. : 23D213
Instrument ID : 67

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V067D26L	1	NA	04/28/2307:22	04/28/2307:22	RDC638	RDC593	V067D26	Lab Control Sample (LCS)
LCD1W	V067D26C	1	NA	04/28/2307:47	04/28/2307:47	RDC639	RDC593	V067D26	LCS Duplicate
MBLK1W	V067D26B	1	NA	04/28/2308:38	04/28/2308:38	RDC641	RDC593	V067D26	Method Blank
QC17042023TB01	23D213-12	1	NA	04/28/2310:46	04/28/2310:46	RDC646	RDC593	V067D26	Field Sample
BGMW07042023	23D213-01	1	NA	04/28/2311:11	04/28/2311:11	RDC647	RDC593	V067D26	Field Sample
MW32042023	23D213-02	1	NA	04/28/2311:37	04/28/2311:37	RDC648	RDC593	V067D26	Field Sample
BGMW08042023	23D213-03	1	NA	04/28/2312:03	04/28/2312:03	RDC649	RDC593	V067D26	Field Sample
TMW18042023	23D213-04	1	NA	04/28/2312:28	04/28/2312:28	RDC650	RDC593	V067D26	Field Sample
TMW58042023	23D213-05	1	NA	04/28/2312:54	04/28/2312:54	RDC651	RDC593	V067D26	Field Sample
BGMW09042023	23D213-06	1	NA	04/28/2313:19	04/28/2313:19	RDC652	RDC593	V067D26	Field Sample
BGMW09042023D	23D213-07	1	NA	04/28/2313:45	04/28/2313:45	RDC653	RDC593	V067D26	Field Sample
TMW36042023	23D213-08	1	NA	04/28/2314:11	04/28/2314:11	RDC654	RDC593	V067D26	Field Sample
BGMW12042023	23D213-09	1	NA	04/28/2314:36	04/28/2314:36	RDC655	RDC593	V067D26	Field Sample
TMW16042023	23D213-10	1	NA	04/28/2315:02	04/28/2315:02	RDC656	RDC593	V067D26	Field Sample
TMW19042023	23D213-11	1	NA	04/28/2315:28	04/28/2315:28	RDC657	RDC593	V067D26	Field Sample
BGMW07042023MS	23D213-01M	1	NA	04/28/2317:11	04/28/2317:11	RDC661	RDC593	V067D26	Matrix Spike Sample (MS)
BGMW07042023MSD	23D213-01S	1	NA	04/28/2317:36	04/28/2317:36	RDC662	RDC593	V067D26	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/28/23 11:11
Sample ID	: BGMW07042023	Date Analyzed:	04/28/23 11:11
Lab Samp ID:	23D213-01	Dilution Factor:	1
Lab File ID:	RDC647	Matrix:	WATER
Ext Btch ID:	V067D26	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.84	10.0	98	81-118
4-Bromofluorobenzene	9.78	10.0	98	85-114
Toluene-d8	9.55	10.0	96	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 07:45
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/28/23 11:37
Sample ID : MW32042023	Date Analyzed: 04/28/23 11:37
Lab Samp ID: 23D213-02	Dilution Factor: 1
Lab File ID: RDC648	Matrix: WATER
Ext Btch ID: VO67D26	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.89	10.0	99	85-114
Toluene-d8	9.69	10.0	97	89-112
Dibromofluoromethane	9.95	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/28/23 12:03
Sample ID	: BGMW08042023	Date Analyzed:	04/28/23 12:03
Lab Samp ID:	23D213-03	Dilution Factor:	1
Lab File ID:	RDC649	Matrix:	WATER
Ext Btch ID:	V067D26	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.80	10.0	98	81-118
4-Bromofluorobenzene	9.89	10.0	99	85-114
Toluene-d8	9.64	10.0	96	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 09:15
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/28/23 12:28
Sample ID : TMW18042023	Date Analyzed: 04/28/23 12:28
Lab Samp ID: 23D213-04	Dilution Factor: 1
Lab File ID: RDC650	Matrix: WATER
Ext Btch ID: VO67D26	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	0.18J	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	9.85	10.0	98	85-114
Toluene-d8	9.59	10.0	96	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 09:30
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/28/23 12:54
Sample ID : TMW58042023	Date Analyzed: 04/28/23 12:54
Lab Samp ID: 23D213-05	Dilution Factor: 1
Lab File ID: RDC651	Matrix: WATER
Ext Btch ID: VO67D26	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.43	10.0	94	81-118
4-Bromofluorobenzene	9.87	10.0	99	85-114
Toluene-d8	9.55	10.0	95	89-112
Dibromofluoromethane	9.99	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 10:25
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/28/23 13:19
Sample ID : BGMW09042023	Date Analyzed: 04/28/23 13:19
Lab Samp ID: 23D213-06	Dilution Factor: 1
Lab File ID: RDC652	Matrix: WATER
Ext Btch ID: VO67D26	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.45	10.0	95	81-118
4-Bromofluorobenzene	9.77	10.0	98	85-114
Toluene-d8	9.65	10.0	97	89-112
Dibromofluoromethane	9.94	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 10:40
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/28/23 13:45
Sample ID : BGMW09042023D	Date Analyzed: 04/28/23 13:45
Lab Samp ID: 23D213-07	Dilution Factor: 1
Lab File ID: RDC653	Matrix: WATER
Ext Btch ID: VO67D26	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.74	10.0	97	81-118
4-Bromofluorobenzene	9.80	10.0	98	85-114
Toluene-d8	9.55	10.0	95	89-112
Dibromofluoromethane	10.0	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 11:30
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/28/23 14:11
Sample ID : TMW36042023	Date Analyzed: 04/28/23 14:11
Lab Samp ID: 23D213-08	Dilution Factor: 1
Lab File ID: RDC654	Matrix: WATER
Ext Btch ID: VO67D26	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.52	10.0	95	81-118
4-Bromofluorobenzene	9.86	10.0	99	85-114
Toluene-d8	9.68	10.0	97	89-112
Dibromofluoromethane	9.98	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D213
Sample ID : BGMW12042023
Lab Samp ID: 23D213-09
Lab File ID: RDC655
Ext Btch ID: VO67D26
Calib. Ref.: RDC593

Date Collected: 04/17/23 12:50
Date Received: 04/19/23
Date Extracted: 04/28/23 14:36
Date Analyzed: 04/28/23 14:36
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	9.68	10.0	97	81-118
4-Bromofluorobenzene	9.72	10.0	97	85-114
Toluene-d8	9.58	10.0	96	89-112
Dibromofluoromethane	9.93	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/28/23 15:02
Sample ID	: TMW16042023	Date Analyzed:	04/28/23 15:02
Lab Samp ID:	23D213-10	Dilution Factor:	1
Lab File ID:	RDC656	Matrix:	WATER
Ext Btch ID:	VO67D26	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.57	10.0	96	81-118
4-Bromofluorobenzene	9.90	10.0	99	85-114
Toluene-d8	9.70	10.0	97	89-112
Dibromofluoromethane	9.97	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 10:15
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/28/23 15:28
Sample ID : TMW19042023	Date Analyzed: 04/28/23 15:28
Lab Samp ID: 23D213-11	Dilution Factor: 1
Lab File ID: RDC657	Matrix: WATER
Ext Btch ID: VO67D26	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.84	10.0	98	85-114
Toluene-d8	9.57	10.0	96	89-112
Dibromofluoromethane	9.96	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 08:00
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/28/23 10:46
Sample ID : QC17042023TB01	Date Analyzed: 04/28/23 10:46
Lab Samp ID: 23D213-12	Dilution Factor: 1
Lab File ID: RDC646	Matrix: WATER
Ext Btch ID: VO67D26	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.1	10.0	101	85-114
Toluene-d8	9.73	10.0	97	89-112
Dibromofluoromethane	9.83	10.0	98	80-119

Notes:
Sample Amount : 25ml
Prepared by : VLu
Final Volume : 25ml
Analyzed by : VLu
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#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

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

A total of eleven(11) water samples were received on 04/19/23 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: RDH389, RDH390, RDH424 and RDH425) 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. SVD028WB - 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: SVD028WL/SVD028WC - RPDs for 2-Nitrophenol(RPD=32*), 4-Chlorophenyl-Phenyl Ether(RPD=21*), 4-Nitroaniline(RPD=36*), and Nitrobenzene(RPD=29*) 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: 23D213-01M/23D213-01S - Percent recovery for several analytes in MS and/or MSD were not within MS QC limit. RPD for several analytes were >RPD 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. For this SDG, all surrogate recoveries were within QC limits except for 2-Fluorophenol and Phenol-D5 in D213-01M and 2-Fluorobiphenyl, Nitrobenzene-D5 and Phenol-D5 in D213-06; 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 : 23D213

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

A total of eleven(11) water samples were received on 04/19/23 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: RDH391 and RDH423) 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. SVD028WB - 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. CLD028WL/CLD028WC 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 23D213-01M/23D213-01S. 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.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

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

A total of eleven(11) water samples were received on 04/19/23 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: RDH390, RDH424, RDJ390 and RDJ419) 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. SVD028WB - 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. CLD028WX/CLD028WY 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. 23D213-01M/23D213-01S - 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. : 23D213
Instrument ID : E7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVD028WB	1	NA	04/27/2309:51	04/24/2313:15	RDH392	RCH015	23SVD028W	Method Blank
LCS1W	SVD028WL	1	NA	04/27/2310:09	04/24/2313:15	RDH393	RCH015	23SVD028W	Lab Control Sample (LCS)
LCD1W	SVD028WC	1	NA	04/27/2310:28	04/24/2313:15	RDH394	RCH015	23SVD028W	LCS Duplicate
BGMW07042023MS	23D213-01M	1	NA	04/27/2311:24	04/24/2313:15	RDH397	RCH015	23SVD028W	Matrix Spike Sample (MS)
BGMW07042023MSD	23D213-01S	1	NA	04/27/2311:43	04/24/2313:15	RDH398	RCH015	23SVD028W	MS Duplicate (MSD)
BGMW07042023	23D213-01	1	NA	04/27/2312:39	04/24/2313:15	RDH401	RCH015	23SVD028W	Field Sample
MW32042023	23D213-02	1	NA	04/27/2312:58	04/24/2313:15	RDH402	RCH015	23SVD028W	Field Sample
BGMW08042023	23D213-03	1	NA	04/27/2313:16	04/24/2313:15	RDH403	RCH015	23SVD028W	Field Sample
TMW18042023	23D213-04	1	NA	04/27/2313:35	04/24/2313:15	RDH404	RCH015	23SVD028W	Field Sample
TMW58042023	23D213-05	1	NA	04/27/2313:54	04/24/2313:15	RDH405	RCH015	23SVD028W	Field Sample
BGMW09042023	23D213-06	1	NA	04/27/2314:12	04/24/2313:15	RDH406	RCH015	23SVD028W	Field Sample
BGMW09042023D	23D213-07	1	NA	04/27/2314:31	04/24/2313:15	RDH407	RCH015	23SVD028W	Field Sample
TMW36042023	23D213-08	1	NA	04/27/2314:50	04/24/2313:15	RDH408	RCH015	23SVD028W	Field Sample
BGMW12042023	23D213-09	1	NA	04/27/2315:09	04/24/2313:15	RDH409	RCH015	23SVD028W	Field Sample
TMW16042023	23D213-10	1	NA	04/27/2315:27	04/24/2313:15	RDH410	RCH015	23SVD028W	Field Sample
TMW19042023	23D213-11	1	NA	04/27/2315:46	04/24/2313:15	RDH411	RCH015	23SVD028W	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. : 23D213
Instrument ID : E7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVD028WB	1	NA	04/27/2309:51	04/24/2313:15	RDH392	RCH007	23SVD028W	Method Blank
BGMW07042023	23D213-01	1	NA	04/27/2312:39	04/24/2313:15	RDH401	RCH007	23SVD028W	Field Sample
MW32042023	23D213-02	1	NA	04/27/2312:58	04/24/2313:15	RDH402	RCH007	23SVD028W	Field Sample
BGMW08042023	23D213-03	1	NA	04/27/2313:16	04/24/2313:15	RDH403	RCH007	23SVD028W	Field Sample
TMW18042023	23D213-04	1	NA	04/27/2313:35	04/24/2313:15	RDH404	RCH007	23SVD028W	Field Sample
TMW58042023	23D213-05	1	NA	04/27/2313:54	04/24/2313:15	RDH405	RCH007	23SVD028W	Field Sample
BGMW09042023	23D213-06	1	NA	04/27/2314:12	04/24/2313:15	RDH406	RCH007	23SVD028W	Field Sample
BGMW09042023D	23D213-07	1	NA	04/27/2314:31	04/24/2313:15	RDH407	RCH007	23SVD028W	Field Sample
TMW36042023	23D213-08	1	NA	04/27/2314:50	04/24/2313:15	RDH408	RCH007	23SVD028W	Field Sample
BGMW12042023	23D213-09	1	NA	04/27/2315:09	04/24/2313:15	RDH409	RCH007	23SVD028W	Field Sample
TMW16042023	23D213-10	1	NA	04/27/2315:27	04/24/2313:15	RDH410	RCH007	23SVD028W	Field Sample
TMW19042023	23D213-11	1	NA	04/27/2315:46	04/24/2313:15	RDH411	RCH007	23SVD028W	Field Sample
LCS1W!	CLD028WX	1	NA	04/27/2317:00	04/24/2313:15	RDJ414	RCJ025	23SVD028W	Lab Control Sample (LCS)
LCD1W!	CLD028WY	1	NA	04/27/2317:18	04/24/2313:15	RDJ415	RCJ025	23SVD028W	LCS Duplicate
BGMW07042023MS!	23D213-01M	1	NA	04/27/2317:37	04/24/2313:15	RDJ416	RCJ025	23SVD028W	Matrix Spike Sample (MS)
BGMW07042023MSD!	23D213-01S	1	NA	04/27/2317:56	04/24/2313:15	RDJ417	RCJ025	23SVD028W	MS Duplicate (MSD)

! Instrument ID : E4
FN - Filename
% Moist - Percent Moisture

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

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

SDG NO. : 23D213
Instrument ID : E7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVD028WB	1	NA	04/27/2309:51	04/24/2313:15	RDH392	RCH028	23SVD028W	Method Blank
LCS1W	CLD028WL	1	NA	04/27/2310:47	04/24/2313:15	RDH395	RCH028	23SVD028W	Lab Control Sample (LCS)
LCD1W	CLD028WC	1	NA	04/27/2311:05	04/24/2313:15	RDH396	RCH028	23SVD028W	LCS Duplicate
BGMW07042023MS	23D213-01M	1	NA	04/27/2312:02	04/24/2313:15	RDH399	RCH028	23SVD028W	Matrix Spike Sample (MS)
BGMW07042023MSD	23D213-01S	1	NA	04/27/2312:20	04/24/2313:15	RDH400	RCH028	23SVD028W	MS Duplicate (MSD)
BGMW07042023	23D213-01	1	NA	04/27/2312:39	04/24/2313:15	RDH401	RCH028	23SVD028W	Field Sample
MW32042023	23D213-02	1	NA	04/27/2312:58	04/24/2313:15	RDH402	RCH028	23SVD028W	Field Sample
BGMW08042023	23D213-03	1	NA	04/27/2313:16	04/24/2313:15	RDH403	RCH028	23SVD028W	Field Sample
TMW18042023	23D213-04	1	NA	04/27/2313:35	04/24/2313:15	RDH404	RCH028	23SVD028W	Field Sample
TMW58042023	23D213-05	1	NA	04/27/2313:54	04/24/2313:15	RDH405	RCH028	23SVD028W	Field Sample
BGMW09042023	23D213-06	1	NA	04/27/2314:12	04/24/2313:15	RDH406	RCH028	23SVD028W	Field Sample
BGMW09042023D	23D213-07	1	NA	04/27/2314:31	04/24/2313:15	RDH407	RCH028	23SVD028W	Field Sample
TMW36042023	23D213-08	1	NA	04/27/2314:50	04/24/2313:15	RDH408	RCH028	23SVD028W	Field Sample
BGMW12042023	23D213-09	1	NA	04/27/2315:09	04/24/2313:15	RDH409	RCH028	23SVD028W	Field Sample
TMW16042023	23D213-10	1	NA	04/27/2315:27	04/24/2313:15	RDH410	RCH028	23SVD028W	Field Sample
TMW19042023	23D213-11	1	NA	04/27/2315:46	04/24/2313:15	RDH411	RCH028	23SVD028W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW07042023	Date Analyzed:	04/27/23 12:39
Lab Samp ID:	23D213-01	Dilution Factor:	1
Lab File ID:	RDH401	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	40.3	68.4	59	43-140
2-Fluorobiphenyl	14.8	22.8	65	44-119
2-Fluorophenol	29.1	68.4	43	19-119
Nitrobenzene-d5	14.1	22.8	62	44-120
Phenol-d5	37.5	68.4	55	40-130
Terphenyl-d14	16.9	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: RCH007 DCC Ref: RDH390

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:	04/17/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW07042023	Date Analyzed:	04/27/23 12:39
Lab Samp ID:	23D213-01	Dilution Factor:	1
Lab File ID:	RDH401	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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 (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW07042023	Date Analyzed:	04/27/23 12:39
Lab Samp ID:	23D213-01	Dilution Factor:	1
Lab File ID:	RDH401	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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 SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:45
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: MW32042023	Date Analyzed:	04/27/23 12:58
Lab Samp ID:	23D213-02	Dilution Factor:	1
Lab File ID:	RDH402	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	40.1	64.8	62	43-140
2-Fluorobiphenyl	13.7	21.6	64	44-119
2-Fluorophenol	32.2	64.8	50	19-119
Nitrobenzene-d5	13.8	21.6	64	44-120
Phenol-d5	39.5	64.8	61	40-130
Terphenyl-d14	18.1	21.6	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml 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:	04/17/23 07:45
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: MW32042023	Date Analyzed:	04/27/23 12:58
Lab Samp ID:	23D213-02	Dilution Factor:	1
Lab File ID:	RDH402	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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 : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:45
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: MW32042023	Date Analyzed:	04/27/23 12:58
Lab Samp ID:	23D213-02	Dilution Factor:	1
Lab File ID:	RDH402	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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 :	KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW08042023	Date Analyzed:	04/27/23 13:16
Lab Samp ID:	23D213-03	Dilution Factor:	1
Lab File ID:	RDH403	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	44.3	65.4	68	43-140
2-Fluorobiphenyl	10.6	21.8	49	44-119
2-Fluorophenol	18.4	65.4	28	19-119
Nitrobenzene-d5	11.0	21.8	51	44-120
Phenol-d5	26.8	65.4	41	40-130
Terphenyl-d14	16.1	21.8	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml 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:	04/17/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW08042023	Date Analyzed:	04/27/23 13:16
Lab Samp ID:	23D213-03	Dilution Factor:	1
Lab File ID:	RDH403	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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 : JMuert Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW08042023	Date Analyzed:	04/27/23 13:16
Lab Samp ID:	23D213-03	Dilution Factor:	1
Lab File ID:	RDH403	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:15
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW18042023	Date Analyzed:	04/27/23 13:35
Lab Samp ID:	23D213-04	Dilution Factor:	1
Lab File ID:	RDH404	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	33.7	71.4	47	43-140
2-Fluorobiphenyl	10.6	23.8	45	44-119
2-Fluorophenol	24.3	71.4	34	19-119
Nitrobenzene-d5	11.6	23.8	49	44-120
Phenol-d5	32.3	71.4	45	40-130
Terphenyl-d14	16.3	23.8	68	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 840ml	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:	04/17/23 09:15
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW18042023	Date Analyzed:	04/27/23 13:35
Lab Samp ID:	23D213-04	Dilution Factor:	1
Lab File ID:	RDH404	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:15
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMWI8042023	Date Analyzed:	04/27/23 13:35
Lab Samp ID:	23D213-04	Dilution Factor:	1
Lab File ID:	RDH404	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D213
Sample ID : TMW5B042023
Lab Samp ID: 23D213-05
Lab File ID: RDH405
Ext Btch ID: 23SVD028W
Calib. Ref.: RCH015

Date Collected: 04/17/23 09:30
Date Received: 04/19/23
Date Extracted: 04/24/23 13:15
Date Analyzed: 04/27/23 13:54
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E7

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	40.9	66.0	62	43-140
2-Fluorobiphenyl	12.8	22.0	58	44-119
2-Fluorophenol	32.6	66.0	49	19-119
Nitrobenzene-d5	14.1	22.0	64	44-120
Phenol-d5	39.2	66.0	59	40-130
Terphenyl-d14	17.2	22.0	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: RCH007 DCC Ref: RDH390

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:	04/17/23 09:30
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW58042023	Date Analyzed:	04/27/23 13:54
Lab Samp ID:	23D213-05	Dilution Factor:	1
Lab File ID:	RDH405	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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 (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:30
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW58042023	Date Analyzed:	04/27/23 13:54
Lab Samp ID:	23D213-05	Dilution Factor:	1
Lab File ID:	RDH405	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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 SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:25
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW09042023	Date Analyzed:	04/27/23 14:12
Lab Samp ID:	23D213-06	Dilution Factor:	1
Lab File ID:	RDH406	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	35.4	69.0	51	43-140
2-Fluorobiphenyl	8.28	23.0	36*	44-119
2-Fluorophenol	18.8	69.0	27	19-119
Nitrobenzene-d5	8.61	23.0	37*	44-120
Phenol-d5	23.7	69.0	34*	40-130
Terphenyl-d14	16.0	23.0	70	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: RCH007 DCC Ref: RDH390
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml 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:	04/17/23 10:25
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW09042023	Date Analyzed:	04/27/23 14:12
Lab Samp ID:	23D213-06	Dilution Factor:	1
Lab File ID:	RDH406	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:25
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW09042023	Date Analyzed:	04/27/23 14:12
Lab Samp ID:	23D213-06	Dilution Factor:	1
Lab File ID:	RDH406	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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 : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW09042023D	Date Analyzed:	04/27/23 14:31
Lab Samp ID:	23D213-07	Dilution Factor:	1
Lab File ID:	RDH407	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	40.9	62.4	66	43-140
2-Fluorobiphenyl	14.0	20.8	67	44-119
2-Fluorophenol	36.0	62.4	58	19-119
Nitrobenzene-d5	14.9	20.8	71	44-120
Phenol-d5	41.5	62.4	66	40-130
Terphenyl-d14	12.3	20.8	59	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 960ml	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:	04/17/23 10:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW09042023D	Date Analyzed:	04/27/23 14:31
Lab Samp ID:	23D213-07	Dilution Factor:	1
Lab File ID:	RDH407	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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 : JMuert Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:40
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW09042023D	Date Analyzed:	04/27/23 14:31
Lab Samp ID:	23D213-07	Dilution Factor:	1
Lab File ID:	RDH407	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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 : JMuert Analyzed by : KVu

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

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 11:30
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/24/23 13:15
Sample ID : TMW36042023	Date Analyzed: 04/27/23 14:50
Lab Samp ID: 23D213-08	Dilution Factor: 1
Lab File ID: RDH408	Matrix: WATER
Ext Btch ID: 23SVD028W	% Moisture: NA
Calib. Ref.: RCH015	Instrument ID: E7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	20	4.9	9.8
1,2-Dichlorobenzene	ND	9.8	2.5	4.9
1,2-Diphenylhydrazine	ND	9.8	2.5	4.9
1,3-Dichlorobenzene	ND	9.8	2.5	4.9
1,4-Dichlorobenzene	ND	9.8	2.5	4.9
2,4,5-Trichlorophenol	ND	9.8	2.5	4.9
2,4,6-Trichlorophenol	ND	9.8	2.5	4.9
2,4-Dichlorophenol	ND	9.8	2.5	4.9
2,4-Dimethylphenol	ND	9.8	2.5	4.9
2,4-Dinitrophenol	ND	20	2.5	4.9
2,4-Dinitrotoluene	ND	9.8	2.5	4.9
2,6-Dinitrotoluene	ND	9.8	2.5	4.9
2-Chloronaphthalene	ND	9.8	2.5	4.9
2-Chlorophenol	ND	9.8	2.5	4.9
2-Methylnaphthalene	ND	9.8	2.5	4.9
2-Methylphenol	ND	9.8	2.5	4.9
2-Nitroaniline	ND	9.8	2.5	4.9
2-Nitrophenol	ND	9.8	2.5	4.9
3,3'-Dichlorobenzidine	ND	9.8	2.5	4.9
3/4-Methylphenol	ND	9.8	2.5	4.9
3-Nitroaniline	ND	9.8	2.5	4.9
4,6-Dinitro-2-methylphenol	ND	20	2.5	4.9
4-Bromophenyl phenyl ether	ND	9.8	2.5	4.9
4-Chloro-3-methylphenol	ND	9.8	2.5	4.9
4-Chloroaniline	ND	20	4.9	9.8
4-Chlorophenyl-phenyl ether	ND	9.8	2.5	4.9
4-Nitroaniline	ND	9.8	2.5	4.9
4-Nitrophenol	ND	20	2.5	4.9
Acenaphthene	ND	9.8	2.5	4.9
Acenaphthylene	ND	9.8	2.5	4.9
Anthracene	ND	9.8	2.5	4.9
Benzo(a)anthracene	ND	9.8	2.5	4.9
Benzo(a)pyrene	ND	9.8	2.5	4.9
Benzo(b)fluoranthene	ND	9.8	2.5	4.9
Benzo(g,h,i)perylene	ND	9.8	2.5	4.9
Benzo(k)fluoranthene	ND	9.8	2.5	4.9
Benzoic Acid	ND	98	20	39
Benzyl Alcohol	ND	9.8	2.5	4.9
bis(2-Chloroisopropyl) ether	ND	9.8	2.5	4.9
bis(2-Chloroethoxy)methane	ND	9.8	2.5	4.9
bis(2-Chloroethyl) ether	ND	9.8	2.5	4.9
bis(2-Ethylhexyl) phthalate	ND	20	4.9	9.8
Butylbenzylphthalate	ND	9.8	2.5	4.9
Carbazole	ND	9.8	2.5	4.9
Chrysene	ND	9.8	2.5	4.9
Dibenzo(a,h)anthracene	ND	9.8	2.5	4.9
Dibenzofuran	ND	9.8	2.5	4.9
Diethylphthalate	ND	9.8	2.5	4.9
Dimethylphthalate	ND	9.8	2.5	4.9
Di-n-butyl phthalate	ND	9.8	2.5	4.9
Di-n-octyl phthalate	ND	9.8	2.5	4.9
Fluoranthene	ND	9.8	2.5	4.9
Fluorene	ND	9.8	2.5	4.9
Hexachlorobenzene	ND	9.8	2.5	4.9
Hexachlorobutadiene	ND	9.8	2.5	4.9
Hexachloroethane	ND	9.8	2.5	4.9
Indeno(1,2,3-cd)pyrene	ND	9.8	2.5	4.9
Isophorone	ND	9.8	2.5	4.9
Naphthalene	ND	9.8	2.5	4.9
Nitrobenzene	ND	9.8	2.5	4.9
N-Nitrosodimethylamine	ND	9.8	2.5	4.9
n-Nitroso-di-n-propylamine	ND	9.8	2.5	4.9
n-Nitrosodiphenylamine	ND	9.8	2.5	4.9
Pentachlorophenol	ND	20	2.5	4.9
Phenanthrene	ND	9.8	2.5	4.9
Phenol	ND	9.8	2.5	4.9
Pyrene	ND	9.8	2.5	4.9
Hexachlorocyclopentadiene	ND	9.8	2.5	4.9
Benzidine	ND	39	9.8	20
2,3,4,6-Tetrachlorophenol	ND	9.8	2.5	4.9
2,6-Dichlorophenol	ND	9.8	2.5	4.9

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	34.4	58.8	59	43-140
2-Fluorobiphenyl	10.6	19.6	54	44-119
2-Fluorophenol	29.8	58.8	51	19-119
Nitrobenzene-d5	11.6	19.6	59	44-120
Phenol-d5	30.8	58.8	52	40-130
Terphenyl-d14	15.5	19.6	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1020ml 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:	04/17/23 11:30
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW36042023	Date Analyzed:	04/27/23 14:50
Lab Samp ID:	23D213-08	Dilution Factor:	1
Lab File ID:	RDH408	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	20	4.9	9.8
Benzaldehyde	ND	20	4.9	9.8

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1020ml 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:	04/17/23 11:30
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW36042023	Date Analyzed:	04/27/23 14:50
Lab Samp ID:	23D213-08	Dilution Factor:	1
Lab File ID:	RDH408	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	9.8	2.5	4.9

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1020ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 12:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW12042023	Date Analyzed:	04/27/23 15:09
Lab Samp ID:	23D213-09	Dilution Factor:	1
Lab File ID:	RDH409	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH015	Instrument ID:	E7

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	39.6	60.6	65	43-140
2-Fluorobiphenyl	13.0	20.2	64	44-119
2-Fluorophenol	35.5	60.6	59	19-119
Nitrobenzene-d5	13.7	20.2	68	44-120
Phenol-d5	43.7	60.6	72	40-130
Terphenyl-d14	15.7	20.2	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 990ml	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:	04/17/23 12:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW12042023	Date Analyzed:	04/27/23 15:09
Lab Samp ID:	23D213-09	Dilution Factor:	1
Lab File ID:	RDH409	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 12:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: BGMW12042023	Date Analyzed:	04/27/23 15:09
Lab Samp ID:	23D213-09	Dilution Factor:	1
Lab File ID:	RDH409	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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	: JMuert	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D213
Sample ID : TMW16042023
Lab Samp ID: 23D213-10
Lab File ID: RDH410
Ext Btch ID: 23SVD028W
Calib. Ref.: RCH015

Date Collected: 04/17/23 07:50
Date Received: 04/19/23
Date Extracted: 04/24/23 13:15
Date Analyzed: 04/27/23 15:27
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	19	4.9	9.7
1,2-Dichlorobenzene	ND	9.7	2.4	4.9
1,2-Diphenylhydrazine	ND	9.7	2.4	4.9
1,3-Dichlorobenzene	ND	9.7	2.4	4.9
1,4-Dichlorobenzene	ND	9.7	2.4	4.9
2,4,5-Trichlorophenol	ND	9.7	2.4	4.9
2,4,6-Trichlorophenol	ND	9.7	2.4	4.9
2,4-Dichlorophenol	ND	9.7	2.4	4.9
2,4-Dimethylphenol	ND	9.7	2.4	4.9
2,4-Dinitrophenol	ND	19	2.4	4.9
2,4-Dinitrotoluene	ND	9.7	2.4	4.9
2,6-Dinitrotoluene	ND	9.7	2.4	4.9
2-Chloronaphthalene	ND	9.7	2.4	4.9
2-Chlorophenol	ND	9.7	2.4	4.9
2-Methylnaphthalene	ND	9.7	2.4	4.9
2-Methylphenol	ND	9.7	2.4	4.9
2-Nitroaniline	ND	9.7	2.4	4.9
2-Nitrophenol	ND	9.7	2.4	4.9
3,3'-Dichlorobenzidine	ND	9.7	2.4	4.9
3/4-Methylphenol	ND	9.7	2.4	4.9
3-Nitroaniline	ND	9.7	2.4	4.9
4,6-Dinitro-2-methylphenol	ND	19	2.4	4.9
4-Bromophenyl phenyl ether	ND	9.7	2.4	4.9
4-Chloro-3-methylphenol	ND	9.7	2.4	4.9
4-Chloroaniline	ND	19	4.9	9.7
4-Chlorophenyl-phenyl ether	ND	9.7	2.4	4.9
4-Nitroaniline	ND	9.7	2.4	4.9
4-Nitrophenol	ND	19	2.4	4.9
Acenaphthene	ND	9.7	2.4	4.9
Acenaphthylene	ND	9.7	2.4	4.9
Anthracene	ND	9.7	2.4	4.9
Benzo(a)anthracene	ND	9.7	2.4	4.9
Benzo(a)pyrene	ND	9.7	2.4	4.9
Benzo(b)fluoranthene	ND	9.7	2.4	4.9
Benzo(g,h,i)perylene	ND	9.7	2.4	4.9
Benzo(k)fluoranthene	ND	9.7	2.4	4.9
Benzoic Acid	ND	97	19	39
Benzyl Alcohol	ND	9.7	2.4	4.9
bis(2-Chloroisopropyl) ether	ND	9.7	2.4	4.9
bis(2-Chloroethoxy)methane	ND	9.7	2.4	4.9
bis(2-Chloroethyl) ether	ND	9.7	2.4	4.9
bis(2-Ethylhexyl) phthalate	ND	19	4.9	9.7
Butylbenzylphthalate	ND	9.7	2.4	4.9
Carbazole	ND	9.7	2.4	4.9
Chrysene	ND	9.7	2.4	4.9
Dibenzo(a,h)anthracene	ND	9.7	2.4	4.9
Dibenzofuran	ND	9.7	2.4	4.9
Diethylphthalate	ND	9.7	2.4	4.9
Dimethylphthalate	ND	9.7	2.4	4.9
Di-n-butyl phthalate	ND	9.7	2.4	4.9
Di-n-octyl phthalate	ND	9.7	2.4	4.9
Fluoranthene	ND	9.7	2.4	4.9
Fluorene	ND	9.7	2.4	4.9
Hexachlorobenzene	ND	9.7	2.4	4.9
Hexachlorobutadiene	ND	9.7	2.4	4.9
Hexachloroethane	ND	9.7	2.4	4.9
Indeno(1,2,3-cd)pyrene	ND	9.7	2.4	4.9
Isophorone	ND	9.7	2.4	4.9
Naphthalene	ND	9.7	2.4	4.9
Nitrobenzene	ND	9.7	2.4	4.9
N-Nitrosodimethylamine	ND	9.7	2.4	4.9
n-Nitroso-di-n-propylamine	ND	9.7	2.4	4.9
n-Nitrosodiphenylamine	ND	9.7	2.4	4.9
Pentachlorophenol	ND	19	2.4	4.9
Phenanthrene	ND	9.7	2.4	4.9
Phenol	ND	9.7	2.4	4.9
Pyrene	ND	9.7	2.4	4.9
Hexachlorocyclopentadiene	ND	9.7	2.4	4.9
Benzidine	ND	39	9.7	19
2,3,4,6-Tetrachlorophenol	ND	9.7	2.4	4.9
2,6-Dichlorophenol	ND	9.7	2.4	4.9

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	34.9	58.2	60	43-140
2-Fluorobiphenyl	10.5	19.4	54	44-119
2-Fluorophenol	27.8	58.2	48	19-119
Nitrobenzene-d5	11.3	19.4	58	44-120
Phenol-d5	32.4	58.2	56	40-130
Terphenyl-d14	15.6	19.4	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: RCH007 DCC Ref: RDH390

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1030ml
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:	04/17/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW16042023	Date Analyzed:	04/27/23 15:27
Lab Samp ID:	23D213-10	Dilution Factor:	1
Lab File ID:	RDH410	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	19	4.9	9.7
Benzaldehyde	ND	19	4.9	9.7

Notes:

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1030ml 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:	04/17/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW16042023	Date Analyzed:	04/27/23 15:27
Lab Samp ID:	23D213-10	Dilution Factor:	1
Lab File ID:	RDH410	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	9.7	2.4	4.9

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1030ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D213
Sample ID : TMW19042023
Lab Samp ID: 23D213-11
Lab File ID: RDH411
Ext Btch ID: 23SVD028W
Calib. Ref.: RCH015

Date Collected: 04/17/23 10:15
Date Received: 04/19/23
Date Extracted: 04/24/23 13:15
Date Analyzed: 04/27/23 15:46
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E7

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	36.4	66.6	55	43-140
2-Fluorobiphenyl	11.9	22.2	54	44-119
2-Fluorophenol	33.3	66.6	50	19-119
Nitrobenzene-d5	12.3	22.2	55	44-120
Phenol-d5	35.8	66.6	54	40-130
Terphenyl-d14	16.6	22.2	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: RCH007 DCC Ref: RDH390

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:	04/17/23 10:15
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW19042023	Date Analyzed:	04/27/23 15:46
Lab Samp ID:	23D213-11	Dilution Factor:	1
Lab File ID:	RDH411	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH007	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
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:15
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/24/23 13:15
Sample ID	: TMW19042023	Date Analyzed:	04/27/23 15:46
Lab Samp ID:	23D213-11	Dilution Factor:	1
Lab File ID:	RDH411	Matrix:	WATER
Ext Btch ID:	23SVD028W	% Moisture:	NA
Calib. Ref.:	RCH028	Instrument ID:	E7

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	: JMuert	Analyzed by	: KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

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

SDG#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

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

A total of four(4) water samples were received on 04/19/23 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. VGH7D10B - 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. VGH7D10L/VGH7D10C 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
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D213
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	VGH7D10B	1	NA	04/19/2313:21	04/19/2313:21	AD19004A	AD19003A	23VGH7D10	Method Blank
LCS1W	VGH7D10L	1	NA	04/19/2314:00	04/19/2314:00	AD19005A	AD19003A	23VGH7D10	Lab Control Sample (LCS)
LCD1W	VGH7D10C	1	NA	04/19/2314:38	04/19/2314:38	AD19006A	AD19003A	23VGH7D10	LCS Duplicate
MW32042023	D213-02	1	NA	04/19/2322:56	04/19/2322:56	AD19019A	AD19012A	23VGH7D10	Field Sample
TMW58042023	D213-05	1	NA	04/19/2323:34	04/19/2323:34	AD19020A	AD19012A	23VGH7D10	Field Sample
BGMW12042023	D213-09	1	NA	04/20/2300:12	04/20/2300:12	AD19021A	AD19012A	23VGH7D10	Field Sample
QC17042023TB01	D213-12	1	NA	04/20/2300:50	04/20/2300:50	AD19022A	AD19012A	23VGH7D10	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:	04/17/23 07:45
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/19/23 22:56
Sample ID	: MW32042023	Date Analyzed:	04/19/23 22:56
Lab Samp ID:	D213-02	Dilution Factor:	1
Lab File ID:	AD19019A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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:	04/17/23 09:30
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/19/23 23:34
Sample ID	: TMW58042023	Date Analyzed:	04/19/23 23:34
Lab Samp ID:	D213-05	Dilution Factor:	1
Lab File ID:	AD19020A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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:	04/17/23 12:50
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/20/23 00:12
Sample ID	: BGMW12042023	Date Analyzed:	04/20/23 00:12
Lab Samp ID:	D213-09	Dilution Factor:	1
Lab File ID:	AD19021A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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	33.6	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:	04/17/23 08:00
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/20/23 00:50
Sample ID	: QC17042023TB01	Date Analyzed:	04/20/23 00:50
Lab Samp ID:	D213-12	Dilution Factor:	1
Lab File ID:	AD19022A	Matrix:	WATER
Ext Btch ID:	23VGH7D10	% Moisture:	NA
Calib. Ref.:	AD19012A	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	37.3	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#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of three(3) water samples were received on 04/19/23 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. DSD027WB - 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. DSD027WL/DSD027WC 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. : 23D213
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	DSD027WB	1	NA	04/25/2320:01	04/23/2309:45	LD25029A	LD25026A	23DSD027W	Method Blank
LCS1W	DSD027WL	1	NA	04/25/2320:20	04/23/2309:45	LD25030A	LD25026A	23DSD027W	Lab Control Sample (LCS)
LCD1W	DSD027WC	1	NA	04/25/2320:38	04/23/2309:45	LD25031A	LD25026A	23DSD027W	LCS Duplicate
MW32042023	D213-02	1	NA	04/25/2316:55	04/23/2309:45	LD25019A	LD25003A	23DSD027W	Field Sample
TMW58042023	D213-05	1	NA	04/25/2317:13	04/23/2309:45	LD25020A	LD25003A	23DSD027W	Field Sample
BGMW12042023	D213-09	1	NA	04/25/2317:32	04/23/2309:45	LD25021A	LD25003A	23DSD027W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:45
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/23/23 09:45
Sample ID	: MW32042023	Date Analyzed:	04/25/23 16:55
Lab Samp ID:	23D213-02	Dilution Factor:	1
Lab File ID:	LD25019A	Matrix:	WATER
Ext Btch ID:	23DSD027W	% Moisture:	NA
Calib. Ref.:	LD25003A	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	0.751	1.00	75	60-130
Hexacosane	0.216	0.250	86	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:	04/17/23 09:30
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/23/23 09:45
Sample ID	: TMW58042023	Date Analyzed:	04/25/23 17:13
Lab Samp ID:	23D213-05	Dilution Factor:	1
Lab File ID:	LD25020A	Matrix:	WATER
Ext Btch ID:	23DSD027W	% Moisture:	NA
Calib. Ref.:	LD25003A	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	0.818	1.02	80	60-130
Hexacosane	0.240	0.255	94	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: 04/17/23 12:50
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:45
Sample ID : BGMW12042023	Date Analyzed: 04/25/23 17:32
Lab Samp ID: 23D213-09	Dilution Factor: 1
Lab File ID: LD25021A	Matrix: WATER
Ext Btch ID: 23DSD027W	% Moisture: NA
Calib. Ref.: LD25003A	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	0.899	1.11	81	60-130
Hexacosane	0.271	0.278	98	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW3520C/8081B
PESTICIDES

A total of eight(8) water samples were received on 04/19/23 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. CPD027WB - 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) LCS was analyzed. CPD027WL - recovery for all analytes were within LCS QC 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. D213-01M/D213-01S - 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.
Project : USACE WINGATE

SDG NO. : 23D213
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	CPD027WB	1	NA	04/24/2317:21	04/23/2309:00	RD24005	RD24003	23CPD027W	Method Blank
LCS1W	CPD027WL	1	NA	04/24/2317:42	04/23/2309:00	RD24006	RD24003	23CPD027W	Lab Control Sample (LCS)
BGMW07042023	D213-01	1	NA	04/24/2320:05	04/23/2309:00	RD24013	RD24003	23CPD027W	Field Sample
BGMW07042023MS	D213-01M	1	NA	04/24/2320:25	04/23/2309:00	RD24014	RD24003	23CPD027W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	1	NA	04/24/2321:47	04/23/2309:00	RD24018	RD24016	23CPD027W	MS Duplicate (MSD)
MW32042023	D213-02	1	NA	04/24/2322:48	04/23/2309:00	RD24021	RD24016	23CPD027W	Field Sample
BGMW08042023	D213-03	1	NA	04/24/2323:09	04/23/2309:00	RD24022	RD24016	23CPD027W	Field Sample
TMW58042023	D213-05	1	NA	04/24/2323:29	04/23/2309:00	RD24023	RD24016	23CPD027W	Field Sample
BGMW09042023	D213-06	1	NA	04/24/2323:50	04/23/2309:00	RD24024	RD24016	23CPD027W	Field Sample
BGMW09042023D	D213-07	1	NA	04/25/2300:11	04/23/2309:00	RD24025	RD24016	23CPD027W	Field Sample
TMW36042023	D213-08	1	NA	04/25/2300:31	04/23/2309:00	RD24026	RD24016	23CPD027W	Field Sample
BGMW12042023	D213-09	1	NA	04/25/2300:52	04/23/2309:00	RD24027	RD24016	23CPD027W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 07:40
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID : BGMW07042023	Date Analyzed: 04/24/23 20:05
Lab Samp ID: D213-01	Dilution Factor: 1
Lab File ID: RD24013	Matrix: WATER
Ext Btch ID: 23CPD027W	% Moisture: NA
Calib. Ref.: RD24003	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.047
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.047
beta-BHC	(ND) | ND	0.12	0.024	0.047
Heptachlor	(ND) | ND	0.12	0.024	0.047
delta-BHC	(ND) | ND	0.12	0.024	0.047
Aldrin	(ND) | ND	0.12	0.024	0.047
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.047
gamma-Chlordane	(ND) | ND	0.12	0.024	0.047
alpha-Chlordane	(ND) | ND	0.12	0.024	0.047
Endosulfan I	(ND) | ND	0.12	0.024	0.047
4,4'-DDE	(ND) | ND	0.12	0.024	0.047
Dieldrin	(ND) | ND	0.12	0.024	0.047
Endrin	(ND) | 0.031J	0.12	0.024	0.047
4,4'-DDD	(ND) | ND	0.12	0.024	0.047
Endosulfan II	(ND) | ND	0.12	0.024	0.047
4,4'-DDT	(ND) | ND	0.12	0.024	0.047
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.047
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.047
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.29	0.59
Endrin Ketone	(ND) | ND	0.12	0.024	0.047

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.351) | 0.345	0.471	75	44-124
Decachlorobiphenyl	(0.364) | 0.346	0.471	77	30-135

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

Sample Amount : 850ml	Final Volume : 10ml
Prepared by : JMuert	Analyzed by : EKim
Result Quantified : First column | Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24004	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 07:45
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID : MW32042023	Date Analyzed: 04/24/23 22:48
Lab Samp ID: D213-02	Dilution Factor: 1
Lab File ID: RD24021	Matrix: WATER
Ext Btch ID: 23CPD027W	% Moisture: NA
Calib. Ref.: RD24016	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	(0.289) | 0.274	0.388	74	44-124
Decachlorobiphenyl	(0.284) | 0.271	0.388	73	30-135

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

Sample Amount : 1030ml	Final Volume : 10ml
Prepared by : JMuert	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24017	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
Batch No.	: 23D213	Date Extracted:	04/23/23 09:00
Sample ID	: BGMW08042023	Date Analyzed:	04/24/23 23:09
Lab Samp ID:	D213-03	Dilution Factor:	1
Lab File ID:	RD24022	Matrix:	WATER
Ext Btch ID:	23CPD027W	% Moisture:	NA
Calib. Ref.:	RD24016	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	0.045J | (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	0.035J | (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	0.312 | (0.336)	0.388	87	44-124
Decachlorobiphenyl	(0.289) | 0.280	0.388	74	30-135

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

Sample Amount	: 1030ml	Final Volume	: 10ml
Prepared by	: JMuert	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RD24017		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 09:30
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID : TMW58042023	Date Analyzed: 04/24/23 23:29
Lab Samp ID: D213-05	Dilution Factor: 1
Lab File ID: RD24023	Matrix: WATER
Ext Btch ID: 23CPD027W	% Moisture: NA
Calib. Ref.: RD24016	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	(0.308) | 0.294	0.400	77	44-124
Decachlorobiphenyl	(0.306) | 0.295	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 : JMuert	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D213
Sample ID : BGMW09042023
Lab Samp ID: D213-06
Lab File ID: RD24024
Ext Btch ID: 23CPD027W
Calib. Ref.: RD24016

Date Collected: 04/17/23 10:25
Date Received: 04/19/23
Date Extracted: 04/23/23 09:00
Date Analyzed: 04/24/23 23:50
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	0.337 | (0.344)	0.444	78	44-124
Decachlorobiphenyl	(0.352) | 0.332	0.444	79	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 900ml
Final Volume : 10ml
Prepared by : JMuert
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RD24017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 10:40
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID : BGMW09042023D	Date Analyzed: 04/25/23 00:11
Lab Samp ID: D213-07	Dilution Factor: 1
Lab File ID: RD24025	Matrix: WATER
Ext Btch ID: 23CPD027W	% Moisture: NA
Calib. Ref.: RD24016	Instrument ID: F9

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	(0.343) | 0.311	0.460	75	44-124
Decachlorobiphenyl	(0.365) | 0.347	0.460	79	30-135

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

Sample Amount : 870ml	Final Volume : 10ml
Prepared by : JMuert	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RD24017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 11:30
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID : TMW36042023	Date Analyzed: 04/25/23 00:31
Lab Samp ID: D213-08	Dilution Factor: 1
Lab File ID: RD24026	Matrix: WATER
Ext Btch ID: 23CPD027W	% Moisture: NA
Calib. Ref.: RD24016	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	(0.317) | 0.300	0.421	75	44-124
Decachlorobiphenyl	(0.335) | 0.316	0.421	80	30-135

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

Sample Amount : 950ml	Final Volume : 10ml
Prepared by : JMuert	Analyzed by : EKim
Result Quantified : First column | Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RD24017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 12:50
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID : BGMW12042023	Date Analyzed: 04/25/23 00:52
Lab Samp ID: D213-09	Dilution Factor: 1
Lab File ID: RD24027	Matrix: WATER
Ext Btch ID: 23CPD027W	% Moisture: NA
Calib. Ref.: RD24016	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	(0.327) | 0.315	0.404	81	44-124
Decachlorobiphenyl	(0.329) | 0.309	0.404	81	30-135

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

Sample Amount : 990ml	Final Volume : 10ml
Prepared by : JMuert	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RD24017

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW3520C/8082A
PCBS

A total of seven(7) water samples were received on 04/19/23 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. CPD027WB - 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) LCS was analyzed. 60D027WL - recovery for all analytes were within LCS QC 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. D213-01M/D213-01S - 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. : 23D213
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	CPD027WB	1	NA	04/25/2321:50	04/23/2309:00	KD25033A	KD25031A	CPD027W	Method Blank
LCS1W	60D027WL	1	NA	04/25/2322:10	04/23/2309:00	KD25034A	KD25031A	CPD027W	Lab Control Sample (LCS)
BGMW07042023	D213-01	1.18	NA	04/25/2322:30	04/23/2309:00	KD25035A	KD25031A	CPD027W	Field Sample
MW32042023	D213-02	0.97	NA	04/25/2323:30	04/23/2309:00	KD25038A	KD25031A	CPD027W	Field Sample
BGMW08042023	D213-03	0.97	NA	04/25/2323:50	04/23/2309:00	KD25039A	KD25031A	CPD027W	Field Sample
TMW58042023	D213-05	1	NA	04/26/2300:10	04/23/2309:00	KD25040A	KD25031A	CPD027W	Field Sample
BGMW09042023	D213-06	1.11	NA	04/26/2300:30	04/23/2309:00	KD25041A	KD25031A	CPD027W	Field Sample
BGMW09042023D	D213-07	1.15	NA	04/26/2300:50	04/23/2309:00	KD25042A	KD25031A	CPD027W	Field Sample
BGMW12042023	D213-09	1.01	NA	04/26/2302:10	04/23/2309:00	KD25046A	KD25044A	CPD027W	Field Sample
BGMW07042023MS	D213-01M	1.18	NA	04/25/2322:50	04/23/2309:00	KD25036A	KD25031A	CPD027W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	1.15	NA	04/25/2323:10	04/23/2309:00	KD25037A	KD25031A	CPD027W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID: BGMW07042023	Date Analyzed: 04/25/23 22:30
Lab Samp ID: D213-01	Dilution Factor: 1.18
Lab File ID: KD25035A	Matrix : WATER
Ext Btch ID: CPD027W	% Moisture : NA
Calib. Ref.: KD25031A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.2	0.29	0.59
PCB-1221	(ND)|ND	1.2	0.29	0.59
PCB-1232	(ND)|ND	1.2	0.29	0.59
PCB-1242	(ND)|ND	1.2	0.29	0.59
PCB-1248	(ND)|ND	1.2	0.29	0.59
PCB-1254	(ND)|ND	1.2	0.29	0.59
PCB-1260	(ND)|ND	1.2	0.29	0.59

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.6258)|0.5424	0.4720	(133)|115	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID: MW32042023	Date Analyzed: 04/25/23 23:30
Lab Samp ID: D213-02	Dilution Factor: 0.97
Lab File ID: KD25038A	Matrix : WATER
Ext Btch ID: CPD027W	% Moisture : NA
Calib. Ref.: KD25031A	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	(0.4905)|0.4316	0.3880	(126)|111	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID: BGMW08042023	Date Analyzed: 04/25/23 23:50
Lab Samp ID: D213-03	Dilution Factor: 0.97
Lab File ID: KD25039A	Matrix : WATER
Ext Btch ID: CPD027W	% Moisture : NA
Calib. Ref.: KD25031A	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	(0.5132)|0.4398	0.3880	(132)|113	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID: TMW58042023	Date Analyzed: 04/26/23 00:10
Lab Samp ID: D213-05	Dilution Factor: 1
Lab File ID: KD25040A	Matrix : WATER
Ext Btch ID: CPD027W	% Moisture : NA
Calib. Ref.: KD25031A	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	(0.5208)|0.4633	0.4000	(130)|116	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID: BGMW09042023	Date Analyzed: 04/26/23 00:30
Lab Samp ID: D213-06	Dilution Factor: 1.11
Lab File ID: KD25041A	Matrix : WATER
Ext Btch ID: CPD027W	% Moisture : NA
Calib. Ref.: KD25031A	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	(0.5790)|0.5199	0.4440	(130)|117	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID: BGMW09042023D	Date Analyzed: 04/26/23 00:50
Lab Samp ID: D213-07	Dilution Factor: 1.15
Lab File ID: KD25042A	Matrix : WATER
Ext Btch ID: CPD027W	% Moisture : NA
Calib. Ref.: KD25031A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.29	0.58
PCB-1221	(ND)|ND	1.1	0.29	0.58
PCB-1232	(ND)|ND	1.1	0.29	0.58
PCB-1242	(ND)|ND	1.1	0.29	0.58
PCB-1248	(ND)|ND	1.1	0.29	0.58
PCB-1254	(ND)|ND	1.1	0.29	0.58
PCB-1260	(ND)|ND	1.1	0.29	0.58

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.6128)|0.5397	0.4600	(133)|117	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/23/23 09:00
Sample ID: BGMW12042023	Date Analyzed: 04/26/23 02:10
Lab Samp ID: D213-09	Dilution Factor: 1.01
Lab File ID: KD25046A	Matrix : WATER
Ext Btch ID: CPD027W	% Moisture : NA
Calib. Ref.: KD25044A	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	(0.5430)|0.4738	0.4040	(134)|117	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#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD 8151A
HERBICIDES

A total of seven(7) water samples were received on 04/19/23 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. HED004WB - 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. HED004WL/HED004WC 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. D213-01M/D213-01S - 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.

Dalapon results were reported from channel A due to contamination observed in channel B.

LAB CHRONICLE
HERBICIDES

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

SDG NO. : 23D213
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	HED004WB	1	NA	04/27/2318:41	04/20/2312:00	WD27003A	WD27002A	HED004W	Method Blank
LCS1W	HED004WL	1	NA	04/27/2319:09	04/20/2312:00	WD27004A	WD27002A	HED004W	Lab Control Sample (LCS)
LCD1W	HED004WC	1	NA	04/27/2319:37	04/20/2312:00	WD27005A	WD27002A	HED004W	LCS Duplicate
BGMW07042023	D213-01	1	NA	04/27/2321:59	04/20/2312:00	WD27010A	WD27002A	HED004W	Field Sample
BGMW07042023MS	D213-01M	1	NA	04/27/2322:28	04/20/2312:00	WD27011A	WD27002A	HED004W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	1	NA	04/27/2322:56	04/20/2312:00	WD27012A	WD27002A	HED004W	MS Duplicate (MSD)
MW32042023	D213-02	1	NA	04/28/2300:50	04/20/2312:00	WD27016A	WD27014A	HED004W	Field Sample
BGMW08042023	D213-03	1	NA	04/28/2301:18	04/20/2312:00	WD27017A	WD27014A	HED004W	Field Sample
TMW58042023	D213-05	1	NA	04/28/2301:46	04/20/2312:00	WD27018A	WD27014A	HED004W	Field Sample
BGMW09042023	D213-06	1	NA	04/28/2302:14	04/20/2312:00	WD27019A	WD27014A	HED004W	Field Sample
BGMW09042023D	D213-07	1	NA	04/28/2302:43	04/20/2312:00	WD27020A	WD27014A	HED004W	Field Sample
BGMW12042023	D213-09	1	NA	04/28/2303:11	04/20/2312:00	WD27021A	WD27014A	HED004W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:00
Sample ID: BGMW07042023	Date Analyzed: 04/27/23 21:59
Lab Samp ID: D213-01	Dilution Factor: 1
Lab File ID: WD27010A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27002A	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)	0.98J	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	8.589	(8.744)	10.00	85.9	(87.4)	32-138

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Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:00
Sample ID: MW32042023	Date Analyzed: 04/28/23 00:50
Lab Samp ID: D213-02	Dilution Factor: 1
Lab File ID: WD27016A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27014A	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) | 3.3	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	8.716 | (9.105)	10.00	87.2 | (91.1)	32-138

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Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:00
Sample ID: BGMW08042023	Date Analyzed: 04/28/23 01:18
Lab Samp ID: D213-03	Dilution Factor: 1
Lab File ID: WD27017A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27014A	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) | 1.7	1.0	0.10	0.20
DICAMBA	0.12J | (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	(9.094) | 8.928	10.00	(90.9) | 89.3	32-138

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Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:00
Sample ID: TMW58042023	Date Analyzed: 04/28/23 01:46
Lab Samp ID: D213-05	Dilution Factor: 1
Lab File ID: WD27018A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27014A	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)|2.3	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	8.029|(8.310)	10.00	80.3|(83.1)	32-138

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Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:00
Sample ID: BGMW09042023	Date Analyzed: 04/28/23 02:14
Lab Samp ID: D213-06	Dilution Factor: 1
Lab File ID: WD27019A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27014A	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) | 0.97J	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	8.952 | (9.563)	10.00	89.5 | (95.6)	32-138

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Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:00
Sample ID: BGMW09042023D	Date Analyzed: 04/28/23 02:43
Lab Samp ID: D213-07	Dilution Factor: 1
Lab File ID: WD27020A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27014A	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) | 1.3	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	8.477 | (8.941)	10.00	84.8 | (89.4)	32-138

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Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:00
Sample ID: BGMW12042023	Date Analyzed: 04/28/23 03:11
Lab Samp ID: D213-09	Dilution Factor: 1
Lab File ID: WD27021A	Matrix : WATER
Ext Btch ID: HED004W	% Moisture : NA
Calib. Ref.: WD27014A	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) | 0.22J	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	8.567 | (9.012)	10.00	85.7 | (90.1)	32-138

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Final result indicated by ( )

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8330B
EXPLOSIVES

SDG#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW8330B
EXPLOSIVES

A total of eleven(11) water samples were received on 04/19/23 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. EXD008WB - 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. EXD008WL/EXD008WC 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. D213-01M/D213-01S - 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 : 23D213

METHOD SW8330B
EXPLOSIVES

A total of eleven(11) water samples were received on 04/19/23 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. EXD008WB - 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. 35D008WL/35D008WC 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 D213-01M/D213-01S. 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
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. : 23D213
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	EXD008WB	1	NA	05/16/2314:26	04/20/2312:30	XE15032A	XE15026A	EXD008W	Method Blank
LCS1W	EXD008WL	1	NA	05/16/2315:23	04/20/2312:30	XE15033A	XE15026A	EXD008W	Lab Control Sample (LCS)
LCD1W	EXD008WC	1	NA	05/16/2316:11	04/20/2312:30	XE15034A	XE15026A	EXD008W	LCS Duplicate
BGMW07042023	D213-01	1	NA	05/17/2305:23	04/20/2312:30	XE15049A	XE15039A	EXD008W	Field Sample
BGMW07042023MS	D213-01M	1	NA	05/17/2306:11	04/20/2312:30	XE15050A	XE15039A	EXD008W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	1	NA	05/17/2308:53	04/20/2312:30	XE15053A	XE15051A	EXD008W	MS Duplicate (MSD)
MW32042023	D213-02	1	NA	05/17/2311:26	04/20/2312:30	XE15056A	XE15051A	EXD008W	Field Sample
BGMW08042023	D213-03	1	NA	05/17/2312:22	04/20/2312:30	XE15057A	XE15051A	EXD008W	Field Sample
TMW18042023	D213-04	1	NA	05/17/2313:11	04/20/2312:30	XE15058A	XE15051A	EXD008W	Field Sample
TMW58042023	D213-05	1	NA	05/17/2314:07	04/20/2312:30	XE15059A	XE15051A	EXD008W	Field Sample
BGMW09042023	D213-06	1	NA	05/17/2314:55	04/20/2312:30	XE15060A	XE15051A	EXD008W	Field Sample
BGMW09042023D	D213-07	1	NA	05/17/2315:52	04/20/2312:30	XE15061A	XE15051A	EXD008W	Field Sample
TMW36042023	D213-08	1	NA	05/17/2316:40	04/20/2312:30	XE15062A	XE15051A	EXD008W	Field Sample
BGMW12042023	D213-09	1	NA	05/17/2319:21	04/20/2312:30	XE15065A	XE15063A	EXD008W	Field Sample
TMW16042023	D213-10	1	NA	05/17/2320:10	04/20/2312:30	XE15066A	XE15063A	EXD008W	Field Sample
TMW19042023	D213-11	1	NA	05/17/2321:06	04/20/2312:30	XE15067A	XE15063A	EXD008W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D213
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	EXD008WB	1	NA	05/16/2314:26	04/20/2312:30	XE15032A	XE15027A	EXD008W	Method Blank
LCS1W	35D008WL	1	NA	05/16/2317:08	04/20/2312:30	XE15035A	XE15027A	EXD008W	Lab Control Sample (LCS)
LCD1W	35D008WC	1	NA	05/16/2317:56	04/20/2312:30	XE15036A	XE15027A	EXD008W	LCS Duplicate
BGMW07042023	D213-01	1	NA	05/17/2305:23	04/20/2312:30	XE15049A	XE15040A	EXD008W	Field Sample
BGMW07042023MS	D213-01M	1	NA	05/17/2309:41	04/20/2312:30	XE15054A	XE15052A	EXD008W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	1	NA	05/17/2310:38	04/20/2312:30	XE15055A	XE15052A	EXD008W	MS Duplicate (MSD)
MW32042023	D213-02	1	NA	05/17/2311:26	04/20/2312:30	XE15056A	XE15052A	EXD008W	Field Sample
BGMW08042023	D213-03	1	NA	05/17/2312:22	04/20/2312:30	XE15057A	XE15052A	EXD008W	Field Sample
TMW18042023	D213-04	1	NA	05/17/2313:11	04/20/2312:30	XE15058A	XE15052A	EXD008W	Field Sample
TMW58042023	D213-05	1	NA	05/17/2314:07	04/20/2312:30	XE15059A	XE15052A	EXD008W	Field Sample
BGMW09042023	D213-06	1	NA	05/17/2314:55	04/20/2312:30	XE15060A	XE15052A	EXD008W	Field Sample
BGMW09042023D	D213-07	1	NA	05/17/2315:52	04/20/2312:30	XE15061A	XE15052A	EXD008W	Field Sample
TMW36042023	D213-08	1	NA	05/17/2316:40	04/20/2312:30	XE15062A	XE15052A	EXD008W	Field Sample
BGMW12042023	D213-09	1	NA	05/17/2319:21	04/20/2312:30	XE15065A	XE15064A	EXD008W	Field Sample
TMW16042023	D213-10	1	NA	05/17/2320:10	04/20/2312:30	XE15066A	XE15064A	EXD008W	Field Sample
TMW19042023	D213-11	1	NA	05/17/2321:06	04/20/2312:30	XE15067A	XE15064A	EXD008W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW07042023	Date Analyzed: 05/17/23 05:23
Lab Samp ID: D213-01	Dilution Factor: 1
Lab File ID: XE15049A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15039A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW07042023	Date Analyzed: 05/17/23 05:23
Lab Samp ID: D213-01	Dilution Factor: 1
Lab File ID: XE15049A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15040A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: MW32042023	Date Analyzed: 05/17/23 11:26
Lab Samp ID: D213-02	Dilution Factor: 1
Lab File ID: XE15056A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15051A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: MW32042023	Date Analyzed: 05/17/23 11:26
Lab Samp ID: D213-02	Dilution Factor: 1
Lab File ID: XE15056A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15052A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW08042023	Date Analyzed: 05/17/23 12:22
Lab Samp ID: D213-03	Dilution Factor: 1
Lab File ID: XE15057A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15051A	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	90.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW08042023	Date Analyzed: 05/17/23 12:22
Lab Samp ID: D213-03	Dilution Factor: 1
Lab File ID: XE15057A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15052A	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	90.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW18042023	Date Analyzed: 05/17/23 13:11
Lab Samp ID: D213-04	Dilution Factor: 1
Lab File ID: XE15058A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15051A	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	97.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW18042023	Date Analyzed: 05/17/23 13:11
Lab Samp ID: D213-04	Dilution Factor: 1
Lab File ID: XE15058A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15052A	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	97.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW58042023	Date Analyzed: 05/17/23 14:07
Lab Samp ID: D213-05	Dilution Factor: 1
Lab File ID: XE15059A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15051A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW58042023	Date Analyzed: 05/17/23 14:07
Lab Samp ID: D213-05	Dilution Factor: 1
Lab File ID: XE15059A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15052A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW09042023	Date Analyzed: 05/17/23 14:55
Lab Samp ID: D213-06	Dilution Factor: 1
Lab File ID: XE15060A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15051A	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	3.39	4.000	84.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW09042023	Date Analyzed: 05/17/23 14:55
Lab Samp ID: D213-06	Dilution Factor: 1
Lab File ID: XE15060A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15052A	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	3.39	4.000	84.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW09042023D	Date Analyzed: 05/17/23 15:52
Lab Samp ID: D213-07	Dilution Factor: 1
Lab File ID: XE15061A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15051A	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	3.34	4.000	83.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW09042023D	Date Analyzed: 05/17/23 15:52
Lab Samp ID: D213-07	Dilution Factor: 1
Lab File ID: XE15061A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15052A	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	3.34	4.000	83.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW36042023	Date Analyzed: 05/17/23 16:40
Lab Samp ID: D213-08	Dilution Factor: 1
Lab File ID: XE15062A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15051A	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	94.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW36042023	Date Analyzed: 05/17/23 16:40
Lab Samp ID: D213-08	Dilution Factor: 1
Lab File ID: XE15062A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15052A	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	94.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW12042023	Date Analyzed: 05/17/23 19:21
Lab Samp ID: D213-09	Dilution Factor: 1
Lab File ID: XE15065A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15063A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: BGMW12042023	Date Analyzed: 05/17/23 19:21
Lab Samp ID: D213-09	Dilution Factor: 1
Lab File ID: XE15065A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15064A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW16042023	Date Analyzed: 05/17/23 20:10
Lab Samp ID: D213-10	Dilution Factor: 1
Lab File ID: XE15066A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15063A	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	88.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW16042023	Date Analyzed: 05/17/23 20:10
Lab Samp ID: D213-10	Dilution Factor: 1
Lab File ID: XE15066A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15064A	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	88.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW19042023	Date Analyzed: 05/17/23 21:06
Lab Samp ID: D213-11	Dilution Factor: 1
Lab File ID: XE15067A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15063A	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	3.51	4.000	87.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 12:30
Sample ID: TMW19042023	Date Analyzed: 05/17/23 21:06
Lab Samp ID: D213-11	Dilution Factor: 1
Lab File ID: XE15067A	Matrix : WATER
Ext Btch ID: EXD008W	% Moisture : NA
Calib. Ref.: XE15064A	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	3.51	4.000	87.8	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#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW8332
NITROGLYCERIN AND PETN

A total of eleven(11) water samples were received on 04/19/23 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. EXD009WB - 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. EXD009WL/EXD009WC 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. D213-01M/D213-01S - 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. : 23D213
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	EXD009WB	1	NA	05/15/2317:04	04/20/2311:00	NE15028A	NE15027A	EXD009W	Method Blank
LCS1W	EXD009WL	1	NA	05/15/2317:13	04/20/2311:00	NE15029A	NE15027A	EXD009W	Lab Control Sample (LCS)
LCD1W	EXD009WC	1	NA	05/15/2317:22	04/20/2311:00	NE15030A	NE15027A	EXD009W	LCS Duplicate
BGMW07042023	D213-01	1	NA	05/15/2318:53	04/20/2311:00	NE15040A	NE15027A	EXD009W	Field Sample
BGMW07042023MS	D213-01M	1	NA	05/15/2319:11	04/20/2311:00	NE15042A	NE15041A	EXD009W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	1	NA	05/15/2319:20	04/20/2311:00	NE15043A	NE15041A	EXD009W	MS Duplicate (MSD)
MW32042023	D213-02	1	NA	05/15/2319:29	04/20/2311:00	NE15044A	NE15041A	EXD009W	Field Sample
BGMW08042023	D213-03	1	NA	05/15/2319:38	04/20/2311:00	NE15045A	NE15041A	EXD009W	Field Sample
TMW18042023	D213-04	1	NA	05/15/2319:47	04/20/2311:00	NE15046A	NE15041A	EXD009W	Field Sample
TMW58042023	D213-05	1	NA	05/15/2319:56	04/20/2311:00	NE15047A	NE15041A	EXD009W	Field Sample
BGMW09042023	D213-06	1	NA	05/15/2320:05	04/20/2311:00	NE15048A	NE15041A	EXD009W	Field Sample
BGMW09042023D	D213-07	1	NA	05/15/2320:14	04/20/2311:00	NE15049A	NE15041A	EXD009W	Field Sample
TMW36042023	D213-08	1	NA	05/15/2320:23	04/20/2311:00	NE15050A	NE15041A	EXD009W	Field Sample
BGMW12042023	D213-09	1	NA	05/15/2320:33	04/20/2311:00	NE15051A	NE15041A	EXD009W	Field Sample
TMW16042023	D213-10	1	NA	05/15/2321:00	04/20/2311:00	NE15054A	NE15053A	EXD009W	Field Sample
TMW19042023	D213-11	1	NA	05/15/2321:09	04/20/2311:00	NE15055A	NE15053A	EXD009W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: BGMW07042023	Date Analyzed: 05/15/23 18:53
Lab Samp ID: D213-01	Dilution Factor: 1
Lab File ID: NE15040A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15027A	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	532	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: MW32042023	Date Analyzed: 05/15/23 19:29
Lab Samp ID: D213-02	Dilution Factor: 1
Lab File ID: NE15044A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15041A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: BGMW08042023	Date Analyzed: 05/15/23 19:38
Lab Samp ID: D213-03	Dilution Factor: 1
Lab File ID: NE15045A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15041A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: TMW18042023	Date Analyzed: 05/15/23 19:47
Lab Samp ID: D213-04	Dilution Factor: 1
Lab File ID: NE15046A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15041A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: TMW58042023	Date Analyzed: 05/15/23 19:56
Lab Samp ID: D213-05	Dilution Factor: 1
Lab File ID: NE15047A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15041A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: BGMW09042023	Date Analyzed: 05/15/23 20:05
Lab Samp ID: D213-06	Dilution Factor: 1
Lab File ID: NE15048A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15041A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: BGMW09042023D	Date Analyzed: 05/15/23 20:14
Lab Samp ID: D213-07	Dilution Factor: 1
Lab File ID: NE15049A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15041A	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	532	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: TMW36042023	Date Analyzed: 05/15/23 20:23
Lab Samp ID: D213-08	Dilution Factor: 1
Lab File ID: NE15050A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15041A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: BGMW12042023	Date Analyzed: 05/15/23 20:33
Lab Samp ID: D213-09	Dilution Factor: 1
Lab File ID: NE15051A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15041A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: TMW16042023	Date Analyzed: 05/15/23 21:00
Lab Samp ID: D213-10	Dilution Factor: 1
Lab File ID: NE15054A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15053A	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: 04/17/23
Project : USACE WINGATE	Date Received: 04/19/23
Batch No. : 23D213	Date Extracted: 04/20/23 11:00
Sample ID: TMW19042023	Date Analyzed: 05/15/23 21:09
Lab Samp ID: D213-11	Dilution Factor: 1
Lab File ID: NE15055A	Matrix : WATER
Ext Btch ID: EXD009W	% Moisture : NA
Calib. Ref.: NE15053A	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	566	500.0	113	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW6020A
METALS BY ICP-MS

A total of eleven(11) water samples were received on 04/19/23 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. Refer to MRL summary form 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. IMD045WB - 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. IMD045WL/IMD045WC 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: D213-01M/D213-01S - Percent recoveries for Calcium(233X), Copper, Magnesium(31X), Manganese(43X), Potassium and Sodium(1967X) 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. : 23D213
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	IMD045WB	1	NA	06/27/2312:36	04/26/2315:08	H6F25045	H6F25043	IMD045W	Method Blank
LCS1W	IMD045WL	1	NA	06/27/2312:39	04/26/2315:08	H6F25046	H6F25043	IMD045W	Lab Control Sample (LCS)
LCD1W	IMD045WC	1	NA	06/27/2312:42	04/26/2315:08	H6F25047	H6F25043	IMD045W	LCS Duplicate
BGMW07042023	D213-01A	5	NA	06/27/2314:46	04/26/2315:08	H6F25086	H6F25084	IMD045W	Analytical Spike Sample
BGMW07042023	D213-01G	5	NA	06/27/2314:49	04/26/2315:08	H6F25087	H6F25084	IMD045W	Diluted Sample
BGMW07042023	D213-01J	25	NA	06/27/2314:52	04/26/2315:08	H6F25088	H6F25084	IMD045W	Diluted Sample
BGMW07042023MS	D213-01M	5	NA	06/27/2314:55	04/26/2315:08	H6F25089	H6F25084	IMD045W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	5	NA	06/27/2314:58	04/26/2315:08	H6F25090	H6F25084	IMD045W	MS Duplicate (MSD)
MW32042023	D213-02G	5	NA	06/27/2315:01	04/26/2315:08	H6F25091	H6F25084	IMD045W	Diluted Sample
BGMW08042023	D213-03K	20	NA	06/27/2315:03	04/26/2315:08	H6F25092	H6F25084	IMD045W	Diluted Sample
TMW18042023	D213-04G	5	NA	06/27/2315:06	04/26/2315:08	H6F25093	H6F25084	IMD045W	Diluted Sample
TMW58042023	D213-05G	5	NA	06/27/2315:09	04/26/2315:08	H6F25094	H6F25084	IMD045W	Diluted Sample
BGMW09042023	D213-06I	10	NA	06/27/2315:12	04/26/2315:08	H6F25095	H6F25084	IMD045W	Diluted Sample
BGMW09042023D	D213-07I	10	NA	06/27/2315:30	04/26/2315:08	H6F25098	H6F25096	IMD045W	Diluted Sample
TMW36042023	D213-08G	5	NA	06/27/2315:33	04/26/2315:08	H6F25099	H6F25096	IMD045W	Diluted Sample
BGMW12042023	D213-09G	5	NA	06/27/2315:36	04/26/2315:08	H6F25100	H6F25096	IMD045W	Diluted Sample
TMW16042023	D213-10G	5	NA	06/27/2315:39	04/26/2315:08	H6F25101	H6F25096	IMD045W	Diluted Sample
TMW19042023	D213-11G	5	NA	06/27/2315:42	04/26/2315:08	H6F25102	H6F25096	IMD045W	Diluted Sample
BGMW07042023	D213-01A	200	NA	06/27/2315:54	04/26/2315:08	H6F25105	H6F25103	IMD045W	Analytical Spike Sample
BGMW07042023	D213-01T	200	NA	06/27/2315:57	04/26/2315:08	H6F25106	H6F25103	IMD045W	Diluted Sample
BGMW07042023	D213-01J	1000	NA	06/27/2316:00	04/26/2315:08	H6F25107	H6F25103	IMD045W	Diluted Sample
BGMW07042023MS	D213-01M	200	NA	06/27/2316:05	04/26/2315:08	H6F25108	H6F25103	IMD045W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	200	NA	06/27/2316:08	04/26/2315:08	H6F25109	H6F25103	IMD045W	MS Duplicate (MSD)
MW32042023	D213-02T	50	NA	06/27/2316:11	04/26/2315:08	H6F25110	H6F25103	IMD045W	Diluted Sample
BGMW08042023	D213-03T	100	NA	06/27/2316:14	04/26/2315:08	H6F25111	H6F25103	IMD045W	Diluted Sample
TMW18042023	D213-04T	50	NA	06/27/2316:17	04/26/2315:08	H6F25112	H6F25103	IMD045W	Diluted Sample
TMW58042023	D213-05T	50	NA	06/27/2316:19	04/26/2315:08	H6F25113	H6F25103	IMD045W	Diluted Sample
BGMW09042023	D213-06T	50	NA	06/27/2316:22	04/26/2315:08	H6F25114	H6F25103	IMD045W	Diluted Sample
BGMW09042023D	D213-07T	50	NA	06/27/2316:31	04/26/2315:08	H6F25117	H6F25115	IMD045W	Diluted Sample
TMW36042023	D213-08T	50	NA	06/27/2316:34	04/26/2315:08	H6F25118	H6F25115	IMD045W	Diluted Sample
BGMW12042023	D213-09T	50	NA	06/27/2316:37	04/26/2315:08	H6F25119	H6F25115	IMD045W	Diluted Sample
TMW16042023	D213-10T	50	NA	06/27/2316:40	04/26/2315:08	H6F25120	H6F25115	IMD045W	Diluted Sample
TMW19042023	D213-11T	50	NA	06/27/2316:43	04/26/2315:08	H6F25121	H6F25115	IMD045W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW07042023
Lab Samp ID: D213-01G
Lab File ID: H6F25087
Ext Btch ID: IMD045W
Calib. Ref.: H6F25084

Date Collected: 04/17/23 07:40
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 14:49
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	0.64J	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	700000	1000	250	500
Chromium	1.5J	5.0	0.50	1.0
Cobalt	1.2J	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	93000	500	100	250
Manganese	1300	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	8800	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	3.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW07042023
Lab Samp ID: D213-01T
Lab File ID: H6F25106
Ext Btch ID: IMD045W
Calib. Ref.: H6F25103

Date Analyzed: 06/27/23 15:57
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	BGMW07042023	Date Analyzed:	06/27/23 14:49
Lab Samp ID:	D213-01G	Dilution Factor:	5
Lab File ID:	H6F25087	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25084	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	26	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	700000	1000	250	500
Chromium	1.5J	5.0	0.50	1.0
Cobalt	1.2J	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	93000	500	100	250
Manganese	1300	5.0	1.2	2.5
Nickel	2.0J	5.0	1.2	2.5
Potassium	8800	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	5900000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:40
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	BGMW07042023	Date Analyzed:	06/27/23 15:57
Lab Samp ID:	D213-01T	Dilution Factor:	200
Lab File ID:	H6F25106	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25103	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	700000	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	96000	20000	4000	10000
Manganese	1400	200	50	100
Nickel	ND	200	50	100
Potassium	ND	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	4100	4000	1000	2000

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: MW32042023
Lab Samp ID: D213-02G
Lab File ID: H6F25091
Ext Btch ID: IMD045W
Calib. Ref.: H6F25084

Date Collected: 04/17/23 07:45
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 15:01
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	960	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	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	140000	1000	250	500
Chromium	2.7J	5.0	0.50	1.0
Cobalt	1.7J	3.7	0.50	1.0
Copper	32	10	2.5	5.0
Iron	1100	1000	120	250
Lead	1.4J	5.0	0.25	0.50
Magnesium	27000	500	100	250
Manganese	380	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	720J	1000	250	500
Selenium	110	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	30J	100	25	50

Sample ID: MW32042023
Lab Samp ID: D213-02T
Lab File ID: H6F25110
Ext Btch ID: IMD045W
Calib. Ref.: H6F25103

Date Analyzed: 06/27/23 16:11
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1400000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:45
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	MW32042023	Date Analyzed:	06/27/23 15:01
Lab Samp ID:	D213-02G	Dilution Factor:	5
Lab File ID:	H6F25091	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	960	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	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	140000	1000	250	500
Chromium	2.7J	5.0	0.50	1.0
Cobalt	1.7J	3.7	0.50	1.0
Copper	32	10	2.5	5.0
Iron	1100	1000	120	250
Lead	1.4J	5.0	0.25	0.50
Magnesium	27000	500	100	250
Manganese	380	5.0	1.2	2.5
Nickel	2.3J	5.0	1.2	2.5
Potassium	720J	1000	250	500
Selenium	110	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1300000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.9J	5.0	1.2	2.5
Zinc	30J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 07:45
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D213	Date Extracted: 04/26/23 15:08
Sample ID: MW32042023	Date Analyzed: 06/27/23 16:11
Lab Samp ID: D213-02T	Dilution Factor: 50
Lab File ID: H6F25110	Matrix: WATER
Ext Btch ID: IMD045W	% Moisture: NA
Calib. Ref.: H6F25103	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	20J	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	390	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	BGMW08042023	Date Analyzed:	06/27/23 15:03
Lab Samp ID:	D213-03K	Dilution Factor:	20
Lab File ID:	H6F25092	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	460J	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	340000	4000	1000	2000
Chromium	5.4J	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	42000	2000	400	1000
Manganese	160	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	4700	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	5.0J	20	5.0	10
Zinc	ND	400	100	200

Sample ID:	BGMW08042023	Date Analyzed:	06/27/23 16:14
Lab Samp ID:	D213-03T	Dilution Factor:	100
Lab File ID:	H6F25111	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25103	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	3800000	20000	5000	10000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:10
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	BGMW08042023	Date Analyzed:	06/27/23 15:03
Lab Samp ID:	D213-03K	Dilution Factor:	20
Lab File ID:	H6F25092	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25084	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	460J	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	340000	4000	1000	2000
Chromium	5.4J	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	42000	2000	400	1000
Manganese	160	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	4700	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	5.0J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW08042023
Lab Samp ID: D213-03T
Lab File ID: H6F25111
Ext Btch ID: IMD045W
Calib. Ref.: H6F25103

Date Collected: 04/17/23 09:10
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 16:14
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	330000	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	42000	10000	2000	5000
Manganese	170	100	25	50
Nickel	ND	100	25	50
Potassium	5300J	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	3800000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	1500J	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW18042023
Lab Samp ID: D213-04G
Lab File ID: H6F25093
Ext Btch ID: IMD045W
Calib. Ref.: H6F25084

Date Collected: 04/17/23 09:15
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 15:06
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	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	0.67J	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	0.30J	5.0	0.25	0.50
Magnesium	1200	500	100	250
Manganese	6.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	2400	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	7.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW18042023
Lab Samp ID: D213-04T
Lab File ID: H6F25112
Ext Btch ID: IMD045W
Calib. Ref.: H6F25103

Date Analyzed: 06/27/23 16:17
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	680000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW18042023
Lab Samp ID: D213-04G
Lab File ID: H6F25093
Ext Btch ID: IMD045W
Calib. Ref.: H6F25084

Date Collected: 04/17/23 09:15
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 15:06
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	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	0.67J	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	0.30J	5.0	0.25	0.50
Magnesium	1200	500	100	250
Manganese	6.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	2400	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:15
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	TMW18042023	Date Analyzed:	06/27/23 16:17
Lab Samp ID:	D213-04T	Dilution Factor:	50
Lab File ID:	H6F25112	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25103	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	7800J	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	ND	50	12	25
Nickel	ND	50	12	25
Potassium	2600J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW58042023
Lab Samp ID: D213-05G
Lab File ID: H6F25094
Ext Btch ID: IMD045W
Calib. Ref.: H6F25084

Date Collected: 04/17/23 09:30
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 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	160J	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	8100	1000	250	500
Chromium	0.54J	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	990	500	100	250
Manganese	39	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	8.4	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW58042023
Lab Samp ID: D213-05T
Lab File ID: H6F25113
Ext Btch ID: IMD045W
Calib. Ref.: H6F25103

Date Analyzed: 06/27/23 16:19
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:30
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	TMW58042023	Date Analyzed:	06/27/23 15:09
Lab Samp ID:	D213-05G	Dilution Factor:	5
Lab File ID:	H6F25094	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25084	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	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	8100	1000	250	500
Chromium	0.54J	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	990	500	100	250
Manganese	39	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	8.4	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:30
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	TMW58042023	Date Analyzed:	06/27/23 16:19
Lab Samp ID:	D213-05T	Dilution Factor:	50
Lab File ID:	H6F25113	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25103	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	8700J	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	46J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW09042023
Lab Samp ID: D213-06I
Lab File ID: H6F25095
Ext Btch ID: IMD045W
Calib. Ref.: H6F25084

Date Collected: 04/17/23 10:25
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 15:12
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	440J	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	33000	2000	500	1000
Chromium	1.6J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	380J	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	4000	1000	200	500
Manganese	91	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1600J	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	7.2J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: BGMW09042023
Lab Samp ID: D213-06T
Lab File ID: H6F25114
Ext Btch ID: IMD045W
Calib. Ref.: H6F25103

Date Analyzed: 06/27/23 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	1200000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW09042023
Lab Samp ID: D213-06I
Lab File ID: H6F25095
Ext Btch ID: IMD045W
Calib. Ref.: H6F25084

Date Collected: 04/17/23 10:25
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 15:12
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	440J	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	33000	2000	500	1000
Chromium	1.6J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	380J	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	4000	1000	200	500
Manganese	91	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1600J	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	7.2J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW09042023
Lab Samp ID: D213-06T
Lab File ID: H6F25114
Ext Btch ID: IMD045W
Calib. Ref.: H6F25103

Date Collected: 04/17/23 10:25
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 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)
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	94	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW09042023D
Lab Samp ID: D213-07I
Lab File ID: H6F25098
Ext Btch ID: IMD045W
Calib. Ref.: H6F25096

Date Collected: 04/17/23 10:40
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 15:30
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	880J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.3J	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	35000	2000	500	1000
Chromium	6.2J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	760J	2000	250	500
Lead	1.4J	10	0.50	1.0
Magnesium	4200	1000	200	500
Manganese	130	10	2.5	5.0
Nickel	6.2J	10	2.5	5.0
Potassium	1600J	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	6.4J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: BGMW09042023D
Lab Samp ID: D213-07T
Lab File ID: H6F25117
Ext Btch ID: IMD045W
Calib. Ref.: H6F25115

Date Analyzed: 06/27/23 16:31
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:40
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	BGMW09042023D	Date Analyzed:	06/27/23 15:30
Lab Samp ID:	D213-07I	Dilution Factor:	10
Lab File ID:	H6F25098	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	880J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.3J	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	35000	2000	500	1000
Chromium	6.2J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	760J	2000	250	500
Lead	1.4J	10	0.50	1.0
Magnesium	4200	1000	200	500
Manganese	130	10	2.5	5.0
Nickel	6.2J	10	2.5	5.0
Potassium	1600J	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	6.4J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:40
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	BGMW09042023D	Date Analyzed:	06/27/23 16:31
Lab Samp ID:	D213-07T	Dilution Factor:	50
Lab File ID:	H6F25117	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25115	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	34000	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	4300J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 11:30
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D213	Date Extracted: 04/26/23 15:08
Sample ID: TMW36042023	Date Analyzed: 06/27/23 15:33
Lab Samp ID: D213-08G	Dilution Factor: 5
Lab File ID: H6F25099	Matrix: WATER
Ext Btch ID: IMD045W	% Moisture: NA
Calib. Ref.: H6F25096	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	5.8	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8700	1000	250	500
Chromium	6.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	7.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	930	500	100	250
Manganese	22	5.0	1.2	2.5
Nickel	20	5.0	1.2	2.5
Potassium	810J	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	36J	100	25	50

Sample ID: TMW36042023	Date Analyzed: 06/27/23 16:34
Lab Samp ID: D213-08T	Dilution Factor: 50
Lab File ID: H6F25118	Matrix: WATER
Ext Btch ID: IMD045W	% Moisture: NA
Calib. Ref.: H6F25115	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	660000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 11:30
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	TMW36042023	Date Analyzed:	06/27/23 15:33
Lab Samp ID:	D213-08G	Dilution Factor:	5
Lab File ID:	H6F25099	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25096	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	5.8	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8700	1000	250	500
Chromium	6.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	7.9J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	930	500	100	250
Manganese	22	5.0	1.2	2.5
Nickel	20	5.0	1.2	2.5
Potassium	810J	1000	250	500
Selenium	ND	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	ND	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 11:30
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	TMW36042023	Date Analyzed:	06/27/23 16:34
Lab Samp ID:	D213-08T	Dilution Factor:	50
Lab File ID:	H6F25118	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25115	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	8700J	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	1000J	5000	1000	2500
Manganese	26J	50	12	25
Nickel	20J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	660000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW12042023
Lab Samp ID: D213-09G
Lab File ID: H6F25100
Ext Btch ID: IMD045W
Calib. Ref.: H6F25096

Date Collected: 04/17/23 12:50
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 15:36
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	820	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.94J	5.0	0.62	1.2
Barium	39	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	0.56J	5.0	0.50	1.0
Cobalt	0.64J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	890J	1000	120	250
Lead	0.81J	5.0	0.25	0.50
Magnesium	15000	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.9J	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	4.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW12042023
Lab Samp ID: D213-09T
Lab File ID: H6F25119
Ext Btch ID: IMD045W
Calib. Ref.: H6F25115

Date Analyzed: 06/27/23 16:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	470000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 12:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	BGMW12042023	Date Analyzed:	06/27/23 15:36
Lab Samp ID:	D213-09G	Dilution Factor:	5
Lab File ID:	H6F25100	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25096	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	0.94J	5.0	0.62	1.2
Barium	39	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	0.56J	5.0	0.50	1.0
Cobalt	0.64J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	890J	1000	120	250
Lead	0.81J	5.0	0.25	0.50
Magnesium	15000	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.9J	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	460000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 12:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	BGMW12042023	Date Analyzed:	06/27/23 16:37
Lab Samp ID:	D213-09T	Dilution Factor:	50
Lab File ID:	H6F25119	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25115	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	38J	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	16000	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW16042023
Lab Samp ID: D213-10G
Lab File ID: H6F25101
Ext Btch ID: IMD045W
Calib. Ref.: H6F25096

Date Collected: 04/17/23 07:50
Date Received: 04/19/23
Date Extracted: 04/26/23 15:08
Date Analyzed: 06/27/23 15:39
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	120J	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	4300	1000	250	500
Chromium	3.5J	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	0.92J	5.0	0.25	0.50
Magnesium	450J	500	100	250
Manganese	8.2	5.0	1.2	2.5
Nickel	26	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	5.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW16042023
Lab Samp ID: D213-10T
Lab File ID: H6F25120
Ext Btch ID: IMD045W
Calib. Ref.: H6F25115

Date Analyzed: 06/27/23 16:40
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	450000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	TMW16042023	Date Analyzed:	06/27/23 15:39
Lab Samp ID:	D213-10G	Dilution Factor:	5
Lab File ID:	H6F25101	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25096	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	120J	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	4300	1000	250	500
Chromium	3.5J	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	0.92J	5.0	0.25	0.50
Magnesium	450J	500	100	250
Manganese	8.2	5.0	1.2	2.5
Nickel	26	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	450000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 07:50
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D213	Date Extracted: 04/26/23 15:08
Sample ID: TMW16042023	Date Analyzed: 06/27/23 16:40
Lab Samp ID: D213-10T	Dilution Factor: 50
Lab File ID: H6F25120	Matrix: WATER
Ext Btch ID: IMD045W	% Moisture: NA
Calib. Ref.: H6F25115	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	4500J	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	25J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:15
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	TMW19042023	Date Analyzed:	06/27/23 15:42
Lab Samp ID:	D213-11G	Dilution Factor:	5
Lab File ID:	H6F25102	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25096	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	6.5	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	5.9	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	31	5.0	1.2	2.5
Nickel	21	5.0	1.2	2.5
Potassium	870J	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:	TMW19042023	Date Analyzed:	06/27/23 16:43
Lab Samp ID:	D213-11T	Dilution Factor:	50
Lab File ID:	H6F25121	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25115	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 10:15
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D213	Date Extracted: 04/26/23 15:08
Sample ID: TMW19042023	Date Analyzed: 06/27/23 15:42
Lab Samp ID: D213-11G	Dilution Factor: 5
Lab File ID: H6F25102	Matrix: WATER
Ext Btch ID: IMD045W	% Moisture: NA
Calib. Ref.: H6F25096	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	6.5	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	5.9	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	31	5.0	1.2	2.5
Nickel	21	5.0	1.2	2.5
Potassium	870J	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	5.1	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:15
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	TMW19042023	Date Analyzed:	06/27/23 16:43
Lab Samp ID:	D213-11T	Dilution Factor:	50
Lab File ID:	H6F25121	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25115	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	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	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D213	Date Extracted:	04/26/23 15:08
Sample ID:	MBLK1W	Date Analyzed:	06/27/23 12:36
Lab Samp ID:	IMD045WB	Dilution Factor:	1
Lab File ID:	H6F25045	Matrix:	WATER
Ext Btch ID:	IMD045W	% Moisture:	NA
Calib. Ref.:	H6F25043	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of eleven(11) water samples were received on 04/19/23 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. IMD046WB - 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. IMD046WL/IMD046WC 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: D213-01M/D213-01S - Percent recoveries for Calcium(225X), Copper, Magnesium(30X), Manganese(36X) and Sodium(1927X) 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. Samples D213-07 to D213-11 were reported from re-analysis due to CCV failure for Beryllium.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

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

SDG NO. : 23D213
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	IMD046WB	1	NA	06/27/2311:38	04/26/2317:10	H6F25027	H6F25025	IMD046W	Method Blank
LCS1W	IMD046WL	1	NA	06/27/2311:41	04/26/2317:10	H6F25028	H6F25025	IMD046W	Lab Control Sample (LCS)
LCD1W	IMD046WC	1	NA	06/27/2311:43	04/26/2317:10	H6F25029	H6F25025	IMD046W	LCS Duplicate
BGMW07042023	D213-01A	5	NA	06/27/2317:08	04/26/2317:10	H6F25124	H6F25122	IMD046W	Analytical Spike Sample
BGMW07042023	D213-01G	5	NA	06/27/2317:11	04/26/2317:10	H6F25125	H6F25122	IMD046W	Diluted Sample
BGMW07042023	D213-01J	25	NA	06/27/2317:14	04/26/2317:10	H6F25126	H6F25122	IMD046W	Diluted Sample
BGMW07042023MS	D213-01M	5	NA	06/27/2317:17	04/26/2317:10	H6F25127	H6F25122	IMD046W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	5	NA	06/27/2317:20	04/26/2317:10	H6F25128	H6F25122	IMD046W	MS Duplicate (MSD)
MW32042023	D213-02G	5	NA	06/27/2317:23	04/26/2317:10	H6F25129	H6F25122	IMD046W	Diluted Sample
BGMW08042023	D213-03K	20	NA	06/27/2317:32	04/26/2317:10	H6F25130	H6F25122	IMD046W	Diluted Sample
TMW18042023	D213-04G	5	NA	06/27/2317:35	04/26/2317:10	H6F25131	H6F25122	IMD046W	Diluted Sample
TMW58042023	D213-05G	5	NA	06/27/2317:38	04/26/2317:10	H6F25132	H6F25122	IMD046W	Diluted Sample
BGMW09042023	D213-06I	10	NA	06/27/2317:41	04/26/2317:10	H6F25133	H6F25122	IMD046W	Diluted Sample
BGMW07042023	D213-01A	200	NA	06/27/2318:31	04/26/2317:10	H6F25143	H6F25141	IMD046W	Analytical Spike Sample
BGMW07042023	D213-01T	200	NA	06/27/2318:34	04/26/2317:10	H6F25144	H6F25141	IMD046W	Diluted Sample
BGMW07042023	D213-01J	1000	NA	06/27/2318:37	04/26/2317:10	H6F25145	H6F25141	IMD046W	Diluted Sample
BGMW07042023MS	D213-01M	200	NA	06/27/2318:40	04/26/2317:10	H6F25146	H6F25141	IMD046W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	200	NA	06/27/2318:43	04/26/2317:10	H6F25147	H6F25141	IMD046W	MS Duplicate (MSD)
BGMW08042023	D213-03T	100	NA	06/27/2318:49	04/26/2317:10	H6F25149	H6F25141	IMD046W	Diluted Sample
TMW18042023	D213-04T	50	NA	06/27/2318:51	04/26/2317:10	H6F25150	H6F25141	IMD046W	Diluted Sample
TMW58042023	D213-05T	50	NA	06/27/2318:54	04/26/2317:10	H6F25151	H6F25141	IMD046W	Diluted Sample
BGMW09042023	D213-06T	50	NA	06/27/2318:57	04/26/2317:10	H6F25152	H6F25141	IMD046W	Diluted Sample
BGMW09042023D	D213-07T	50	NA	06/27/2319:06	04/26/2317:10	H6F25155	H6F25153	IMD046W	Diluted Sample
TMW36042023	D213-08T	50	NA	06/27/2319:09	04/26/2317:10	H6F25156	H6F25153	IMD046W	Diluted Sample
BGMW12042023	D213-09T	50	NA	06/27/2319:12	04/26/2317:10	H6F25157	H6F25153	IMD046W	Diluted Sample
TMW16042023	D213-10T	50	NA	06/27/2319:15	04/26/2317:10	H6F25158	H6F25153	IMD046W	Diluted Sample
TMW19042023	D213-11T	50	NA	06/27/2319:18	04/26/2317:10	H6F25159	H6F25153	IMD046W	Diluted Sample
BGMW09042023D	D213-07I	10	NA	06/28/2312:57	04/26/2317:10	H6F26030	H6F26028	IMD046W	Diluted Sample
TMW36042023	D213-08G	5	NA	06/28/2313:00	04/26/2317:10	H6F26031	H6F26028	IMD046W	Diluted Sample
BGMW12042023	D213-09G	5	NA	06/28/2313:03	04/26/2317:10	H6F26032	H6F26028	IMD046W	Diluted Sample
TMW16042023	D213-10G	5	NA	06/28/2313:06	04/26/2317:10	H6F26033	H6F26028	IMD046W	Diluted Sample
TMW19042023	D213-11G	5	NA	06/28/2313:09	04/26/2317:10	H6F26034	H6F26028	IMD046W	Diluted Sample
MW32042023	D213-02T	50	NA	06/28/2313:12	04/26/2317:10	H6F26035	H6F26028	IMD046W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW07042023
Lab Samp ID: D213-01G
Lab File ID: H6F25125
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 07:40
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 17:11
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	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	680000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	1.1J	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	91000	500	100	250
Manganese	1100	5.0	1.2	2.5
Nickel	2.1J	5.0	1.2	2.5
Potassium	7400	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	ND	100	25	50

Sample ID: BGMW07042023
Lab Samp ID: D213-01T
Lab File ID: H6F25144
Ext Btch ID: IMD046W
Calib. Ref.: H6F25141

Date Analyzed: 06/27/23 18:34
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	5800000	40000	10000	20000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW07042023
Lab Samp ID: D213-01G
Lab File ID: H6F25125
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 07:40
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 17:11
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	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	680000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	1.1J	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	91000	500	100	250
Manganese	1100	5.0	1.2	2.5
Nickel	2.1J	5.0	1.2	2.5
Potassium	7400	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	5700000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.3J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW07042023
Lab Samp ID: D213-01T
Lab File ID: H6F25144
Ext Btch ID: IMD046W
Calib. Ref.: H6F25141

Date Collected: 04/17/23 07:40
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 18:34
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
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	670000	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	94000	20000	4000	10000
Manganese	1100	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	ND	200	30	60
Silver	ND	200	20	40
Sodium	5800000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	ND	200	50	100
Zinc	1800J	4000	1000	2000

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: MW32042023
Lab Samp ID: D213-02G
Lab File ID: H6F25129
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 07:45
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 17:23
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	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	130000	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	26000	500	100	250
Manganese	39	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	610J	1000	250	500
Selenium	100	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW32042023
Lab Samp ID: D213-02T
Lab File ID: H6F26035
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Analyzed: 06/28/23 13:12
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: MW32042023
Lab Samp ID: D213-02G
Lab File ID: H6F25129
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 07:45
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 17:23
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	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	130000	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	26000	500	100	250
Manganese	39	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	610J	1000	250	500
Selenium	100	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1300000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.8J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 07:45
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 17:10
Sample ID:	MW32042023	Date Analyzed:	06/28/23 13:12
Lab Samp ID:	D213-02T	Dilution Factor:	50
Lab File ID:	H6F26035	Matrix:	WATER
Ext Btch ID:	IMD046W	% Moisture:	NA
Calib. Ref.:	H6F26028	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	130000	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	27000	5000	1000	2500
Manganese	45J	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	840J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW08042023
Lab Samp ID: D213-03K
Lab File ID: H6F25130
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 09:10
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 17:32
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	11J	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	39000	2000	400	1000
Manganese	33	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	4300	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	220J	400	100	200

Sample ID: BGMW08042023
Lab Samp ID: D213-03T
Lab File ID: H6F25149
Ext Btch ID: IMD046W
Calib. Ref.: H6F25141

Date Analyzed: 06/27/23 18:49
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	3600000	20000	5000	10000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 09:10
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D213	Date Extracted: 04/26/23 17:10
Sample ID: BGMW08042023	Date Analyzed: 06/27/23 17:32
Lab Samp ID: D213-03K	Dilution Factor: 20
Lab File ID: H6F25130	Matrix: WATER
Ext Btch ID: IMD046W	% Moisture: NA
Calib. Ref.: H6F25122	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	11J	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	39000	2000	400	1000
Manganese	33	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	4300	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	3700000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	220J	400	100	200

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW08042023
Lab Samp ID: D213-03T
Lab File ID: H6F25149
Ext Btch ID: IMD046W
Calib. Ref.: H6F25141

Date Collected: 04/17/23 09:10
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 18:49
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	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	39000	10000	2000	5000
Manganese	35J	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	3600000	20000	5000	10000
Thallium	ND	50	10	20
Vanadium	ND	100	25	50
Zinc	1400J	2000	500	1000

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW18042023
Lab Samp ID: D213-04G
Lab File ID: H6F25131
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 09:15
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 17:35
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	180J	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	7600	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	1100	500	100	250
Manganese	5.7	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	6.8	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW18042023
Lab Samp ID: D213-04T
Lab File ID: H6F25150
Ext Btch ID: IMD046W
Calib. Ref.: H6F25141

Date Analyzed: 06/27/23 18:51
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:15
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 17:10
Sample ID:	TMW18042023	Date Analyzed:	06/27/23 17:35
Lab Samp ID:	D213-04G	Dilution Factor:	5
Lab File ID:	H6F25131	Matrix:	WATER
Ext Btch ID:	IMD046W	% Moisture:	NA
Calib. Ref.:	H6F25122	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	180J	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	7600	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	1100	500	100	250
Manganese	5.7	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	660000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	6.8	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 09:15
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 17:10
Sample ID:	TMW18042023	Date Analyzed:	06/27/23 18:51
Lab Samp ID:	D213-04T	Dilution Factor:	50
Lab File ID:	H6F25150	Matrix:	WATER
Ext Btch ID:	IMD046W	% Moisture:	NA
Calib. Ref.:	H6F25141	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	1100J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW58042023
Lab Samp ID: D213-05G
Lab File ID: H6F25132
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 09:30
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 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	1.4J	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	7600	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	20	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	830J	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	7.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW58042023
Lab Samp ID: D213-05T
Lab File ID: H6F25151
Ext Btch ID: IMD046W
Calib. Ref.: H6F25141

Date Analyzed: 06/27/23 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	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 09:30
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D213	Date Extracted: 04/26/23 17:10
Sample ID: TMW58042023	Date Analyzed: 06/27/23 17:38
Lab Samp ID: D213-05G	Dilution Factor: 5
Lab File ID: H6F25132	Matrix: WATER
Ext Btch ID: IMD046W	% Moisture: NA
Calib. Ref.: H6F25122	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	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	7600	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	20	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	830J	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	7.6	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW58042023
Lab Samp ID: D213-05T
Lab File ID: H6F25151
Ext Btch ID: IMD046W
Calib. Ref.: H6F25141

Date Collected: 04/17/23 09:30
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 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)
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	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	20J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW09042023
Lab Samp ID: D213-06I
Lab File ID: H6F25133
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 10:25
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 17:41
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	7.7J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	31000	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	3600	1000	200	500
Manganese	10	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1500J	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	5.7J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: BGMW09042023
Lab Samp ID: D213-06T
Lab File ID: H6F25152
Ext Btch ID: IMD046W
Calib. Ref.: H6F25141

Date Analyzed: 06/27/23 18:57
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW09042023
Lab Samp ID: D213-06I
Lab File ID: H6F25133
Ext Btch ID: IMD046W
Calib. Ref.: H6F25122

Date Collected: 04/17/23 10:25
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 17:41
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	7.7J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	31000	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	3600	1000	200	500
Manganese	10	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1500J	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	5.7J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:25
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 17:10
Sample ID:	BGMW09042023	Date Analyzed:	06/27/23 18:57
Lab Samp ID:	D213-06T	Dilution Factor:	50
Lab File ID:	H6F25152	Matrix:	WATER
Ext Btch ID:	IMD046W	% Moisture:	NA
Calib. Ref.:	H6F25141	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	3700J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW09042023D
Lab Samp ID: D213-07I
Lab File ID: H6F26030
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 10:40
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 12:57
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	8.8J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	33000	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	3800	1000	200	500
Manganese	15	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1400J	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	5.7J	10	2.5	5.0
Zinc	140J	200	50	100

Sample ID: BGMW09042023D
Lab Samp ID: D213-07T
Lab File ID: H6F25155
Ext Btch ID: IMD046W
Calib. Ref.: H6F25153

Date Analyzed: 06/27/23 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	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW09042023D
Lab Samp ID: D213-07I
Lab File ID: H6F26030
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 10:40
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 12:57
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	8.8J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	33000	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	3800	1000	200	500
Manganese	15	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1400J	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	5.7J	10	2.5	5.0
Zinc	140J	200	50	100

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/17/23 10:40
Project : USACE WINGATE	Date Received: 04/19/23
SDG NO. : 23D213	Date Extracted: 04/26/23 17:10
Sample ID: BGMW09042023D	Date Analyzed: 06/27/23 19:06
Lab Samp ID: D213-07T	Dilution Factor: 50
Lab File ID: H6F25155	Matrix: WATER
Ext Btch ID: IMD046W	% Moisture: NA
Calib. Ref.: H6F25153	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	31000	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	3800J	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW36042023
Lab Samp ID: D213-08G
Lab File ID: H6F26031
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 11:30
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 13:00
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	6.1	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	0.64J	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	970	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	34	5.0	1.2	2.5
Potassium	720J	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	86J	100	25	50

Sample ID: TMW36042023
Lab Samp ID: D213-08T
Lab File ID: H6F25156
Ext Btch ID: IMD046W
Calib. Ref.: H6F25153

Date Analyzed: 06/27/23 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	660000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW36042023
Lab Samp ID: D213-08G
Lab File ID: H6F26031
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 11:30
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 13:00
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	6.1	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	0.64J	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	970	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	34	5.0	1.2	2.5
Potassium	720J	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	ND	5.0	1.2	2.5
Zinc	86J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW36042023
Lab Samp ID: D213-08T
Lab File ID: H6F25156
Ext Btch ID: IMD046W
Calib. Ref.: H6F25153

Date Collected: 04/17/23 11:30
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 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)
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	8900J	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	34J	50	12	25
Nickel	28J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	660000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW12042023
Lab Samp ID: D213-09G
Lab File ID: H6F26032
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 12:50
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 13:03
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	26	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	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	15000	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	1.4J	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	1.6J	5.0	1.2	2.5
Zinc	52J	100	25	50

Sample ID: BGMW12042023
Lab Samp ID: D213-09T
Lab File ID: H6F25157
Ext Btch ID: IMD046W
Calib. Ref.: H6F25153

Date Analyzed: 06/27/23 19:12
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	450000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 12:50
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 17:10
Sample ID:	BGMW12042023	Date Analyzed:	06/28/23 13:03
Lab Samp ID:	D213-09G	Dilution Factor:	5
Lab File ID:	H6F26032	Matrix:	WATER
Ext Btch ID:	IMD046W	% Moisture:	NA
Calib. Ref.:	H6F26028	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	26	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	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	15000	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	1.4J	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	450000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	1.6J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: BGMW12042023
Lab Samp ID: D213-09T
Lab File ID: H6F25157
Ext Btch ID: IMD046W
Calib. Ref.: H6F25153

Date Collected: 04/17/23 12:50
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 19:12
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	22J	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	15000	5000	1000	2500
Manganese	26J	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	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW16042023
Lab Samp ID: D213-10G
Lab File ID: H6F26033
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 07:50
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 13:06
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	3900	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	430J	500	100	250
Manganese	3.0J	5.0	1.2	2.5
Nickel	20	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	5.6	5.0	1.2	2.5
Zinc	53J	100	25	50

Sample ID: TMW16042023
Lab Samp ID: D213-10T
Lab File ID: H6F25158
Ext Btch ID: IMD046W
Calib. Ref.: H6F25153

Date Analyzed: 06/27/23 19:15
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	430000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW16042023
Lab Samp ID: D213-10G
Lab File ID: H6F26033
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 07:50
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 13:06
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	3900	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	430J	500	100	250
Manganese	3.0J	5.0	1.2	2.5
Nickel	20	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	430000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.6	5.0	1.2	2.5
Zinc	53J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW16042023
Lab Samp ID: D213-10T
Lab File ID: H6F25158
Ext Btch ID: IMD046W
Calib. Ref.: H6F25153

Date Collected: 04/17/23 07:50
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 19:15
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	4000J	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	16J	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW19042023
Lab Samp ID: D213-11G
Lab File ID: H6F26034
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 10:15
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 13:09
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	6.3	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	0.62J	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	28	5.0	1.2	2.5
Nickel	16	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	5.4	5.0	1.2	2.5
Zinc	59J	100	25	50

Sample ID: TMW19042023
Lab Samp ID: D213-11T
Lab File ID: H6F25159
Ext Btch ID: IMD046W
Calib. Ref.: H6F25153

Date Analyzed: 06/27/23 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	640000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: TMW19042023
Lab Samp ID: D213-11G
Lab File ID: H6F26034
Ext Btch ID: IMD046W
Calib. Ref.: H6F26028

Date Collected: 04/17/23 10:15
Date Received: 04/19/23
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/28/23 13:09
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	6.3	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	0.62J	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	28	5.0	1.2	2.5
Nickel	16	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	670000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.4	5.0	1.2	2.5
Zinc	59J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/17/23 10:15
Project	: USACE WINGATE	Date Received:	04/19/23
SDG NO.	: 23D213	Date Extracted:	04/26/23 17:10
Sample ID:	TMW19042023	Date Analyzed:	06/27/23 19:18
Lab Samp ID:	D213-11T	Dilution Factor:	50
Lab File ID:	H6F25159	Matrix:	WATER
Ext Btch ID:	IMD046W	% Moisture:	NA
Calib. Ref.:	H6F25153	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	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	27J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D213
Sample ID: MBLK1W
Lab Samp ID: IMD046WB
Lab File ID: H6F25027
Ext Btch ID: IMD046W
Calib. Ref.: H6F25025

Date Collected: NA
Date Received: NA
Date Extracted: 04/26/23 17:10
Date Analyzed: 06/27/23 11:38
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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 04/19/23 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 HGE011WB. 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. HGE011WL/HGE011WC 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 D213-01M/D213-01S. 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.

D213-01 was reported from dilution due to PS/MS/MSD/serial dilution deficiencies at 1X run. Matrix interference was suspected.

LAB CHRONICLE
MERCURY BY COLD VAPOR

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

SDG NO. : 23D213
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	HGE011WB	1	NA	05/11/2318:13	05/11/2313:51	M47E011012	M47E011	23HGE011W	Method Blank
LCS1W	HGE011WL	1	NA	05/11/2318:14	05/11/2313:51	M47E011013	M47E011	23HGE011W	Lab Control Sample (LCS)
LCD1W	HGE011WC	1	NA	05/11/2318:16	05/11/2313:51	M47E011014	M47E011	23HGE011W	LCS Duplicate
MW32042023	D213-02	1	NA	05/11/2318:27	05/11/2313:51	M47E011020	M47E011	23HGE011W	Field Sample
BGMW08042023	D213-03	1	NA	05/11/2318:29	05/11/2313:51	M47E011021	M47E011	23HGE011W	Field Sample
TMW18042023	D213-04	1	NA	05/11/2318:35	05/11/2313:51	M47E011024	M47E011	23HGE011W	Field Sample
TMW58042023	D213-05	1	NA	05/11/2318:37	05/11/2313:51	M47E011025	M47E011	23HGE011W	Field Sample
BGMW09042023	D213-06	1	NA	05/11/2318:39	05/11/2313:51	M47E011026	M47E011	23HGE011W	Field Sample
BGMW09042023D	D213-07	1	NA	05/11/2318:41	05/11/2313:51	M47E011027	M47E011	23HGE011W	Field Sample
TMW36042023	D213-08	1	NA	05/11/2318:42	05/11/2313:51	M47E011028	M47E011	23HGE011W	Field Sample
BGMW12042023	D213-09	1	NA	05/11/2318:44	05/11/2313:51	M47E011029	M47E011	23HGE011W	Field Sample
TMW16042023	D213-10	1	NA	05/11/2318:46	05/11/2313:51	M47E011030	M47E011	23HGE011W	Field Sample
TMW19042023	D213-11	1	NA	05/11/2318:47	05/11/2313:51	M47E011031	M47E011	23HGE011W	Field Sample
BGMW07042023MS	D213-01M	5	NA	05/12/2313:39	05/11/2313:51	M47E012012	M47E012	23HGE011W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	5	NA	05/12/2313:41	05/11/2313:51	M47E012013	M47E012	23HGE011W	MS Duplicate (MSD)
BGMW07042023	D213-01I	5	NA	05/12/2313:45	05/11/2313:51	M47E012015	M47E012	23HGE011W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D213

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	HGE011WB	ND	1	NA	0.50	0.10	0.20	05/11/2318:13	05/11/2313:51	M47E011012	M47E011	23HGE011W	NA	NA
LCS1W	HGE011WL	2.6	1	NA	0.50	0.10	0.20	05/11/2318:14	05/11/2313:51	M47E011013	M47E011	23HGE011W	NA	NA
LCD1W	HGE011WC	2.6	1	NA	0.50	0.10	0.20	05/11/2318:16	05/11/2313:51	M47E011014	M47E011	23HGE011W	NA	NA
MW32042023	D213-02	ND	1	NA	0.50	0.10	0.20	05/11/2318:27	05/11/2313:51	M47E011020	M47E011	23HGE011W	04/17/2307:45	04/19/23
BGMW08042023	D213-03	ND	1	NA	0.50	0.10	0.20	05/11/2318:29	05/11/2313:51	M47E011021	M47E011	23HGE011W	04/17/2309:10	04/19/23
TMW18042023	D213-04	ND	1	NA	0.50	0.10	0.20	05/11/2318:35	05/11/2313:51	M47E011024	M47E011	23HGE011W	04/17/2309:15	04/19/23
TMW58042023	D213-05	ND	1	NA	0.50	0.10	0.20	05/11/2318:37	05/11/2313:51	M47E011025	M47E011	23HGE011W	04/17/2309:30	04/19/23
BGMW09042023	D213-06	ND	1	NA	0.50	0.10	0.20	05/11/2318:39	05/11/2313:51	M47E011026	M47E011	23HGE011W	04/17/2310:25	04/19/23
BGMW09042023D	D213-07	ND	1	NA	0.50	0.10	0.20	05/11/2318:41	05/11/2313:51	M47E011027	M47E011	23HGE011W	04/17/2310:40	04/19/23
TMW36042023	D213-08	0.12J	1	NA	0.50	0.10	0.20	05/11/2318:42	05/11/2313:51	M47E011028	M47E011	23HGE011W	04/17/2311:30	04/19/23
BGMW12042023	D213-09	ND	1	NA	0.50	0.10	0.20	05/11/2318:44	05/11/2313:51	M47E011029	M47E011	23HGE011W	04/17/2312:50	04/19/23
TMW16042023	D213-10	ND	1	NA	0.50	0.10	0.20	05/11/2318:46	05/11/2313:51	M47E011030	M47E011	23HGE011W	04/17/2307:50	04/19/23
TMW19042023	D213-11	ND	1	NA	0.50	0.10	0.20	05/11/2318:47	05/11/2313:51	M47E011031	M47E011	23HGE011W	04/17/2310:15	04/19/23
BGMW07042023MS	D213-01M	2.5	5	NA	2.5	0.50	1.0	05/12/2313:39	05/11/2313:51	M47E012012	M47E012	23HGE011W	04/17/2307:40	04/19/23
BGMW07042023MSD	D213-01S	2.5J	5	NA	2.5	0.50	1.0	05/12/2313:41	05/11/2313:51	M47E012013	M47E012	23HGE011W	04/17/2307:40	04/19/23
BGMW07042023	D213-01I	ND	5	NA	2.5	0.50	1.0	05/12/2313:45	05/11/2313:51	M47E012015	M47E012	23HGE011W	04/17/2307:40	04/19/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 04/19/23 to be analyzed for Dissolved Mercury by Cold Vapor in accordance with Method SW7470A (DISSOLVED) and project specific requirements.

Holding Time
D213-06 was digested and analyzed out of holding time for one(1)day. The rest of the samples were digested and analyzed within the prescribed holding time. Originally, D213-06 was digested and analyzed within the holding time, but the lab suspected contamination. Hence, the D213-06 was re-digested, but out of 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, two(2) method blanks were analyzed. HGE012WB and HGE018WB 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. HGE012WL/HGE012WC and HGE018WL/HGE018WC 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. Mercury was within MS QC limits in D213-01M/D213-01S. 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.

D213-01 was reported from dilution due to failing PS/MS/MSD/serial dilution at initial 1X run. Matrix interference was suspected.

LAB CHRONICLE
DISSOLVED MERCURY BY COLD VAPOR

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

SDG NO. : 23D213
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	HGE012WB	1	NA	05/11/2318:51	05/11/2313:51	M47E011033	M47E011	23HGE012W	Method Blank
LCS1W	HGE012WL	1	NA	05/11/2318:57	05/11/2313:51	M47E011036	M47E011	23HGE012W	Lab Control Sample (LCS)
LCD1W	HGE012WC	1	NA	05/11/2318:59	05/11/2313:51	M47E011037	M47E011	23HGE012W	LCS Duplicate
MW32042023	D213-02	1	NA	05/11/2319:10	05/11/2313:51	M47E011043	M47E011	23HGE012W	Field Sample
BGMW08042023	D213-03	1	NA	05/11/2319:11	05/11/2313:51	M47E011044	M47E011	23HGE012W	Field Sample
TMW18042023	D213-04	1	NA	05/11/2319:13	05/11/2313:51	M47E011045	M47E011	23HGE012W	Field Sample
TMW58042023	D213-05	1	NA	05/11/2319:19	05/11/2313:51	M47E011048	M47E011	23HGE012W	Field Sample
BGMW09042023D	D213-07	1	NA	05/11/2319:22	05/11/2313:51	M47E011050	M47E011	23HGE012W	Field Sample
TMW36042023	D213-08	1	NA	05/11/2319:24	05/11/2313:51	M47E011051	M47E011	23HGE012W	Field Sample
TMW16042023	D213-10	1	NA	05/11/2319:28	05/11/2313:51	M47E011053	M47E011	23HGE012W	Field Sample
TMW19042023	D213-11	1	NA	05/11/2319:29	05/11/2313:51	M47E011054	M47E011	23HGE012W	Field Sample
BGMW07042023MS	D213-01M	5	NA	05/12/2313:48	05/11/2313:51	M47E012017	M47E012	23HGE012W	Matrix Spike Sample (MS)
BGMW07042023MSD	D213-01S	5	NA	05/12/2313:50	05/11/2313:51	M47E012018	M47E012	23HGE012W	MS Duplicate (MSD)
BGMW07042023	D213-01I	5	NA	05/12/2313:54	05/11/2313:51	M47E012020	M47E012	23HGE012W	Diluted Sample
BGMW12042023	D213-09N	1	NA	05/12/2314:06	05/11/2313:51	M47E012026	M47E012	23HGE012W	Field Sample
MBLK2W	HGE018WB	1	NA	05/16/2318:35	05/16/2314:32	M47E016048	M47E016	23HGE018W	Method Blank
LCS2W	HGE018WL	1	NA	05/16/2318:36	05/16/2314:32	M47E016049	M47E016	23HGE018W	Lab Control Sample (LCS)
LCD2W	HGE018WC	1	NA	05/16/2318:38	05/16/2314:32	M47E016050	M47E016	23HGE018W	LCS Duplicate
BGMW09042023	D213-06	1	NA	05/16/2319:21	05/16/2314:32	M47E016073	M47E016	23HGE018W	Field Sample

FN - Filename
% Moist - Percent Moisture

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW6850
PERCHLORATE BY HPLC/MS

SDG#: 23D213

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D213

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of eleven(11) water samples were received on 04/19/23 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. PLD010WB, PLD011WB and PLE001WB 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. PLD010WL/PLD010WC, PLD011WL/PLD011WC and PLE001WL/PLE001WC 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 D213-01M/D213-01S. 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 D213-02I, -09J and -10L 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. : 23D213

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	PLD010WB	ND	1	NA	0.20	0.050	0.10	04/27/2311:58	NA	23MD27007	MD27004	PLD010W	NA	NA
LCS1W	PLD010WL	0.23	1	NA	0.20	0.050	0.10	04/27/2312:13	NA	23MD27008	MD27004	PLD010W	NA	NA
LCD1W	PLD010WC	0.21	1	NA	0.20	0.050	0.10	04/27/2312:29	NA	23MD27009	MD27004	PLD010W	NA	NA
BGMW07042023	D213-01	ND	1	NA	0.20	0.050	0.10	04/27/2320:39	NA	23MD27038	MD27028	PLD010W	04/17/2307:40	04/19/23
BGMW07042023MS	D213-01M	0.20	1	NA	0.20	0.050	0.10	04/27/2321:52	NA	23MD27040	MD27039	PLD010W	04/17/2307:40	04/19/23
BGMW07042023MSD	D213-01S	0.20J	1	NA	0.20	0.050	0.10	04/27/2322:07	NA	23MD27041	MD27039	PLD010W	04/17/2307:40	04/19/23
BGMW08042023	D213-03	ND	1	NA	0.20	0.050	0.10	04/27/2322:36	NA	23MD27043	MD27039	PLD010W	04/17/2309:10	04/19/23
TMW18042023	D213-04	ND	1	NA	0.20	0.050	0.10	04/27/2322:51	NA	23MD27044	MD27039	PLD010W	04/17/2309:15	04/19/23
TMW58042023	D213-05	ND	1	NA	0.20	0.050	0.10	04/27/2323:05	NA	23MD27045	MD27039	PLD010W	04/17/2309:30	04/19/23
BGMW09042023	D213-06	ND	1	NA	0.20	0.050	0.10	04/27/2323:20	NA	23MD27046	MD27039	PLD010W	04/17/2310:25	04/19/23
BGMW09042023D	D213-07	ND	1	NA	0.20	0.050	0.10	04/27/2323:35	NA	23MD27047	MD27039	PLD010W	04/17/2310:40	04/19/23
MW32042023	D213-02I	ND	5	NA	1.0	0.25	0.50	04/28/2301:32	NA	23MD27052	MD27050	PLD010W	04/17/2307:45	04/19/23
MBLK2W	PLD011WB	ND	1	NA	0.20	0.050	0.10	04/28/2312:04	NA	23MD28007	MD28004	PLD011W	NA	NA
LCS2W	PLD011WL	0.20J	1	NA	0.20	0.050	0.10	04/28/2313:09	NA	23MD28008	MD28004	PLD011W	NA	NA
LCD2W	PLD011WC	0.18J	1	NA	0.20	0.050	0.10	04/28/2314:22	NA	23MD28009	MD28004	PLD011W	NA	NA
TMW36042023	D213-08	ND	1	NA	0.20	0.050	0.10	04/28/2314:52	NA	23MD28010	MD28004	PLD011W	04/17/2311:30	04/19/23
TMW19042023	D213-11	ND	1	NA	0.20	0.050	0.10	04/28/2315:36	NA	23MD28013	MD28004	PLD011W	04/17/2310:15	04/19/23
MBLK3W	PLE001WB	ND	1	NA	0.20	0.050	0.10	05/01/2311:35	NA	23ME01007	ME01004	PLE001W	NA	NA
LCS3W	PLE001WL	0.19J	1	NA	0.20	0.050	0.10	05/01/2311:50	NA	23ME01008	ME01004	PLE001W	NA	NA
LCD3W	PLE001WC	0.21	1	NA	0.20	0.050	0.10	05/01/2312:27	NA	23ME01009	ME01004	PLE001W	NA	NA
BGMW12042023	D213-09J	ND	10	NA	2.0	0.50	1.0	05/01/2315:16	NA	23ME01018	ME01017	PLE001W	04/17/2312:50	04/19/23
TMW16042023	D213-10L	ND	30	NA	6.0	1.5	3.0	05/01/2316:20	NA	23ME01021	ME01017	PLE001W	04/17/2307:50	04/19/23

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: 07-06-2023
EMAX Batch No.: 23D225

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 04/20/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW30042023	D225-01	04/19/23	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
TMW26042023	D225-02	04/19/23	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
TMW50042023	D225-03	04/19/23	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
SMW01042023	D225-04	04/19/23	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

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

Sample ID	Control #	Col Date	Matrix	Analysis
SMW01042023D	D225-05	04/19/23	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
TMW31S042023	D225-06	04/19/23	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
BGMW11042023	D225-07	04/19/23	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
TMW63042023	D225-08	04/19/23	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
TMW08042023	D225-09	04/19/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				PESTICIDES ORGANOCHLORINE
				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
QC19042023EB2	D225-10	04/19/23	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
TMW27042023	D225-11	04/19/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS
QC19042023TB03	D225-12	04/19/23	WATER	VOCS BY 8260C TPH GASOLINE
TMW63042023MS	D225-08M	04/19/23	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
TMW63042023MSD	D225-08S	04/19/23	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

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

NELAP Accredited Certificate Number CA002912022-24
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#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of twelve(12) water samples were received on 04/20/23 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 four(4)CCVs (Data file IDs: RDC637, RDC663, RDC668 and RDC694) associated with this SDG. All calibration requirements were satisfied. Refer Note that "Minimum Response Factor" for all target analytes were within method recommended response factor 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. VO67D26B and VO67D27B 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. VO67D26L/VO67D26C and VO67D27L/VO67D27C 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. 23D225-08M/23D225-08S - 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.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

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

SDG NO. : 23D225
Instrument ID : 67

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V067D26L	1	NA	04/28/2307:22	04/28/2307:22	RDC638	RDC593	V067D26	Lab Control Sample (LCS)
LCD1W	V067D26C	1	NA	04/28/2307:47	04/28/2307:47	RDC639	RDC593	V067D26	LCS Duplicate
MBLK1W	V067D26B	1	NA	04/28/2308:38	04/28/2308:38	RDC641	RDC593	V067D26	Method Blank
TMW30042023	23D225-01	1	NA	04/28/2315:53	04/28/2315:53	RDC658	RDC593	V067D26	Field Sample
TMW26042023	23D225-02	1	NA	04/28/2316:19	04/28/2316:19	RDC659	RDC593	V067D26	Field Sample
LCS2W	V067D27L	1	NA	04/29/2308:57	04/29/2308:57	RDC669	RDC593	V067D27	Lab Control Sample (LCS)
LCD2W	V067D27C	1	NA	04/29/2309:22	04/29/2309:22	RDC670	RDC593	V067D27	LCS Duplicate
MBLK2W	V067D27B	1	NA	04/29/2310:13	04/29/2310:13	RDC672	RDC593	V067D27	Method Blank
QC19042023TB03	23D225-12	1	NA	04/29/2310:39	04/29/2310:39	RDC673	RDC593	V067D27	Field Sample
TMW63042023	23D225-08	1	NA	04/29/2311:04	04/29/2311:04	RDC674	RDC593	V067D27	Field Sample
TMW50042023	23D225-03	1	NA	04/29/2311:30	04/29/2311:30	RDC675	RDC593	V067D27	Field Sample
SMW01042023	23D225-04	1	NA	04/29/2311:56	04/29/2311:56	RDC676	RDC593	V067D27	Field Sample
SMW01042023D	23D225-05	1	NA	04/29/2312:21	04/29/2312:21	RDC677	RDC593	V067D27	Field Sample
TMW31S042023	23D225-06	1	NA	04/29/2312:47	04/29/2312:47	RDC678	RDC593	V067D27	Field Sample
BGMW11042023	23D225-07	1	NA	04/29/2313:12	04/29/2313:12	RDC679	RDC593	V067D27	Field Sample
TMW08042023	23D225-09	1	NA	04/29/2313:38	04/29/2313:38	RDC680	RDC593	V067D27	Field Sample
QC19042023EB2	23D225-10	1	NA	04/29/2314:04	04/29/2314:04	RDC681	RDC593	V067D27	Field Sample
TMW27042023	23D225-11	1	NA	04/29/2314:29	04/29/2314:29	RDC682	RDC593	V067D27	Field Sample
TMW63042023MS	23D225-08M	1	NA	04/29/2318:45	04/29/2318:45	RDC692	RDC593	V067D27	Matrix Spike Sample (MS)
TMW63042023MSD	23D225-08S	1	NA	04/29/2319:10	04/29/2319:10	RDC693	RDC593	V067D27	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/28/23 15:53
Sample ID	: TMW30042023	Date Analyzed:	04/28/23 15:53
Lab Samp ID:	23D225-01	Dilution Factor:	1
Lab File ID:	RDC658	Matrix:	WATER
Ext Btch ID:	VO67D26	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.48	10.0	95	81-118
4-Bromofluorobenzene	9.82	10.0	98	85-114
Toluene-d8	9.69	10.0	97	89-112
Dibromofluoromethane	9.93	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:10
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/28/23 16:19
Sample ID	: TMW26042023	Date Analyzed:	04/28/23 16:19
Lab Samp ID:	23D225-02	Dilution Factor:	1
Lab File ID:	RDC659	Matrix:	WATER
Ext Btch ID:	V067D26	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.52	10.0	95	81-118
4-Bromofluorobenzene	9.77	10.0	98	85-114
Toluene-d8	9.63	10.0	96	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : TMW50042023
Lab Samp ID: 23D225-03
Lab File ID: RDC675
Ext Btch ID: V067D27
Calib. Ref.: RDC593

Date Collected: 04/19/23 08:40
Date Received: 04/20/23
Date Extracted: 04/29/23 11:30
Date Analyzed: 04/29/23 11:30
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	9.26	10.0	93	81-118
4-Bromofluorobenzene	9.97	10.0	100	85-114
Toluene-d8	9.77	10.0	98	89-112
Dibromofluoromethane	9.94	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : SMW01042023
Lab Samp ID: 23D225-04
Lab File ID: RDC676
Ext Btch ID: V067D27
Calib. Ref.: RDC593

Date Collected: 04/19/23 09:00
Date Received: 04/20/23
Date Extracted: 04/29/23 11:56
Date Analyzed: 04/29/23 11:56
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	9.10	10.0	91	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	9.71	10.0	97	89-112
Dibromofluoromethane	9.86	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 09:05
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/29/23 12:21
Sample ID : SMW01042023D	Date Analyzed: 04/29/23 12:21
Lab Samp ID: 23D225-05	Dilution Factor: 1
Lab File ID: RDC677	Matrix: WATER
Ext Btch ID: V067D27	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	8.97	10.0	90	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	9.77	10.0	98	89-112
Dibromofluoromethane	9.79	10.0	98	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:10
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/29/23 12:47
Sample ID	: TMW31S042023	Date Analyzed:	04/29/23 12:47
Lab Samp ID:	23D225-06	Dilution Factor:	1
Lab File ID:	RDC678	Matrix:	WATER
Ext Btch ID:	VO67D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.52	10.0	95	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	9.66	10.0	97	89-112
Dibromofluoromethane	9.99	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 12:20
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/29/23 13:12
Sample ID : BGMW11042023	Date Analyzed: 04/29/23 13:12
Lab Samp ID: 23D225-07	Dilution Factor: 1
Lab File ID: RDC679	Matrix: WATER
Ext Btch ID: V067D27	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.95	10.0	100	85-114
Toluene-d8	9.71	10.0	97	89-112
Dibromofluoromethane	9.96	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : TMW63042023
Lab Samp ID: 23D225-08
Lab File ID: RDC674
Ext Btch ID: V067D27
Calib. Ref.: RDC593

Date Collected: 04/19/23 13:00
Date Received: 04/20/23
Date Extracted: 04/29/23 11:04
Date Analyzed: 04/29/23 11:04
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	9.15	10.0	91	81-118
4-Bromofluorobenzene	9.99	10.0	100	85-114
Toluene-d8	9.74	10.0	97	89-112
Dibromofluoromethane	9.75	10.0	97	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 13:00
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/29/23 13:38
Sample ID : TMW08042023	Date Analyzed: 04/29/23 13:38
Lab Samp ID: 23D225-09	Dilution Factor: 1
Lab File ID: RDC680	Matrix: WATER
Ext Btch ID: V067D27	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.53	10.0	95	81-118
4-Bromofluorobenzene	9.78	10.0	98	85-114
Toluene-d8	9.57	10.0	96	89-112
Dibromofluoromethane	10.0	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : QC19042023EB2
Lab Samp ID: 23D225-10
Lab File ID: RDC681
Ext Btch ID: V067D27
Calib. Ref.: RDC593

Date Collected: 04/19/23 14:00
Date Received: 04/20/23
Date Extracted: 04/29/23 14:04
Date Analyzed: 04/29/23 14:04
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	0.99J	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	1.1	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	0.40J	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	9.61	10.0	96	81-118
4-Bromofluorobenzene	9.77	10.0	98	85-114
Toluene-d8	9.66	10.0	97	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:20
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/29/23 14:29
Sample ID	: TMW27042023	Date Analyzed:	04/29/23 14:29
Lab Samp ID:	23D225-11	Dilution Factor:	1
Lab File ID:	RDC682	Matrix:	WATER
Ext Btch ID:	VO67D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.26	10.0	93	81-118
4-Bromofluorobenzene	9.83	10.0	98	85-114
Toluene-d8	9.70	10.0	97	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : QC19042023TB03
Lab Samp ID: 23D225-12
Lab File ID: RDC673
Ext Btch ID: V067D27
Calib. Ref.: RDC593

Date Collected: 04/19/23 08:00
Date Received: 04/20/23
Date Extracted: 04/29/23 10:39
Date Analyzed: 04/29/23 10:39
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	8.85	10.0	88	81-118
4-Bromofluorobenzene	10.1	10.0	101	85-114
Toluene-d8	9.82	10.0	98	89-112
Dibromofluoromethane	9.83	10.0	98	80-119

Notes:
Sample Amount : 25ml
Prepared by : VLu
Final Volume : 25ml
Analyzed by : VLu
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#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

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

A total of eight(8) water samples were received on 04/20/23 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: RDJ423, RDJ424, RDJ458 and RDJ459) 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. SVD034WB - 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: SVD034WL/SVD034WC - RPD for Hexachlorocyclopentadiene(RPD=24*) was 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. 23D225-08M/23D225-08S - all analytes were within MS QC limits. 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 2,4,6-Tribromophenol, 2-Fluorophenol, Nitrobenzene-D5 and Phenol-D5 in D225-08. However all surrogates of the samples D225-08M/08S were within QC limits and client was informed. 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 : 23D225

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

A total of eight(8) water samples were received on 04/20/23 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: RDJ425 and RDJ457) 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. SVD034WB - 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: CLD034WL/CLD034WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=46*) was 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 23D225-08M/23D225-08S. 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 with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

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

A total of eight(8) water samples were received on 04/20/23 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: RDJ424 and RDJ458) 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. SVD034WB - 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: CLD034WL/CLD034WC - RPD for Benzaldehyde(RPD=39*) was 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 and the following was noted: 23D225-08M/23D225-08S - RPD for Caprolactam, (RPD=21*) was greater than RPD QC limit. 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. : 23D225
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	SVD034WB	1	NA	04/28/2316:20	04/26/2317:30	RDJ431	RCJ011	23SVD034W	Method Blank
LCS1W	SVD034WL	1	NA	04/28/2316:38	04/26/2317:30	RDJ432	RCJ011	23SVD034W	Lab Control Sample (LCS)
LCD1W	SVD034WC	1	NA	04/28/2316:57	04/26/2317:30	RDJ433	RCJ011	23SVD034W	LCS Duplicate
TMW63042023MS	23D225-08M	1	NA	04/28/2317:52	04/26/2317:30	RDJ436	RCJ011	23SVD034W	Matrix Spike Sample (MS)
TMW63042023MSD	23D225-08S	1	NA	04/28/2318:11	04/26/2317:30	RDJ437	RCJ011	23SVD034W	MS Duplicate (MSD)
TMW30042023	23D225-01	1	NA	04/28/2319:07	04/26/2317:30	RDJ440	RCJ011	23SVD034W	Field Sample
TMW50042023	23D225-03	1	NA	04/28/2319:25	04/26/2317:30	RDJ441	RCJ011	23SVD034W	Field Sample
SMW01042023	23D225-04	1	NA	04/28/2319:44	04/26/2317:30	RDJ442	RCJ011	23SVD034W	Field Sample
SMW01042023D	23D225-05	1	NA	04/28/2320:03	04/26/2317:30	RDJ443	RCJ011	23SVD034W	Field Sample
TMW31S042023	23D225-06	1	NA	04/28/2320:21	04/26/2317:30	RDJ444	RCJ011	23SVD034W	Field Sample
BGMW11042023	23D225-07	1	NA	04/28/2320:40	04/26/2317:30	RDJ445	RCJ011	23SVD034W	Field Sample
TMW63042023	23D225-08	1	NA	04/28/2320:58	04/26/2317:30	RDJ446	RCJ011	23SVD034W	Field Sample
QC19042023EB2	23D225-10	1	NA	04/28/2321:17	04/26/2317:30	RDJ447	RCJ011	23SVD034W	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. : 23D225
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	SVD034WB	1	NA	04/28/2316:20	04/26/2317:30	RDJ431	RCJ498	23SVD034W	Method Blank
LCD1W	CLD034WC	1	NA	04/28/2317:15	04/26/2317:30	RDJ434	RCJ498	23SVD034W	LCS Duplicate
LCS1W	CLD034WL	1	NA	04/28/2317:34	04/26/2317:30	RDJ435	RCJ498	23SVD034W	Lab Control Sample (LCS)
TMW63042023MS	23D225-08M	1	NA	04/28/2318:30	04/26/2317:30	RDJ438	RCJ498	23SVD034W	Matrix Spike Sample (MS)
TMW63042023MSD	23D225-08S	1	NA	04/28/2318:48	04/26/2317:30	RDJ439	RCJ498	23SVD034W	MS Duplicate (MSD)
TMW30042023	23D225-01	1	NA	04/28/2319:07	04/26/2317:30	RDJ440	RCJ498	23SVD034W	Field Sample
TMW50042023	23D225-03	1	NA	04/28/2319:25	04/26/2317:30	RDJ441	RCJ498	23SVD034W	Field Sample
SMW01042023	23D225-04	1	NA	04/28/2319:44	04/26/2317:30	RDJ442	RCJ498	23SVD034W	Field Sample
SMW01042023D	23D225-05	1	NA	04/28/2320:03	04/26/2317:30	RDJ443	RCJ498	23SVD034W	Field Sample
TMW31S042023	23D225-06	1	NA	04/28/2320:21	04/26/2317:30	RDJ444	RCJ498	23SVD034W	Field Sample
BGMW11042023	23D225-07	1	NA	04/28/2320:40	04/26/2317:30	RDJ445	RCJ498	23SVD034W	Field Sample
TMW63042023	23D225-08	1	NA	04/28/2320:58	04/26/2317:30	RDJ446	RCJ498	23SVD034W	Field Sample
QC19042023EB2	23D225-10	1	NA	04/28/2321:17	04/26/2317:30	RDJ447	RCJ498	23SVD034W	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. : 23D225
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	SVD034WB	1	NA	04/28/2316:20	04/26/2317:30	RDJ431	RCJ025	23SVD034W	Method Blank
LCD1W	CLD034WC	1	NA	04/28/2317:15	04/26/2317:30	RDJ434	RCJ025	23SVD034W	LCS Duplicate
LCS1W	CLD034WL	1	NA	04/28/2317:34	04/26/2317:30	RDJ435	RCJ025	23SVD034W	Lab Control Sample (LCS)
TMW63042023MS	23D225-08M	1	NA	04/28/2318:30	04/26/2317:30	RDJ438	RCJ025	23SVD034W	Matrix Spike Sample (MS)
TMW63042023MSD	23D225-08S	1	NA	04/28/2318:48	04/26/2317:30	RDJ439	RCJ025	23SVD034W	MS Duplicate (MSD)
TMW30042023	23D225-01	1	NA	04/28/2319:07	04/26/2317:30	RDJ440	RCJ025	23SVD034W	Field Sample
TMW50042023	23D225-03	1	NA	04/28/2319:25	04/26/2317:30	RDJ441	RCJ025	23SVD034W	Field Sample
SMW01042023	23D225-04	1	NA	04/28/2319:44	04/26/2317:30	RDJ442	RCJ025	23SVD034W	Field Sample
SMW01042023D	23D225-05	1	NA	04/28/2320:03	04/26/2317:30	RDJ443	RCJ025	23SVD034W	Field Sample
TMW31S042023	23D225-06	1	NA	04/28/2320:21	04/26/2317:30	RDJ444	RCJ025	23SVD034W	Field Sample
BGMW11042023	23D225-07	1	NA	04/28/2320:40	04/26/2317:30	RDJ445	RCJ025	23SVD034W	Field Sample
TMW63042023	23D225-08	1	NA	04/28/2320:58	04/26/2317:30	RDJ446	RCJ025	23SVD034W	Field Sample
QC19042023EB2	23D225-10	1	NA	04/28/2321:17	04/26/2317:30	RDJ447	RCJ025	23SVD034W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : TMW30042023
Lab Samp ID: 23D225-01
Lab File ID: RDJ440
Ext Btch ID: 23SVD034W
Calib. Ref.: RCJ011

Date Collected: 04/19/23 08:00
Date Received: 04/20/23
Date Extracted: 04/26/23 17:30
Date Analyzed: 04/28/23 19:07
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	45.8	71.4	64	43-140
2-Fluorobiphenyl	15.0	23.8	63	44-119
2-Fluorophenol	24.2	71.4	34	19-119
Nitrobenzene-d5	13.7	23.8	58	44-120
Phenol-d5	36.7	71.4	51	40-130
Terphenyl-d14	23.1	23.8	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: RCJ025 DCC Ref: RDJ424

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: TMW30042023	Date Analyzed:	04/28/23 19:07
Lab Samp ID:	23D225-01	Dilution Factor:	1
Lab File ID:	RDJ440	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/19/23 08:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: TMW30042023	Date Analyzed:	04/28/23 19:07
Lab Samp ID:	23D225-01	Dilution Factor:	1
Lab File ID:	RDJ440	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : TMW50042023
Lab Samp ID: 23D225-03
Lab File ID: RDJ441
Ext Btch ID: 23SVD034W
Calib. Ref.: RCJ011

Date Collected: 04/19/23 08:40
Date Received: 04/20/23
Date Extracted: 04/26/23 17:30
Date Analyzed: 04/28/23 19:25
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	44.0	66.6	66	43-140
2-Fluorobiphenyl	16.7	22.2	75	44-119
2-Fluorophenol	26.5	66.6	40	19-119
Nitrobenzene-d5	15.8	22.2	71	44-120
Phenol-d5	41.0	66.6	62	40-130
Terphenyl-d14	11.6	22.2	52	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: RCJ025 DCC Ref: RDJ424

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:40
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: TMW50042023	Date Analyzed:	04/28/23 19:25
Lab Samp ID:	23D225-03	Dilution Factor:	1
Lab File ID:	RDJ441	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/19/23 08:40
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: TMW50042023	Date Analyzed:	04/28/23 19:25
Lab Samp ID:	23D225-03	Dilution Factor:	1
Lab File ID:	RDJ441	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : SMW01042023
Lab Samp ID: 23D225-04
Lab File ID: RDJ442
Ext Btch ID: 23SVD034W
Calib. Ref.: RCJ011

Date Collected: 04/19/23 09:00
Date Received: 04/20/23
Date Extracted: 04/26/23 17:30
Date Analyzed: 04/28/23 19:44
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	45.8	66.6	69	43-140
2-Fluorobiphenyl	16.3	22.2	73	44-119
2-Fluorophenol	28.2	66.6	42	19-119
Nitrobenzene-d5	13.3	22.2	60	44-120
Phenol-d5	39.8	66.6	60	40-130
Terphenyl-d14	16.6	22.2	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: RCJ025 DCC Ref: RDJ424

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 09:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: SMW01042023	Date Analyzed:	04/28/23 19:44
Lab Samp ID:	23D225-04	Dilution Factor:	1
Lab File ID:	RDJ442	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/19/23 09:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: SMW01042023	Date Analyzed:	04/28/23 19:44
Lab Samp ID:	23D225-04	Dilution Factor:	1
Lab File ID:	RDJ442	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : SMW01042023D
Lab Samp ID: 23D225-05
Lab File ID: RDJ443
Ext Btch ID: 23SVD034W
Calib. Ref.: RCJ011

Date Collected: 04/19/23 09:05
Date Received: 04/20/23
Date Extracted: 04/26/23 17:30
Date Analyzed: 04/28/23 20:03
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.1	12
1,2-Dichlorobenzene	ND	12	3.1	6.1
1,2-Diphenylhydrazine	ND	12	3.1	6.1
1,3-Dichlorobenzene	ND	12	3.1	6.1
1,4-Dichlorobenzene	ND	12	3.1	6.1
2,4,5-Trichlorophenol	ND	12	3.1	6.1
2,4,6-Trichlorophenol	ND	12	3.1	6.1
2,4-Dichlorophenol	ND	12	3.1	6.1
2,4-Dimethylphenol	ND	12	3.1	6.1
2,4-Dinitrophenol	ND	24	3.1	6.1
2,4-Dinitrotoluene	ND	12	3.1	6.1
2,6-Dinitrotoluene	ND	12	3.1	6.1
2-Chloronaphthalene	ND	12	3.1	6.1
2-Chlorophenol	ND	12	3.1	6.1
2-Methylnaphthalene	ND	12	3.1	6.1
2-Methylphenol	ND	12	3.1	6.1
2-Nitroaniline	ND	12	3.1	6.1
2-Nitrophenol	ND	12	3.1	6.1
3,3'-Dichlorobenzidine	ND	12	3.1	6.1
3/4-Methylphenol	ND	12	3.1	6.1
3-Nitroaniline	ND	12	3.1	6.1
4,6-Dinitro-2-methylphenol	ND	24	3.1	6.1
4-Bromophenyl phenyl ether	ND	12	3.1	6.1
4-Chloro-3-methylphenol	ND	12	3.1	6.1
4-Chloroaniline	ND	24	6.1	12
4-Chlorophenyl-phenyl ether	ND	12	3.1	6.1
4-Nitroaniline	ND	12	3.1	6.1
4-Nitrophenol	ND	24	3.1	6.1
Acenaphthene	ND	12	3.1	6.1
Acenaphthylene	ND	12	3.1	6.1
Anthracene	ND	12	3.1	6.1
Benzo(a)anthracene	ND	12	3.1	6.1
Benzo(a)pyrene	ND	12	3.1	6.1
Benzo(b)fluoranthene	ND	12	3.1	6.1
Benzo(g,h,i)perylene	ND	12	3.1	6.1
Benzo(k)fluoranthene	ND	12	3.1	6.1
Benzoic Acid	ND	120	24	49
Benzyl Alcohol	ND	12	3.1	6.1
bis(2-Chloroisopropyl) ether	ND	12	3.1	6.1
bis(2-Chloroethoxy)methane	ND	12	3.1	6.1
bis(2-Chloroethyl) ether	ND	12	3.1	6.1
bis(2-Ethylhexyl) phthalate	ND	24	6.1	12
Butylbenzylphthalate	ND	12	3.1	6.1
Carbazole	ND	12	3.1	6.1
Chrysene	ND	12	3.1	6.1
Dibenzo(a,h)anthracene	ND	12	3.1	6.1
Dibenzofuran	ND	12	3.1	6.1
Diethylphthalate	ND	12	3.1	6.1
Dimethylphthalate	ND	12	3.1	6.1
Di-n-butyl phthalate	ND	12	3.1	6.1
Di-n-octyl phthalate	ND	12	3.1	6.1
Fluoranthene	ND	12	3.1	6.1
Fluorene	ND	12	3.1	6.1
Hexachlorobenzene	ND	12	3.1	6.1
Hexachlorobutadiene	ND	12	3.1	6.1
Hexachloroethane	ND	12	3.1	6.1
Indeno(1,2,3-cd)pyrene	ND	12	3.1	6.1
Isophorone	ND	12	3.1	6.1
Naphthalene	ND	12	3.1	6.1
Nitrobenzene	ND	12	3.1	6.1
N-Nitrosodimethylamine	ND	12	3.1	6.1
n-Nitroso-di-n-propylamine	ND	12	3.1	6.1
n-Nitrosodiphenylamine	ND	12	3.1	6.1
Pentachlorophenol	ND	24	3.1	6.1
Phenanthrene	ND	12	3.1	6.1
Phenol	ND	12	3.1	6.1
Pyrene	ND	12	3.1	6.1
Hexachlorocyclopentadiene	ND	12	3.1	6.1
Benzidine	ND	49	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.1	6.1
2,6-Dichlorophenol	ND	12	3.1	6.1

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	53.0	73.2	72	43-140
2-Fluorobiphenyl	17.6	24.4	72	44-119
2-Fluorophenol	28.6	73.2	39	19-119
Nitrobenzene-d5	13.5	24.4	56	44-120
Phenol-d5	43.3	73.2	59	40-130
Terphenyl-d14	19.3	24.4	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: RCJ025 DCC Ref: RDJ424

Detection limits are reported relative to sample result significant figures.
Sample Amount : 820ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 09:05
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: SMW01042023D	Date Analyzed:	04/28/23 20:03
Lab Samp ID:	23D225-05	Dilution Factor:	1
Lab File ID:	RDJ443	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	6.1

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	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:	04/19/23 09:05
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: SMW01042023D	Date Analyzed:	04/28/23 20:03
Lab Samp ID:	23D225-05	Dilution Factor:	1
Lab File ID:	RDJ443	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ025	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.1	12
Benzaldehyde	ND	24	6.1	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : TMW31S042023
Lab Samp ID: 23D225-06
Lab File ID: RDJ444
Ext Btch ID: 23SVD034W
Calib. Ref.: RCJ011

Date Collected: 04/19/23 10:10
Date Received: 04/20/23
Date Extracted: 04/26/23 17:30
Date Analyzed: 04/28/23 20:21
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.1	12
1,2-Dichlorobenzene	ND	12	3.1	6.1
1,2-Diphenylhydrazine	ND	12	3.1	6.1
1,3-Dichlorobenzene	ND	12	3.1	6.1
1,4-Dichlorobenzene	ND	12	3.1	6.1
2,4,5-Trichlorophenol	ND	12	3.1	6.1
2,4,6-Trichlorophenol	ND	12	3.1	6.1
2,4-Dichlorophenol	ND	12	3.1	6.1
2,4-Dimethylphenol	ND	12	3.1	6.1
2,4-Dinitrophenol	ND	24	3.1	6.1
2,4-Dinitrotoluene	ND	12	3.1	6.1
2,6-Dinitrotoluene	ND	12	3.1	6.1
2-Chloronaphthalene	ND	12	3.1	6.1
2-Chlorophenol	ND	12	3.1	6.1
2-Methylnaphthalene	ND	12	3.1	6.1
2-Methylphenol	ND	12	3.1	6.1
2-Nitroaniline	ND	12	3.1	6.1
2-Nitrophenol	ND	12	3.1	6.1
3,3'-Dichlorobenzidine	ND	12	3.1	6.1
3/4-Methylphenol	ND	12	3.1	6.1
3-Nitroaniline	ND	12	3.1	6.1
4,6-Dinitro-2-methylphenol	ND	24	3.1	6.1
4-Bromophenyl phenyl ether	ND	12	3.1	6.1
4-Chloro-3-methylphenol	ND	12	3.1	6.1
4-Chloroaniline	ND	24	6.1	12
4-Chlorophenyl-phenyl ether	ND	12	3.1	6.1
4-Nitroaniline	ND	12	3.1	6.1
4-Nitrophenol	ND	24	3.1	6.1
Acenaphthene	ND	12	3.1	6.1
Acenaphthylene	ND	12	3.1	6.1
Anthracene	ND	12	3.1	6.1
Benzo(a)anthracene	ND	12	3.1	6.1
Benzo(a)pyrene	ND	12	3.1	6.1
Benzo(b)fluoranthene	ND	12	3.1	6.1
Benzo(g,h,i)perylene	ND	12	3.1	6.1
Benzo(K)fluoranthene	ND	12	3.1	6.1
Benzoic Acid	ND	120	24	49
Benzyl Alcohol	ND	12	3.1	6.1
bis(2-Chloroisopropyl) ether	ND	12	3.1	6.1
bis(2-Chloroethoxy)methane	ND	12	3.1	6.1
bis(2-Chloroethyl) ether	ND	12	3.1	6.1
bis(2-Ethylhexyl) phthalate	ND	24	6.1	12
Butylbenzylphthalate	ND	12	3.1	6.1
Carbazole	ND	12	3.1	6.1
Chrysene	ND	12	3.1	6.1
Dibenzo(a,h)anthracene	ND	12	3.1	6.1
Dibenzofuran	ND	12	3.1	6.1
Diethylphthalate	ND	12	3.1	6.1
Dimethylphthalate	ND	12	3.1	6.1
Di-n-butyl phthalate	ND	12	3.1	6.1
Di-n-octyl phthalate	ND	12	3.1	6.1
Fluoranthene	ND	12	3.1	6.1
Fluorene	ND	12	3.1	6.1
Hexachlorobenzene	ND	12	3.1	6.1
Hexachlorobutadiene	ND	12	3.1	6.1
Hexachloroethane	ND	12	3.1	6.1
Indeno(1,2,3-cd)pyrene	ND	12	3.1	6.1
Isophorone	ND	12	3.1	6.1
Naphthalene	ND	12	3.1	6.1
Nitrobenzene	ND	12	3.1	6.1
N-Nitrosodimethylamine	ND	12	3.1	6.1
n-Nitroso-di-n-propylamine	ND	12	3.1	6.1
n-Nitrosodiphenylamine	ND	12	3.1	6.1
Pentachlorophenol	ND	24	3.1	6.1
Phenanthrene	ND	12	3.1	6.1
Phenol	ND	12	3.1	6.1
Pyrene	ND	12	3.1	6.1
Hexachlorocyclopentadiene	ND	12	3.1	6.1
Benzidine	ND	49	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.1	6.1
2,6-Dichlorophenol	ND	12	3.1	6.1

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	54.4	73.2	74	43-140
2-Fluorobiphenyl	18.2	24.4	75	44-119
2-Fluorophenol	28.4	73.2	39	19-119
Nitrobenzene-d5	14.9	24.4	61	44-120
Phenol-d5	44.3	73.2	60	40-130
Terphenyl-d14	23.4	24.4	96	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: RCJ025 DCC Ref: RDJ424

Detection limits are reported relative to sample result significant figures.
Sample Amount : 820ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:10
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: TMW31S042023	Date Analyzed:	04/28/23 20:21
Lab Samp ID:	23D225-06	Dilution Factor:	1
Lab File ID:	RDJ444	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	6.1

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	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:	04/19/23 10:10
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: TMW31S042023	Date Analyzed:	04/28/23 20:21
Lab Samp ID:	23D225-06	Dilution Factor:	1
Lab File ID:	RDJ444	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ025	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.1	12
Benzaldehyde	ND	24	6.1	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : BGMW11042023
Lab Samp ID: 23D225-07
Lab File ID: RDJ445
Ext Btch ID: 23SVD034W
Calib. Ref.: RCJ011

Date Collected: 04/19/23 12:20
Date Received: 04/20/23
Date Extracted: 04/26/23 17:30
Date Analyzed: 04/28/23 20:40
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	20	4.9	9.8
1,2-Dichlorobenzene	ND	9.8	2.5	4.9
1,2-Diphenylhydrazine	ND	9.8	2.5	4.9
1,3-Dichlorobenzene	ND	9.8	2.5	4.9
1,4-Dichlorobenzene	ND	9.8	2.5	4.9
2,4,5-Trichlorophenol	ND	9.8	2.5	4.9
2,4,6-Trichlorophenol	ND	9.8	2.5	4.9
2,4-Dichlorophenol	ND	9.8	2.5	4.9
2,4-Dimethylphenol	ND	9.8	2.5	4.9
2,4-Dinitrophenol	ND	20	2.5	4.9
2,4-Dinitrotoluene	ND	9.8	2.5	4.9
2,6-Dinitrotoluene	ND	9.8	2.5	4.9
2-Chloronaphthalene	ND	9.8	2.5	4.9
2-Chlorophenol	ND	9.8	2.5	4.9
2-Methylnaphthalene	ND	9.8	2.5	4.9
2-Methylphenol	ND	9.8	2.5	4.9
2-Nitroaniline	ND	9.8	2.5	4.9
2-Nitrophenol	ND	9.8	2.5	4.9
3,3'-Dichlorobenzidine	ND	9.8	2.5	4.9
3/4-Methylphenol	ND	9.8	2.5	4.9
3-Nitroaniline	ND	9.8	2.5	4.9
4,6-Dinitro-2-methylphenol	ND	20	2.5	4.9
4-Bromophenyl phenyl ether	ND	9.8	2.5	4.9
4-Chloro-3-methylphenol	ND	9.8	2.5	4.9
4-Chloroaniline	ND	20	4.9	9.8
4-Chlorophenyl-phenyl ether	ND	9.8	2.5	4.9
4-Nitroaniline	ND	9.8	2.5	4.9
4-Nitrophenol	ND	20	2.5	4.9
Acenaphthene	ND	9.8	2.5	4.9
Acenaphthylene	ND	9.8	2.5	4.9
Anthracene	ND	9.8	2.5	4.9
Benzo(a)anthracene	ND	9.8	2.5	4.9
Benzo(a)pyrene	ND	9.8	2.5	4.9
Benzo(b)fluoranthene	ND	9.8	2.5	4.9
Benzo(g,h,i)perylene	ND	9.8	2.5	4.9
Benzo(k)fluoranthene	ND	9.8	2.5	4.9
Benzoic Acid	ND	98	20	39
Benzyl Alcohol	ND	9.8	2.5	4.9
bis(2-Chloroisopropyl) ether	ND	9.8	2.5	4.9
bis(2-Chloroethoxy)methane	ND	9.8	2.5	4.9
bis(2-Chloroethyl) ether	ND	9.8	2.5	4.9
bis(2-Ethylhexyl) phthalate	ND	20	4.9	9.8
Butylbenzylphthalate	ND	9.8	2.5	4.9
Carbazole	ND	9.8	2.5	4.9
Chrysene	ND	9.8	2.5	4.9
Dibenzo(a,h)anthracene	ND	9.8	2.5	4.9
Dibenzofuran	ND	9.8	2.5	4.9
Diethylphthalate	ND	9.8	2.5	4.9
Dimethylphthalate	ND	9.8	2.5	4.9
Di-n-butyl phthalate	ND	9.8	2.5	4.9
Di-n-octyl phthalate	ND	9.8	2.5	4.9
Fluoranthene	ND	9.8	2.5	4.9
Fluorene	ND	9.8	2.5	4.9
Hexachlorobenzene	ND	9.8	2.5	4.9
Hexachlorobutadiene	ND	9.8	2.5	4.9
Hexachloroethane	ND	9.8	2.5	4.9
Indeno(1,2,3-cd)pyrene	ND	9.8	2.5	4.9
Isophorone	ND	9.8	2.5	4.9
Naphthalene	ND	9.8	2.5	4.9
Nitrobenzene	ND	9.8	2.5	4.9
N-Nitrosodimethylamine	ND	9.8	2.5	4.9
n-Nitroso-di-n-propylamine	ND	9.8	2.5	4.9
n-Nitrosodiphenylamine	ND	9.8	2.5	4.9
Pentachlorophenol	ND	20	2.5	4.9
Phenanthrene	ND	9.8	2.5	4.9
Phenol	ND	9.8	2.5	4.9
Pyrene	ND	9.8	2.5	4.9
Hexachlorocyclopentadiene	ND	9.8	2.5	4.9
Benzidine	ND	39	9.8	20
2,3,4,6-Tetrachlorophenol	ND	9.8	2.5	4.9
2,6-Dichlorophenol	ND	9.8	2.5	4.9

SURROGATE PARAMETERS	RESULT	SPK AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	42.5	58.8	72	43-140
2-Fluorobiphenyl	14.9	19.6	76	44-119
2-Fluorophenol	23.3	58.8	40	19-119
Nitrobenzene-d5	12.1	19.6	62	44-120
Phenol-d5	34.2	58.8	58	40-130
Terphenyl-d14	18.5	19.6	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: RCJ025 DCC Ref: RDJ424

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1020ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 12:20
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: BGMW11042023	Date Analyzed:	04/28/23 20:40
Lab Samp ID:	23D225-07	Dilution Factor:	1
Lab File ID:	RDJ445	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ498	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4,5-Tetrachlorobenzene	ND	9.8	2.5	4.9

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1020ml	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:	04/19/23 12:20
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: BGMW11042023	Date Analyzed:	04/28/23 20:40
Lab Samp ID:	23D225-07	Dilution Factor:	1
Lab File ID:	RDJ445	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ025	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	20	4.9	9.8
Benzaldehyde	ND	20	4.9	9.8

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1020ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 13:00
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 17:30
Sample ID : TMW63042023	Date Analyzed: 04/28/23 20:58
Lab Samp ID: 23D225-08	Dilution Factor: 1
Lab File ID: RDJ446	Matrix: WATER
Ext Btch ID: 23SVD034W	% Moisture: NA
Calib. Ref.: RCJ011	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	22.5	64.8	35*	43-140
2-Fluorobiphenyl	9.43	21.6	44	44-119
2-Fluorophenol	11.7	64.8	18*	19-119
Nitrobenzene-d5	9.04	21.6	42*	44-120
Phenol-d5	18.8	64.8	29*	40-130
Terphenyl-d14	21.4	21.6	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: RCJ025 DCC Ref: RDJ424
* 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:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: TMW63042023	Date Analyzed:	04/28/23 20:58
Lab Samp ID:	23D225-08	Dilution Factor:	1
Lab File ID:	RDJ446	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: TMW63042023	Date Analyzed:	04/28/23 20:58
Lab Samp ID:	23D225-08	Dilution Factor:	1
Lab File ID:	RDJ446	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D225
Sample ID : QC19042023EB2
Lab Samp ID: 23D225-10
Lab File ID: RDJ447
Ext Btch ID: 23SVD034W
Calib. Ref.: RCJ011

Date Collected: 04/19/23 14:00
Date Received: 04/20/23
Date Extracted: 04/26/23 17:30
Date Analyzed: 04/28/23 21:17
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.1	12
1,2-Dichlorobenzene	ND	12	3.1	6.1
1,2-Diphenylhydrazine	ND	12	3.1	6.1
1,3-Dichlorobenzene	ND	12	3.1	6.1
1,4-Dichlorobenzene	ND	12	3.1	6.1
2,4,5-Trichlorophenol	ND	12	3.1	6.1
2,4,6-Trichlorophenol	ND	12	3.1	6.1
2,4-Dichlorophenol	ND	12	3.1	6.1
2,4-Dimethylphenol	ND	12	3.1	6.1
2,4-Dinitrophenol	ND	24	3.1	6.1
2,4-Dinitrotoluene	ND	12	3.1	6.1
2,6-Dinitrotoluene	ND	12	3.1	6.1
2-Chloronaphthalene	ND	12	3.1	6.1
2-Chlorophenol	ND	12	3.1	6.1
2-Methylnaphthalene	ND	12	3.1	6.1
2-Methylphenol	ND	12	3.1	6.1
2-Nitroaniline	ND	12	3.1	6.1
2-Nitrophenol	ND	12	3.1	6.1
3,3'-Dichlorobenzidine	ND	12	3.1	6.1
3/4-Methylphenol	ND	12	3.1	6.1
3-Nitroaniline	ND	12	3.1	6.1
4,6-Dinitro-2-methylphenol	ND	24	3.1	6.1
4-Bromophenyl phenyl ether	ND	12	3.1	6.1
4-Chloro-3-methylphenol	ND	12	3.1	6.1
4-Chloroaniline	ND	24	6.1	12
4-Chlorophenyl-phenyl ether	ND	12	3.1	6.1
4-Nitroaniline	ND	12	3.1	6.1
4-Nitrophenol	ND	24	3.1	6.1
Acenaphthene	ND	12	3.1	6.1
Acenaphthylene	ND	12	3.1	6.1
Anthracene	ND	12	3.1	6.1
Benzo(a)anthracene	ND	12	3.1	6.1
Benzo(a)pyrene	ND	12	3.1	6.1
Benzo(b)fluoranthene	ND	12	3.1	6.1
Benzo(g,h,i)perylene	ND	12	3.1	6.1
Benzo(k)fluoranthene	ND	12	3.1	6.1
Benzoic Acid	ND	120	24	49
Benzyl Alcohol	ND	12	3.1	6.1
bis(2-Chloroisopropyl) ether	ND	12	3.1	6.1
bis(2-Chloroethoxy)methane	ND	12	3.1	6.1
bis(2-Chloroethyl) ether	ND	12	3.1	6.1
bis(2-Ethylhexyl) phthalate	ND	24	6.1	12
Butylbenzylphthalate	ND	12	3.1	6.1
Carbazole	ND	12	3.1	6.1
Chrysene	ND	12	3.1	6.1
Dibenzo(a,h)anthracene	ND	12	3.1	6.1
Dibenzofuran	ND	12	3.1	6.1
Diethylphthalate	5.5J	12	3.1	6.1
Dimethylphthalate	ND	12	3.1	6.1
Di-n-butyl phthalate	ND	12	3.1	6.1
Di-n-octyl phthalate	ND	12	3.1	6.1
Fluoranthene	ND	12	3.1	6.1
Fluorene	ND	12	3.1	6.1
Hexachlorobenzene	ND	12	3.1	6.1
Hexachlorobutadiene	ND	12	3.1	6.1
Hexachloroethane	ND	12	3.1	6.1
Indeno(1,2,3-cd)pyrene	ND	12	3.1	6.1
Isophorone	ND	12	3.1	6.1
Naphthalene	ND	12	3.1	6.1
Nitrobenzene	ND	12	3.1	6.1
N-Nitrosodimethylamine	ND	12	3.1	6.1
n-Nitroso-di-n-propylamine	ND	12	3.1	6.1
n-Nitrosodiphenylamine	ND	12	3.1	6.1
Pentachlorophenol	ND	24	3.1	6.1
Phenanthrene	ND	12	3.1	6.1
Phenol	ND	12	3.1	6.1
Pyrene	ND	12	3.1	6.1
Hexachlorocyclopentadiene	ND	12	3.1	6.1
Benzidine	ND	49	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.1	6.1
2,6-Dichlorophenol	ND	12	3.1	6.1

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	50.5	73.2	69	43-140
2-Fluorobiphenyl	16.4	24.4	67	44-119
2-Fluorophenol	37.8	73.2	52	19-119
Nitrobenzene-d5	15.4	24.4	63	44-120
Phenol-d5	46.5	73.2	64	40-130
Terphenyl-d14	23.6	24.4	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: RCJ025 DCC Ref: RDJ424

Detection limits are reported relative to sample result significant figures.
Sample Amount : 820ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 14:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: QC19042023EB2	Date Analyzed:	04/28/23 21:17
Lab Samp ID:	23D225-10	Dilution Factor:	1
Lab File ID:	RDJ447	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	6.1

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	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:	04/19/23 14:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 17:30
Sample ID	: QC19042023EB2	Date Analyzed:	04/28/23 21:17
Lab Samp ID:	23D225-10	Dilution Factor:	1
Lab File ID:	RDJ447	Matrix:	WATER
Ext Btch ID:	23SVD034W	% Moisture:	NA
Calib. Ref.:	RCJ025	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.1	12
Benzaldehyde	ND	24	6.1	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	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#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

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

A total of six(6) water samples were received on 04/20/23 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. VG39D10B - 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. VG39D10L/VG39D10C 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 D225-08M/D225-08S. 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
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D225
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
LCS1W	VG39D10L	1	NA	04/20/2321:36	04/20/2321:36	ED19060A	ED19056A	23VG39D10	Lab Control Sample (LCS)
LCD1W	VG39D10C	1	NA	04/20/2322:12	04/20/2322:12	ED19061A	ED19056A	23VG39D10	LCS Duplicate
MBLK1W	VG39D10B	1	NA	04/20/2322:48	04/20/2322:48	ED19062A	ED19056A	23VG39D10	Method Blank
TMW50042023	D225-03	1	NA	04/20/2323:24	04/20/2323:24	ED19063A	ED19056A	23VG39D10	Field Sample
BGMW11042023	D225-07	1	NA	04/21/2300:00	04/21/2300:00	ED19064A	ED19056A	23VG39D10	Field Sample
TMW63042023	D225-08	1	NA	04/21/2300:37	04/21/2300:37	ED19065A	ED19056A	23VG39D10	Field Sample
TMW63042023MS	D225-08M	1	NA	04/21/2301:13	04/21/2301:13	ED19066A	ED19056A	23VG39D10	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	04/21/2301:49	04/21/2301:49	ED19067A	ED19056A	23VG39D10	MS Duplicate (MSD)
TMW08042023	D225-09	1	NA	04/21/2303:02	04/21/2303:02	ED19069A	ED19068A	23VG39D10	Field Sample
QC19042023EB2	D225-10	1	NA	04/21/2303:38	04/21/2303:38	ED19070A	ED19068A	23VG39D10	Field Sample
QC19042023TB03	D225-12	1	NA	04/21/2304:14	04/21/2304:14	ED19071A	ED19068A	23VG39D10	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:	04/19/23 08:40
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/20/23 23:24
Sample ID	: TMW50042023	Date Analyzed:	04/20/23 23:24
Lab Samp ID:	D225-03	Dilution Factor:	1
Lab File ID:	ED19063A	Matrix:	WATER
Ext Btch ID:	23VG39D10	% Moisture:	NA
Calib. Ref.:	ED19056A	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	32.8	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:	04/19/23 12:20
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/21/23 00:00
Sample ID	: BGMW11042023	Date Analyzed:	04/21/23 00:00
Lab Samp ID:	D225-07	Dilution Factor:	1
Lab File ID:	ED19064A	Matrix:	WATER
Ext Btch ID:	23VG39D10	% Moisture:	NA
Calib. Ref.:	ED19056A	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:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/21/23 00:37
Sample ID	: TMW63042023	Date Analyzed:	04/21/23 00:37
Lab Samp ID:	D225-08	Dilution Factor:	1
Lab File ID:	ED19065A	Matrix:	WATER
Ext Btch ID:	23VG39D10	% Moisture:	NA
Calib. Ref.:	ED19056A	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	32.2	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:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/21/23 03:02
Sample ID	: TMW08042023	Date Analyzed:	04/21/23 03:02
Lab Samp ID:	D225-09	Dilution Factor:	1
Lab File ID:	ED19069A	Matrix:	WATER
Ext Btch ID:	23VG39D10	% Moisture:	NA
Calib. Ref.:	ED19068A	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:	04/19/23 14:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/21/23 03:38
Sample ID	: QC19042023EB2	Date Analyzed:	04/21/23 03:38
Lab Samp ID:	D225-10	Dilution Factor:	1
Lab File ID:	ED19070A	Matrix:	WATER
Ext Btch ID:	23VG39D10	% Moisture:	NA
Calib. Ref.:	ED19068A	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	32.1	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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/21/23 04:14
Sample ID	: QC19042023TB03	Date Analyzed:	04/21/23 04:14
Lab Samp ID:	D225-12	Dilution Factor:	1
Lab File ID:	ED19071A	Matrix:	WATER
Ext Btch ID:	23VG39D10	% Moisture:	NA
Calib. Ref.:	ED19068A	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	33.4	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of five(5) water samples were received on 04/20/23 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. DSD031WB - 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. DSD031WL/DSD031WC 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 23D225-08M/23D225-08S. 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. : 23D225
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	DSD031WB	1	NA	04/26/2319:25	04/25/2313:15	LD26020A	LD26018A	23DSD031W	Method Blank
LCS1W	DSD031WL	1	NA	04/26/2319:44	04/25/2313:15	LD26021A	LD26018A	23DSD031W	Lab Control Sample (LCS)
LCD1W	DSD031WC	1	NA	04/26/2320:03	04/25/2313:15	LD26022A	LD26018A	23DSD031W	LCS Duplicate
TMW50042023	D225-03	1	NA	04/26/2318:11	04/25/2313:15	LD26016A	LD26003A	23DSD031W	Field Sample
BGMW11042023	D225-07	1	NA	04/26/2318:30	04/25/2313:15	LD26017A	LD26003A	23DSD031W	Field Sample
TMW63042023	D225-08	1	NA	04/26/2320:21	04/25/2313:15	LD26023A	LD26018A	23DSD031W	Field Sample
TMW63042023MS	D225-08M	1	NA	04/26/2320:40	04/25/2313:15	LD26024A	LD26018A	23DSD031W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	04/26/2320:58	04/25/2313:15	LD26025A	LD26018A	23DSD031W	MS Duplicate (MSD)
TMW08042023	D225-09	1	NA	04/26/2321:17	04/25/2313:15	LD26026A	LD26018A	23DSD031W	Field Sample
QC19042023EB2	D225-10	1	NA	04/26/2321:35	04/25/2313:15	LD26027A	LD26018A	23DSD031W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:40
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/25/23 13:15
Sample ID	: TMW50042023	Date Analyzed:	04/26/23 18:11
Lab Samp ID:	23D225-03	Dilution Factor:	1
Lab File ID:	LD26016A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26003A	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	0.814	1.02	80	60-130
Hexacosane	0.228	0.255	89	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:	04/19/23 12:20
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/25/23 13:15
Sample ID	: BGMW11042023	Date Analyzed:	04/26/23 18:30
Lab Samp ID:	23D225-07	Dilution Factor:	1
Lab File ID:	LD26017A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26003A	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	0.806	1.10	73	60-130
Hexacosane	0.247	0.275	90	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:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/25/23 13:15
Sample ID	: TMW63042023	Date Analyzed:	04/26/23 20:21
Lab Samp ID:	23D225-08	Dilution Factor:	1
Lab File ID:	LD26023A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26018A	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	0.875	1.09	80	60-130
Hexacosane	0.252	0.273	93	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:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/25/23 13:15
Sample ID	: TMW08042023	Date Analyzed:	04/26/23 21:17
Lab Samp ID:	23D225-09	Dilution Factor:	1
Lab File ID:	LD26026A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26018A	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	0.873	1.16	75	60-130
Hexacosane	0.270	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:	04/19/23 14:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/25/23 13:15
Sample ID	: QC19042023EB2	Date Analyzed:	04/26/23 21:35
Lab Samp ID:	23D225-10	Dilution Factor:	1
Lab File ID:	LD26027A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26018A	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	0.895	1.09	82	60-130
Hexacosane	0.264	0.273	97	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#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW3520C/8081B
PESTICIDES

A total of seven(7) water samples were received on 04/20/23 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. CPD032WB - 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) LCS was analyzed. CPD032WL - recovery for all analytes were within LCS QC 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. D225-08M/D225-08S - 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.
Project : USACE WINGATE

SDG NO. : 23D225
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	CPD032WB	1	NA	05/02/2317:08	04/26/2313:30	RE02015	RE02013	23CPD032W	Method Blank
LCS1W	CPD032WL	1	NA	05/02/2317:29	04/26/2313:30	RE02016	RE02013	23CPD032W	Lab Control Sample (LCS)
TMW30042023	D225-01	1	NA	05/02/2318:10	04/26/2313:30	RE02018	RE02013	23CPD032W	Field Sample
TMW50042023	D225-03	1	NA	05/02/2318:30	04/26/2313:30	RE02019	RE02013	23CPD032W	Field Sample
TMW31S042023	D225-06	1	NA	05/02/2318:51	04/26/2313:30	RE02020	RE02013	23CPD032W	Field Sample
BGMW11042023	D225-07	1	NA	05/02/2319:11	04/26/2313:30	RE02021	RE02013	23CPD032W	Field Sample
TMW63042023	D225-08	1	NA	05/02/2319:32	04/26/2313:30	RE02022	RE02013	23CPD032W	Field Sample
TMW63042023MS	D225-08M	1	NA	05/02/2319:52	04/26/2313:30	RE02023	RE02013	23CPD032W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	05/02/2320:13	04/26/2313:30	RE02024	RE02013	23CPD032W	MS Duplicate (MSD)
TMW08042023	D225-09	1	NA	05/02/2322:38	04/26/2313:30	RE02031	RE02027	23CPD032W	Field Sample
QC19042023EB2	D225-10	1	NA	05/02/2322:58	04/26/2313:30	RE02032	RE02027	23CPD032W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:00
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 13:30
Sample ID	: TMW30042023	Date Analyzed:	05/02/23 18:10
Lab Samp ID:	D225-01	Dilution Factor:	1
Lab File ID:	RE02018	Matrix:	WATER
Ext Btch ID:	23CPD032W	% Moisture:	NA
Calib. Ref.:	RE02013	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	(0.271) | 0.271	0.440	62	44-124
Decachlorobiphenyl	(0.332) | 0.317	0.440	75	30-135

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

Sample Amount	: 910ml	Final Volume	: 10ml
Prepared by	: POreto	Analyzed by	: EKim
Result Quantified	: First column | Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RE02014		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:40
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 13:30
Sample ID	: TMW50042023	Date Analyzed:	05/02/23 18:30
Lab Samp ID:	D225-03	Dilution Factor:	1
Lab File ID:	RE02019	Matrix:	WATER
Ext Btch ID:	23CPD032W	% Moisture:	NA
Calib. Ref.:	RE02013	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	0.268 | (0.280)	0.435	64	44-124
Decachlorobiphenyl	(0.323) | 0.311	0.435	74	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.:	RE02014		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:10
Project	: USACE WINGATE	Date Received:	04/20/23
Batch No.	: 23D225	Date Extracted:	04/26/23 13:30
Sample ID	: TMW31S042023	Date Analyzed:	05/02/23 18:51
Lab Samp ID:	D225-06	Dilution Factor:	1
Lab File ID:	RE02020	Matrix:	WATER
Ext Btch ID:	23CPD032W	% Moisture:	NA
Calib. Ref.:	RE02013	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	(0.251) | 0.248	0.400	63	44-124
Decachlorobiphenyl	(0.291) | 0.281	0.400	73	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.: RE02014

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 12:20
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 13:30
Sample ID : BGMW11042023	Date Analyzed: 05/02/23 19:11
Lab Samp ID: D225-07	Dilution Factor: 1
Lab File ID: RE02021	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02013	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	(0.275) | 0.273	0.444	62	44-124
Decachlorobiphenyl	(0.323) | 0.314	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 : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE02014

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 13:00
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 13:30
Sample ID : TMW63042023	Date Analyzed: 05/02/23 19:32
Lab Samp ID: D225-08	Dilution Factor: 1
Lab File ID: RE02022	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02013	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	0.255 | (0.256)	0.412	62	44-124
Decachlorobiphenyl	(0.283) | 0.273	0.412	69	30-135

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

Sample Amount : 970ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column | Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE02014

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 13:00
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 13:30
Sample ID : TMW08042023	Date Analyzed: 05/02/23 22:38
Lab Samp ID: D225-09	Dilution Factor: 1
Lab File ID: RE02031	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02027	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	(0.332) | 0.328	0.412	81	44-124
Decachlorobiphenyl	(0.307) | 0.299	0.412	74	30-135

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

Sample Amount : 970ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE02028

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 14:00
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 13:30
Sample ID : QC19042023EB2	Date Analyzed: 05/02/23 22:58
Lab Samp ID: D225-10	Dilution Factor: 1
Lab File ID: RE02032	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02027	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	0.248 | (0.251)	0.412	61	44-124
Decachlorobiphenyl	(0.298) | 0.287	0.412	72	30-135

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

Sample Amount : 970ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE02028

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW3520C/8082A
PCBS

A total of four(4) water samples were received on 04/20/23 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. CPD032WB - 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) LCS was analyzed. 60D032WL - recovery for all analytes were within LCS QC 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. D225-08M/D225-08S - 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. : 23D225
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	CPD032WB	1	NA	04/27/2313:43	04/26/2313:30	KD27004A	KD27002A	CPD032W	Method Blank
LCS1W	60D032WL	1	NA	04/27/2314:03	04/26/2313:30	KD27005A	KD27002A	CPD032W	Lab Control Sample (LCS)
TMW50042023	D225-03	1.09	NA	04/27/2314:23	04/26/2313:30	KD27006A	KD27002A	CPD032W	Field Sample
BGMW11042023	D225-07	1.11	NA	04/27/2314:43	04/26/2313:30	KD27007A	KD27002A	CPD032W	Field Sample
TMW63042023	D225-08	1.03	NA	04/27/2315:03	04/26/2313:30	KD27008A	KD27002A	CPD032W	Field Sample
QC19042023EB2	D225-10	1.03	NA	04/27/2316:03	04/26/2313:30	KD27011A	KD27002A	CPD032W	Field Sample
TMW63042023MS	D225-08M	1.11	NA	04/27/2315:23	04/26/2313:30	KD27009A	KD27002A	CPD032W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1.09	NA	04/27/2315:43	04/26/2313:30	KD27010A	KD27002A	CPD032W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 13:30
Sample ID: TMW50042023	Date Analyzed: 04/27/23 14:23
Lab Samp ID: D225-03	Dilution Factor: 1.09
Lab File ID: KD27006A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27002A	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	(0.5875)|0.5331	0.4360	(135)|122	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 13:30
Sample ID: BGMW11042023	Date Analyzed: 04/27/23 14:43
Lab Samp ID: D225-07	Dilution Factor: 1.11
Lab File ID: KD27007A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27002A	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	(0.5752)|0.5329	0.4440	(130)|120	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 13:30
Sample ID: TMW63042023	Date Analyzed: 04/27/23 15:03
Lab Samp ID: D225-08	Dilution Factor: 1.03
Lab File ID: KD27008A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27002A	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	(0.5558)|0.4836	0.4120	(135)|117	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/26/23 13:30
Sample ID: QC19042023EB2	Date Analyzed: 04/27/23 16:03
Lab Samp ID: D225-10	Dilution Factor: 1.03
Lab File ID: KD27011A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27002A	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	(0.5346)|0.4901	0.4120	(130)|119	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#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD 8151A
HERBICIDES

A total of four(4) water samples were received on 04/20/23 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. HED005WB - 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. HED005WL/HED005WC 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. D225-08M/D225-08S - 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. : 23D225
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	HED005WB	1	NA	04/25/2320:33	04/24/2311:00	WD25003A	WD25002A	HED005W	Method Blank
LCS1W	HED005WL	1	NA	04/25/2321:01	04/24/2311:00	WD25004A	WD25002A	HED005W	Lab Control Sample (LCS)
LCD1W	HED005WC	1	NA	04/25/2321:30	04/24/2311:00	WD25005A	WD25002A	HED005W	LCS Duplicate
TMW50042023	D225-03	1	NA	04/25/2321:58	04/24/2311:00	WD25006A	WD25002A	HED005W	Field Sample
BGMW11042023	D225-07	1	NA	04/25/2322:26	04/24/2311:00	WD25007A	WD25002A	HED005W	Field Sample
TMW63042023	D225-08	1	NA	04/25/2322:55	04/24/2311:00	WD25008A	WD25002A	HED005W	Field Sample
TMW63042023MS	D225-08M	1	NA	04/25/2323:23	04/24/2311:00	WD25009A	WD25002A	HED005W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	04/25/2323:51	04/24/2311:00	WD25010A	WD25002A	HED005W	MS Duplicate (MSD)
QC19042023EB2	D225-10	1	NA	04/26/2300:20	04/24/2311:00	WD25011A	WD25002A	HED005W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/24/23 11:00
Sample ID: TMW50042023	Date Analyzed: 04/25/23 21:58
Lab Samp ID: D225-03	Dilution Factor: 1
Lab File ID: WD25006A	Matrix : WATER
Ext Btch ID: HED005W	% Moisture : NA
Calib. Ref.: WD25002A	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) | 0.35J	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	8.876 | (9.728)	10.00	88.8 | (97.3)	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/24/23 11:00
Sample ID: BGMW11042023	Date Analyzed: 04/25/23 22:26
Lab Samp ID: D225-07	Dilution Factor: 1
Lab File ID: WD25007A	Matrix : WATER
Ext Btch ID: HED005W	% Moisture : NA
Calib. Ref.: WD25002A	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)|0.70J	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	7.481|(8.171)	10.00	74.8|(81.7)	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/24/23 11:00
Sample ID: TMW63042023	Date Analyzed: 04/25/23 22:55
Lab Samp ID: D225-08	Dilution Factor: 1
Lab File ID: WD25008A	Matrix : WATER
Ext Btch ID: HED005W	% Moisture : NA
Calib. Ref.: WD25002A	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) | 0.38J	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	8.370 | (8.945)	10.00	83.7 | (89.5)	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/24/23 11:00
Sample ID: QC19042023EB2	Date Analyzed: 04/26/23 00:20
Lab Samp ID: D225-10	Dilution Factor: 1
Lab File ID: WD25011A	Matrix : WATER
Ext Btch ID: HED005W	% Moisture : NA
Calib. Ref.: WD25002A	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)|0.76J	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	8.276|(8.561)	10.00	82.8|(85.6)	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#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW8330B
EXPLOSIVES

A total of nine(9) water samples were received on 04/20/23 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. EXD013WB - 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. EXD013WL/EXD013WC 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. D225-08M/D225-08S - 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 : 23D225

METHOD SW8330B
EXPLOSIVES

A total of nine(9) water samples were received on 04/20/23 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. EXD013WB - 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. 35D013WL/35D013WC 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 D225-08M/D225-08S. 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. : 23D225
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	EXD013WB	1	NA	05/22/2318:16	04/25/2311:00	XE22010A	XE22002A	EXD013W	Method Blank
LCS1W	EXD013WL	1	NA	05/22/2319:04	04/25/2311:00	XE22011A	XE22002A	EXD013W	Lab Control Sample (LCS)
LCD1W	EXD013WC	1	NA	05/22/2320:01	04/25/2311:00	XE22012A	XE22002A	EXD013W	LCS Duplicate
TMW30042023	D225-01	1	NA	05/23/2300:19	04/25/2311:00	XE22017A	XE22015A	EXD013W	Field Sample
TMW26042023	D225-02	1	NA	05/23/2301:16	04/25/2311:00	XE22018A	XE22015A	EXD013W	Field Sample
TMW50042023	D225-03	1	NA	05/23/2302:04	04/25/2311:00	XE22019A	XE22015A	EXD013W	Field Sample
SMW01042023	D225-04	1	NA	05/23/2303:00	04/25/2311:00	XE22020A	XE22015A	EXD013W	Field Sample
SMW01042023D	D225-05	1	NA	05/23/2303:49	04/25/2311:00	XE22021A	XE22015A	EXD013W	Field Sample
TMW31S042023	D225-06	1	NA	05/23/2304:45	04/25/2311:00	XE22022A	XE22015A	EXD013W	Field Sample
BGMW11042023	D225-07	1	NA	05/23/2305:34	04/25/2311:00	XE22023A	XE22015A	EXD013W	Field Sample
TMW63042023	D225-08	1	NA	05/23/2306:30	04/25/2311:00	XE22024A	XE22015A	EXD013W	Field Sample
TMW63042023MS	D225-08M	1	NA	05/23/2307:19	04/25/2311:00	XE22025A	XE22015A	EXD013W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	05/23/2308:15	04/25/2311:00	XE22026A	XE22015A	EXD013W	MS Duplicate (MSD)
QC19042023EB2	D225-10	1	NA	05/23/2312:34	04/25/2311:00	XE22031A	XE22027A	EXD013W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D225
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	EXD013WB	1	NA	05/22/2318:16	04/25/2311:00	XE22010A	XE22003A	EXD013W	Method Blank
LCS1W	35D013WL	1	NA	05/22/2320:49	04/25/2311:00	XE22013A	XE22003A	EXD013W	Lab Control Sample (LCS)
LCD1W	35D013WC	1	NA	05/22/2321:46	04/25/2311:00	XE22014A	XE22003A	EXD013W	LCS Duplicate
TMW30042023	D225-01	1	NA	05/23/2300:19	04/25/2311:00	XE22017A	XE22016A	EXD013W	Field Sample
TMW26042023	D225-02	1	NA	05/23/2301:16	04/25/2311:00	XE22018A	XE22016A	EXD013W	Field Sample
TMW50042023	D225-03	1	NA	05/23/2302:04	04/25/2311:00	XE22019A	XE22016A	EXD013W	Field Sample
SMW01042023	D225-04	1	NA	05/23/2303:00	04/25/2311:00	XE22020A	XE22016A	EXD013W	Field Sample
SMW01042023D	D225-05	1	NA	05/23/2303:49	04/25/2311:00	XE22021A	XE22016A	EXD013W	Field Sample
TMW31S042023	D225-06	1	NA	05/23/2304:45	04/25/2311:00	XE22022A	XE22016A	EXD013W	Field Sample
BGMW11042023	D225-07	1	NA	05/23/2305:34	04/25/2311:00	XE22023A	XE22016A	EXD013W	Field Sample
TMW63042023	D225-08	1	NA	05/23/2306:30	04/25/2311:00	XE22024A	XE22016A	EXD013W	Field Sample
TMW63042023MS	D225-08M	1	NA	05/23/2310:49	04/25/2311:00	XE22029A	XE22028A	EXD013W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	05/23/2311:45	04/25/2311:00	XE22030A	XE22028A	EXD013W	MS Duplicate (MSD)
QC19042023EB2	D225-10	1	NA	05/23/2312:34	04/25/2311:00	XE22031A	XE22028A	EXD013W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW30042023	Date Analyzed: 05/23/23 00:19
Lab Samp ID: D225-01	Dilution Factor: 1
Lab File ID: XE22017A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22015A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW30042023	Date Analyzed: 05/23/23 00:19
Lab Samp ID: D225-01	Dilution Factor: 1
Lab File ID: XE22017A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22016A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW26042023	Date Analyzed: 05/23/23 01:16
Lab Samp ID: D225-02	Dilution Factor: 1
Lab File ID: XE22018A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22015A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW26042023	Date Analyzed: 05/23/23 01:16
Lab Samp ID: D225-02	Dilution Factor: 1
Lab File ID: XE22018A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22016A	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.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW50042023	Date Analyzed: 05/23/23 02:04
Lab Samp ID: D225-03	Dilution Factor: 1
Lab File ID: XE22019A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22015A	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	3.38	4.000	84.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW50042023	Date Analyzed: 05/23/23 02:04
Lab Samp ID: D225-03	Dilution Factor: 1
Lab File ID: XE22019A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22016A	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	3.38	4.000	84.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: SMW01042023	Date Analyzed: 05/23/23 03:00
Lab Samp ID: D225-04	Dilution Factor: 1
Lab File ID: XE22020A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22015A	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	88.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: SMW01042023	Date Analyzed: 05/23/23 03:00
Lab Samp ID: D225-04	Dilution Factor: 1
Lab File ID: XE22020A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22016A	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	88.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: SMW01042023D	Date Analyzed: 05/23/23 03:49
Lab Samp ID: D225-05	Dilution Factor: 1
Lab File ID: XE22021A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22015A	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	96.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: SMW01042023D	Date Analyzed: 05/23/23 03:49
Lab Samp ID: D225-05	Dilution Factor: 1
Lab File ID: XE22021A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22016A	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	96.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW31S042023	Date Analyzed: 05/23/23 04:45
Lab Samp ID: D225-06	Dilution Factor: 1
Lab File ID: XE22022A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22015A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW31S042023	Date Analyzed: 05/23/23 04:45
Lab Samp ID: D225-06	Dilution Factor: 1
Lab File ID: XE22022A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22016A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: BGMW11042023	Date Analyzed: 05/23/23 05:34
Lab Samp ID: D225-07	Dilution Factor: 1
Lab File ID: XE22023A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22015A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: BGMW11042023	Date Analyzed: 05/23/23 05:34
Lab Samp ID: D225-07	Dilution Factor: 1
Lab File ID: XE22023A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22016A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW63042023	Date Analyzed: 05/23/23 06:30
Lab Samp ID: D225-08	Dilution Factor: 1
Lab File ID: XE22024A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22015A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: TMW63042023	Date Analyzed: 05/23/23 06:30
Lab Samp ID: D225-08	Dilution Factor: 1
Lab File ID: XE22024A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22016A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: QC19042023EB2	Date Analyzed: 05/23/23 12:34
Lab Samp ID: D225-10	Dilution Factor: 1
Lab File ID: XE22031A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22027A	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	89.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 11:00
Sample ID: QC19042023EB2	Date Analyzed: 05/23/23 12:34
Lab Samp ID: D225-10	Dilution Factor: 1
Lab File ID: XE22031A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22028A	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	89.0	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#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW8332
NITROGLYCERIN AND PETN

A total of nine(9) water samples were received on 04/20/23 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. EXD012WB - 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. EXD012WL/EXD012WC 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. D225-08M/D225-08S - 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. : 23D225
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	EXD012WB	1	NA	05/15/2321:18	04/25/2316:15	NE15056A	NE15053A	EXD012W	Method Blank
LCS1W	EXD012WL	1	NA	05/15/2321:27	04/25/2316:15	NE15057A	NE15053A	EXD012W	Lab Control Sample (LCS)
LCD1W	EXD012WC	1	NA	05/15/2321:36	04/25/2316:15	NE15058A	NE15053A	EXD012W	LCS Duplicate
TMW30042023	D225-01	1	NA	05/15/2321:45	04/25/2316:15	NE15059A	NE15053A	EXD012W	Field Sample
TMW26042023	D225-02	1	NA	05/15/2321:54	04/25/2316:15	NE15060A	NE15053A	EXD012W	Field Sample
TMW50042023	D225-03	1	NA	05/15/2322:03	04/25/2316:15	NE15061A	NE15053A	EXD012W	Field Sample
SMW01042023	D225-04	1	NA	05/15/2322:12	04/25/2316:15	NE15062A	NE15053A	EXD012W	Field Sample
SMW01042023D	D225-05	1	NA	05/15/2322:21	04/25/2316:15	NE15063A	NE15053A	EXD012W	Field Sample
TMW31S042023	D225-06	1	NA	05/15/2322:30	04/25/2316:15	NE15064A	NE15053A	EXD012W	Field Sample
BGMW11042023	D225-07	1	NA	05/15/2322:39	04/25/2316:15	NE15065A	NE15053A	EXD012W	Field Sample
TMW63042023	D225-08	1	NA	05/15/2322:48	04/25/2316:15	NE15066A	NE15053A	EXD012W	Field Sample
TMW63042023MS	D225-08M	1	NA	05/15/2323:07	04/25/2316:15	NE15068A	NE15067A	EXD012W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	05/15/2323:16	04/25/2316:15	NE15069A	NE15067A	EXD012W	MS Duplicate (MSD)
QC19042023EB2	D225-10	1	NA	05/15/2323:25	04/25/2316:15	NE15070A	NE15067A	EXD012W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: TMW30042023	Date Analyzed: 05/15/23 21:45
Lab Samp ID: D225-01	Dilution Factor: 1
Lab File ID: NE15059A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15053A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: TMW26042023	Date Analyzed: 05/15/23 21:54
Lab Samp ID: D225-02	Dilution Factor: 1
Lab File ID: NE15060A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15053A	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	519	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: TMW50042023	Date Analyzed: 05/15/23 22:03
Lab Samp ID: D225-03	Dilution Factor: 1
Lab File ID: NE15061A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15053A	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	515	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: SMW01042023	Date Analyzed: 05/15/23 22:12
Lab Samp ID: D225-04	Dilution Factor: 1
Lab File ID: NE15062A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15053A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: SMW01042023D	Date Analyzed: 05/15/23 22:21
Lab Samp ID: D225-05	Dilution Factor: 1
Lab File ID: NE15063A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15053A	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	521	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: TMW31S042023	Date Analyzed: 05/15/23 22:30
Lab Samp ID: D225-06	Dilution Factor: 1
Lab File ID: NE15064A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15053A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: BGMW11042023	Date Analyzed: 05/15/23 22:39
Lab Samp ID: D225-07	Dilution Factor: 1
Lab File ID: NE15065A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15053A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: TMW63042023	Date Analyzed: 05/15/23 22:48
Lab Samp ID: D225-08	Dilution Factor: 1
Lab File ID: NE15066A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15053A	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: 04/19/23
Project : USACE WINGATE	Date Received: 04/20/23
Batch No. : 23D225	Date Extracted: 04/25/23 16:15
Sample ID: QC19042023EB2	Date Analyzed: 05/15/23 23:25
Lab Samp ID: D225-10	Dilution Factor: 1
Lab File ID: NE15070A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15067A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW6020A
METALS BY ICP-MS

A total of eleven(11) water samples were received on 04/20/23 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. IME006WB - 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. IME006WL/IME006WC 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: D225-08M/D225-08S - Percent recovery for Sodium(226X) was not within MS/MSD QC limits. Percent recoveries for Calcium and Manganese 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. : 23D225
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	IME006WB	1	NA	06/28/2315:22	05/02/2312:05	H6F26070	H6F26068	IME006W	Method Blank
LCS1W	IME006WL	1	NA	06/28/2315:26	05/02/2312:05	H6F26071	H6F26068	IME006W	Lab Control Sample (LCS)
LCD1W	IME006WC	1	NA	06/28/2315:28	05/02/2312:05	H6F26072	H6F26068	IME006W	LCS Duplicate
QC19042023EB2	D225-10	1	NA	06/28/2315:31	05/02/2312:05	H6F26073	H6F26068	IME006W	Field Sample
TMW30042023	D225-01G	5	NA	06/28/2315:34	05/02/2312:05	H6F26074	H6F26068	IME006W	Diluted Sample
TMW26042023	D225-02G	5	NA	06/28/2315:37	05/02/2312:05	H6F26075	H6F26068	IME006W	Diluted Sample
TMW50042023	D225-03G	5	NA	06/28/2315:40	05/02/2312:05	H6F26076	H6F26068	IME006W	Diluted Sample
SMW01042023	D225-04G	5	NA	06/28/2315:43	05/02/2312:05	H6F26077	H6F26068	IME006W	Diluted Sample
SMW01042023D	D225-05G	5	NA	06/28/2315:46	05/02/2312:05	H6F26078	H6F26068	IME006W	Diluted Sample
TMW31S042023	D225-06G	5	NA	06/28/2315:49	05/02/2312:05	H6F26079	H6F26068	IME006W	Diluted Sample
BGMW11042023	D225-07G	5	NA	06/28/2316:01	05/02/2312:05	H6F26082	H6F26080	IME006W	Diluted Sample
TMW63042023	D225-08A	5	NA	06/28/2316:08	05/02/2312:05	H6F26083	H6F26080	IME006W	Analytical Spike Sample
TMW63042023	D225-08G	5	NA	06/28/2316:11	05/02/2312:05	H6F26084	H6F26080	IME006W	Diluted Sample
TMW63042023	D225-08J	25	NA	06/28/2316:13	05/02/2312:05	H6F26085	H6F26080	IME006W	Diluted Sample
TMW63042023MS	D225-08M	5	NA	06/28/2316:16	05/02/2312:05	H6F26086	H6F26080	IME006W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	5	NA	06/28/2316:19	05/02/2312:05	H6F26087	H6F26080	IME006W	MS Duplicate (MSD)
TMW08042023	D225-09K	20	NA	06/28/2316:22	05/02/2312:05	H6F26088	H6F26080	IME006W	Diluted Sample
TMW27042023	D225-11G	5	NA	06/28/2316:25	05/02/2312:05	H6F26089	H6F26080	IME006W	Diluted Sample
TMW30042023	D225-01T	50	NA	06/28/2316:28	05/02/2312:05	H6F26090	H6F26080	IME006W	Diluted Sample
TMW26042023	D225-02T	50	NA	06/28/2316:31	05/02/2312:05	H6F26091	H6F26080	IME006W	Diluted Sample
TMW50042023	D225-03T	50	NA	06/28/2316:40	05/02/2312:05	H6F26094	H6F26092	IME006W	Diluted Sample
SMW01042023	D225-04T	50	NA	06/28/2316:43	05/02/2312:05	H6F26095	H6F26092	IME006W	Diluted Sample
SMW01042023D	D225-05T	50	NA	06/28/2316:46	05/02/2312:05	H6F26096	H6F26092	IME006W	Diluted Sample
TMW31S042023	D225-06T	50	NA	06/28/2316:49	05/02/2312:05	H6F26097	H6F26092	IME006W	Diluted Sample
BGMW11042023	D225-07T	50	NA	06/28/2316:51	05/02/2312:05	H6F26098	H6F26092	IME006W	Diluted Sample
TMW63042023	D225-08A	50	NA	06/28/2316:54	05/02/2312:05	H6F26099	H6F26092	IME006W	Analytical Spike Sample
TMW63042023	D225-08T	50	NA	06/28/2316:57	05/02/2312:05	H6F26100	H6F26092	IME006W	Diluted Sample
TMW63042023	D225-08J	250	NA	06/28/2317:00	05/02/2312:05	H6F26101	H6F26092	IME006W	Diluted Sample
TMW63042023MS	D225-08M	50	NA	06/28/2317:03	05/02/2312:05	H6F26102	H6F26092	IME006W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	50	NA	06/28/2317:06	05/02/2312:05	H6F26103	H6F26092	IME006W	MS Duplicate (MSD)
TMW08042023	D225-09T	200	NA	06/28/2317:15	05/02/2312:05	H6F26106	H6F26104	IME006W	Diluted Sample
TMW27042023	D225-11T	50	NA	06/28/2317:18	05/02/2312:05	H6F26107	H6F26104	IME006W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW30042023
Lab Samp ID: D225-01G
Lab File ID: H6F26074
Ext Btch ID: IME006W
Calib. Ref.: H6F26068

Date Collected: 04/19/23 08:00
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 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	0.70J	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	61000	1000	250	500
Chromium	0.55J	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	2.1J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	770J	1000	250	500
Selenium	7.6	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	14	5.0	1.2	2.5
Zinc	48J	100	25	50

Sample ID: TMW30042023
Lab Samp ID: D225-01T
Lab File ID: H6F26090
Ext Btch ID: IME006W
Calib. Ref.: H6F26080

Date Analyzed: 06/28/23 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	460000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:00
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW30042023	Date Analyzed:	06/28/23 15:34
Lab Samp ID:	D225-01G	Dilution Factor:	5
Lab File ID:	H6F26074	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26068	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	10	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	0.55J	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	2.1J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	770J	1000	250	500
Selenium	7.6	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	14	5.0	1.2	2.5
Zinc	48J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:00
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW30042023	Date Analyzed:	06/28/23 16:28
Lab Samp ID:	D225-01T	Dilution Factor:	50
Lab File ID:	H6F26090	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26080	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	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	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	460000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	19J	50	12	25
Zinc	440J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:10
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW26042023	Date Analyzed:	06/28/23 15:37
Lab Samp ID:	D225-02G	Dilution Factor:	5
Lab File ID:	H6F26075	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26068	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	1.2J	5.0	0.62	1.2
Barium	21	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	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	7700	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	310J	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	4.3J	5.0	1.2	2.5
Zinc	76J	100	25	50

Sample ID:	TMW26042023	Date Analyzed:	06/28/23 16:31
Lab Samp ID:	D225-02T	Dilution Factor:	50
Lab File ID:	H6F26091	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26080	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	980000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 08:10
Project : USACE WINGATE	Date Received: 04/20/23
SDG NO. : 23D225	Date Extracted: 05/02/23 12:05
Sample ID: TMW26042023	Date Analyzed: 06/28/23 15:37
Lab Samp ID: D225-02G	Dilution Factor: 5
Lab File ID: H6F26075	Matrix: WATER
Ext Btch ID: IME006W	% Moisture: NA
Calib. Ref.: H6F26068	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	1.2J	5.0	0.62	1.2
Barium	21	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	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	7700	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	310J	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	4.3J	5.0	1.2	2.5
Zinc	76J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:10
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW26042023	Date Analyzed:	06/28/23 16:31
Lab Samp ID:	D225-02T	Dilution Factor:	50
Lab File ID:	H6F26091	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26080	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	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	7800	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	980000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	420J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW50042023
Lab Samp ID: D225-03G
Lab File ID: H6F26076
Ext Btch ID: IME006W
Calib. Ref.: H6F26068

Date Collected: 04/19/23 08:40
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 15:40
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.4J	5.0	0.62	1.2
Barium	73	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	7.6	5.0	0.50	1.0
Cobalt	2.1J	3.7	0.50	1.0
Copper	4.4J	10	2.5	5.0
Iron	1900	1000	120	250
Lead	1.3J	5.0	0.25	0.50
Magnesium	2000	500	100	250
Manganese	460	5.0	1.2	2.5
Nickel	2.9J	5.0	1.2	2.5
Potassium	960J	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	52	5.0	1.2	2.5
Zinc	62J	100	25	50

Sample ID: TMW50042023
Lab Samp ID: D225-03T
Lab File ID: H6F26094
Ext Btch ID: IME006W
Calib. Ref.: H6F26092

Date Analyzed: 06/28/23 16:40
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	540000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW50042023
Lab Samp ID: D225-03G
Lab File ID: H6F26076
Ext Btch ID: IME006W
Calib. Ref.: H6F26068

Date Collected: 04/19/23 08:40
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 15:40
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.4J	5.0	0.62	1.2
Barium	73	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	7.6	5.0	0.50	1.0
Cobalt	2.1J	3.7	0.50	1.0
Copper	4.4J	10	2.5	5.0
Iron	1900	1000	120	250
Lead	1.3J	5.0	0.25	0.50
Magnesium	2000	500	100	250
Manganese	460	5.0	1.2	2.5
Nickel	2.9J	5.0	1.2	2.5
Potassium	960J	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	52	5.0	1.2	2.5
Zinc	62J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:40
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW50042023	Date Analyzed:	06/28/23 16:40
Lab Samp ID:	D225-03T	Dilution Factor:	50
Lab File ID:	H6F26094	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26092	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3900J	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	15000	10000	2500	5000
Chromium	7.6J	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	2200J	5000	1000	2500
Manganese	500	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	54	50	12	25
Zinc	460J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: SMW01042023
Lab Samp ID: D225-04G
Lab File ID: H6F26077
Ext Btch ID: IME006W
Calib. Ref.: H6F26068

Date Collected: 04/19/23 09:00
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 15:43
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	2.7J	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	20000	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	6600	500	100	250
Manganese	270	5.0	1.2	2.5
Nickel	1.9J	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	6.1	5.0	1.2	2.5
Zinc	48J	100	25	50

Sample ID: SMW01042023
Lab Samp ID: D225-04T
Lab File ID: H6F26095
Ext Btch ID: IME006W
Calib. Ref.: H6F26092

Date Analyzed: 06/28/23 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	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: SMW01042023
Lab Samp ID: D225-04G
Lab File ID: H6F26077
Ext Btch ID: IME006W
Calib. Ref.: H6F26068

Date Collected: 04/19/23 09:00
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 15:43
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	2.7J	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	20000	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	6600	500	100	250
Manganese	270	5.0	1.2	2.5
Nickel	1.9J	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	6.1	5.0	1.2	2.5
Zinc	48J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 09:00
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	SMW01042023	Date Analyzed:	06/28/23 16:43
Lab Samp ID:	D225-04T	Dilution Factor:	50
Lab File ID:	H6F26095	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26092	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	37J	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	6800	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	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	420J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: SMW01042023D
Lab Samp ID: D225-05G
Lab File ID: H6F26078
Ext Btch ID: IME006W
Calib. Ref.: H6F26068

Date Collected: 04/19/23 09:05
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 15:46
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.6J	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	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	6600	500	100	250
Manganese	270	5.0	1.2	2.5
Nickel	1.9J	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	6.3	5.0	1.2	2.5
Zinc	47J	100	25	50

Sample ID: SMW01042023D
Lab Samp ID: D225-05T
Lab File ID: H6F26096
Ext Btch ID: IME006W
Calib. Ref.: H6F26092

Date Analyzed: 06/28/23 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	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 09:05
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	SMW01042023D	Date Analyzed:	06/28/23 15:46
Lab Samp ID:	D225-05G	Dilution Factor:	5
Lab File ID:	H6F26078	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26068	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	2.6J	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	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	6600	500	100	250
Manganese	270	5.0	1.2	2.5
Nickel	1.9J	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	6.3	5.0	1.2	2.5
Zinc	47J	100	25	50

Note: Detection 1imits are reported relative to sample result significant figures.

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 09:05
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	SMW01042023D	Date Analyzed:	06/28/23 16:46
Lab Samp ID:	D225-05T	Dilution Factor:	50
Lab File ID:	H6F26096	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26092	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	7800	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	19000	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	6900	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	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	420J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW31S042023
Lab Samp ID: D225-06G
Lab File ID: H6F26079
Ext Btch ID: IME006W
Calib. Ref.: H6F26068

Date Collected: 04/19/23 10:10
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 15:49
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	300J	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	120000	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	150J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	22000	500	100	250
Manganese	44	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	470J	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	3.2J	5.0	1.2	2.5
Zinc	60J	100	25	50

Sample ID: TMW31S042023
Lab Samp ID: D225-06T
Lab File ID: H6F26097
Ext Btch ID: IME006W
Calib. Ref.: H6F26092

Date Analyzed: 06/28/23 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	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 10:10
Project : USACE WINGATE	Date Received: 04/20/23
SDG NO. : 23D225	Date Extracted: 05/02/23 12:05
Sample ID: TMW31S042023	Date Analyzed: 06/28/23 15:49
Lab Samp ID: D225-06G	Dilution Factor: 5
Lab File ID: H6F26079	Matrix: WATER
Ext Btch ID: IME006W	% Moisture: NA
Calib. Ref.: H6F26068	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	300J	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	120000	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	150J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	22000	500	100	250
Manganese	44	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	470J	1000	250	500
Selenium	7.5	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	3.2J	5.0	1.2	2.5
Zinc	60J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:10
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW31S042023	Date Analyzed:	06/28/23 16:49
Lab Samp ID:	D225-06T	Dilution Factor:	50
Lab File ID:	H6F26097	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26092	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	19J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	120000	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	23000	5000	1000	2500
Manganese	120	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	640J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: BGMW11042023
Lab Samp ID: D225-07G
Lab File ID: H6F26082
Ext Btch ID: IME006W
Calib. Ref.: H6F26080

Date Collected: 04/19/23 12:20
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 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	12	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	0.62J	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	33000	500	100	250
Manganese	160	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	970J	1000	250	500
Selenium	0.88J	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	49J	100	25	50

Sample ID: BGMW11042023
Lab Samp ID: D225-07T
Lab File ID: H6F26098
Ext Btch ID: IME006W
Calib. Ref.: H6F26092

Date Analyzed: 06/28/23 16:51
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 12:20
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	BGMW11042023	Date Analyzed:	06/28/23 16:01
Lab Samp ID:	D225-07G	Dilution Factor:	5
Lab File ID:	H6F26082	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26080	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	12	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	0.62J	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	33000	500	100	250
Manganese	160	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	970J	1000	250	500
Selenium	0.88J	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	3.3J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 12:20
Project : USACE WINGATE	Date Received: 04/20/23
SDG NO. : 23D225	Date Extracted: 05/02/23 12:05
Sample ID: BGMW11042023	Date Analyzed: 06/28/23 16:51
Lab Samp ID: D225-07T	Dilution Factor: 50
Lab File ID: H6F26098	Matrix: WATER
Ext Btch ID: IME006W	% Moisture: NA
Calib. Ref.: H6F26092	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	80000	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	930	50	12	25
Nickel	ND	50	12	25
Potassium	3700J	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	450J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW63042023
Lab Samp ID: D225-08G
Lab File ID: H6F26084
Ext Btch ID: IME006W
Calib. Ref.: H6F26080

Date Collected: 04/19/23 13:00
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 16:11
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (µg/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	9600	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	30	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	820J	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	46J	100	25	50

Sample ID: TMW63042023
Lab Samp ID: D225-08T
Lab File ID: H6F26100
Ext Btch ID: IME006W
Calib. Ref.: H6F26092

Date Analyzed: 06/28/23 16:57
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	680000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW63042023	Date Analyzed:	06/28/23 16:11
Lab Samp ID:	D225-08G	Dilution Factor:	5
Lab File ID:	H6F26084	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26080	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	9600	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	30	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	820J	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	ND	5.0	1.2	2.5
Zinc	46J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW63042023
Lab Samp ID: D225-08T
Lab File ID: H6F26100
Ext Btch ID: IME006W
Calib. Ref.: H6F26092

Date Collected: 04/19/23 13:00
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 16:57
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	14J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	10000J	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	37J	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	440J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW08042023
Lab Samp ID: D225-09K
Lab File ID: H6F26088
Ext Btch ID: IME006W
Calib. Ref.: H6F26080

Date Collected: 04/19/23 13:00
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 16:22
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	5.7J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	550000	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	140000	2000	400	1000
Manganese	660	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	2100J	4000	1000	2000
Selenium	42	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	260J	400	100	200

Sample ID: TMW08042023
Lab Samp ID: D225-09T
Lab File ID: H6F26106
Ext Btch ID: IME006W
Calib. Ref.: H6F26104

Date Analyzed: 06/28/23 17:15
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	5100000	40000	10000	20000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 13:00
Project : USACE WINGATE	Date Received: 04/20/23
SDG NO. : 23D225	Date Extracted: 05/02/23 12:05
Sample ID: TMW08042023	Date Analyzed: 06/28/23 16:22
Lab Samp ID: D225-09K	Dilution Factor: 20
Lab File ID: H6F26088	Matrix: WATER
Ext Btch ID: IME006W	% Moisture: NA
Calib. Ref.: H6F26080	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	5.7J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	550000	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	140000	2000	400	1000
Manganese	660	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	2100J	4000	1000	2000
Selenium	42	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	5000000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	260J	400	100	200

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW08042023	Date Analyzed:	06/28/23 17:15
Lab Samp ID:	D225-09T	Dilution Factor:	200
Lab File ID:	H6F26106	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26104	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	550000	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	150000	20000	4000	10000
Manganese	760	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	55J	200	30	60
Silver	ND	200	20	40
Sodium	5100000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	ND	200	50	100
Zinc	2900J	4000	1000	2000

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 14:00
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID	: QC19042023EB2	Date Analyzed:	06/28/23 15:31
Lab Samp ID	: D225-10	Dilution Factor:	1
Lab File ID	: H6F26073	Matrix:	WATER
Ext Btch ID	: IME006W	% Moisture:	NA
Calib. Ref.	: H6F26068	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:20
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW27042023	Date Analyzed:	06/28/23 16:25
Lab Samp ID:	D225-11G	Dilution Factor:	5
Lab File ID:	H6F26089	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26080	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	570J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6700	500	100	250
Manganese	580	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	540J	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	56J	100	25	50

Sample ID:	TMW27042023	Date Analyzed:	06/28/23 17:18
Lab Samp ID:	D225-11T	Dilution Factor:	50
Lab File ID:	H6F26107	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26104	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW27042023
Lab Samp ID: D225-11G
Lab File ID: H6F26089
Ext Btch ID: IME006W
Calib. Ref.: H6F26080

Date Collected: 04/19/23 10:20
Date Received: 04/20/23
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 16:25
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	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	570J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6700	500	100	250
Manganese	580	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	540J	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	ND	5.0	1.2	2.5
Zinc	56J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:20
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	05/02/23 12:05
Sample ID:	TMW27042023	Date Analyzed:	06/28/23 17:18
Lab Samp ID:	D225-11T	Dilution Factor:	50
Lab File ID:	H6F26107	Matrix:	WATER
Ext Btch ID:	IME006W	% Moisture:	NA
Calib. Ref.:	H6F26104	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	23J	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	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	350000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	420J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: MBLK1W
Lab Samp ID: IME006WB
Lab File ID: H6F26070
Ext Btch ID: IME006W
Calib. Ref.: H6F26068

Date Collected: NA
Date Received: NA
Date Extracted: 05/02/23 12:05
Date Analyzed: 06/28/23 15:22
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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of eleven(11) water samples were received on 04/20/23 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. Manganese(0.43J <1/2 LOQ) was detected at trace level in IMD044WB. 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. IMD044WL/IMD044WC 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: D225-08M/D225-08S - Percent recoveries for Sodium(225X) and Zinc were not within MS/MSD QC limits. Percent recovery for Calcium 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
DISSOLVED METALS BY ICP-MS

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

SDG NO. : 23D225
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	IMD044WB	1	NA	06/28/2317:39	04/26/2312:35	H6F26110	H6F26108	IMD044W	Method Blank
LCS1W	IMD044WL	1	NA	06/28/2317:42	04/26/2312:35	H6F26111	H6F26108	IMD044W	Lab Control Sample (LCS)
LCD1W	IMD044WC	1	NA	06/28/2317:45	04/26/2312:35	H6F26112	H6F26108	IMD044W	LCS Duplicate
QC19042023EB2	D225-10	1	NA	06/28/2317:47	04/26/2312:35	H6F26113	H6F26108	IMD044W	Field Sample
TMW30042023	D225-01G	5	NA	06/28/2317:50	04/26/2312:35	H6F26114	H6F26108	IMD044W	Diluted Sample
TMW26042023	D225-02G	5	NA	06/28/2317:53	04/26/2312:35	H6F26115	H6F26108	IMD044W	Diluted Sample
TMW50042023	D225-03G	5	NA	06/28/2317:56	04/26/2312:35	H6F26116	H6F26108	IMD044W	Diluted Sample
SMW01042023	D225-04G	5	NA	06/28/2317:59	04/26/2312:35	H6F26117	H6F26108	IMD044W	Diluted Sample
SMW01042023D	D225-05G	5	NA	06/28/2318:02	04/26/2312:35	H6F26118	H6F26108	IMD044W	Diluted Sample
TMW31S042023	D225-06G	5	NA	06/28/2318:05	04/26/2312:35	H6F26119	H6F26108	IMD044W	Diluted Sample
BGMW11042023	D225-07G	5	NA	06/28/2318:15	04/26/2312:35	H6F26122	H6F26120	IMD044W	Diluted Sample
TMW63042023	D225-08A	5	NA	06/28/2318:18	04/26/2312:35	H6F26123	H6F26120	IMD044W	Analytical Spike Sample
TMW63042023	D225-08G	5	NA	06/28/2318:20	04/26/2312:35	H6F26124	H6F26120	IMD044W	Diluted Sample
TMW63042023	D225-08J	25	NA	06/28/2318:23	04/26/2312:35	H6F26125	H6F26120	IMD044W	Diluted Sample
TMW63042023MS	D225-08M	5	NA	06/28/2318:26	04/26/2312:35	H6F26126	H6F26120	IMD044W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	5	NA	06/28/2318:29	04/26/2312:35	H6F26127	H6F26120	IMD044W	MS Duplicate (MSD)
TMW08042023	D225-09K	20	NA	06/28/2318:32	04/26/2312:35	H6F26128	H6F26120	IMD044W	Diluted Sample
TMW27042023	D225-11G	5	NA	06/28/2318:35	04/26/2312:35	H6F26129	H6F26120	IMD044W	Diluted Sample
TMW30042023	D225-01T	50	NA	06/28/2318:38	04/26/2312:35	H6F26130	H6F26120	IMD044W	Diluted Sample
TMW26042023	D225-02T	50	NA	06/28/2318:41	04/26/2312:35	H6F26131	H6F26120	IMD044W	Diluted Sample
TMW50042023	D225-03T	50	NA	06/28/2318:50	04/26/2312:35	H6F26134	H6F26132	IMD044W	Diluted Sample
SMW01042023	D225-04T	50	NA	06/28/2318:53	04/26/2312:35	H6F26135	H6F26132	IMD044W	Diluted Sample
SMW01042023D	D225-05T	50	NA	06/28/2318:56	04/26/2312:35	H6F26136	H6F26132	IMD044W	Diluted Sample
TMW31S042023	D225-06T	50	NA	06/28/2318:58	04/26/2312:35	H6F26137	H6F26132	IMD044W	Diluted Sample
BGMW11042023	D225-07T	50	NA	06/28/2319:01	04/26/2312:35	H6F26138	H6F26132	IMD044W	Diluted Sample
TMW63042023	D225-08A	50	NA	06/28/2319:04	04/26/2312:35	H6F26139	H6F26132	IMD044W	Analytical Spike Sample
TMW63042023	D225-08T	50	NA	06/28/2319:07	04/26/2312:35	H6F26140	H6F26132	IMD044W	Diluted Sample
TMW63042023	D225-08J	250	NA	06/28/2319:10	04/26/2312:35	H6F26141	H6F26132	IMD044W	Diluted Sample
TMW63042023MS	D225-08M	50	NA	06/28/2319:13	04/26/2312:35	H6F26142	H6F26132	IMD044W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	50	NA	06/28/2319:16	04/26/2312:35	H6F26143	H6F26132	IMD044W	MS Duplicate (MSD)
TMW08042023	D225-09T	200	NA	06/28/2319:25	04/26/2312:35	H6F26146	H6F26144	IMD044W	Diluted Sample
TMW27042023	D225-11T	50	NA	06/28/2319:28	04/26/2312:35	H6F26147	H6F26144	IMD044W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW30042023
Lab Samp ID: D225-01G
Lab File ID: H6F26114
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 08:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 17:50
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	0.72J	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	61000	1000	250	500
Chromium	0.53J	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	2.6J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	760J	1000	250	500
Selenium	7.1	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	34J	100	25	50

Sample ID: TMW30042023
Lab Samp ID: D225-01T
Lab File ID: H6F26130
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Analyzed: 06/28/23 18:38
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	480000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW30042023
Lab Samp ID: D225-01G
Lab File ID: H6F26114
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 08:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 17:50
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	0.72J	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	61000	1000	250	500
Chromium	0.53J	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	2.6J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	760J	1000	250	500
Selenium	7.1	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	13	5.0	1.2	2.5
Zinc	34J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW30042023
Lab Samp ID: D225-01T
Lab File ID: H6F26130
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Collected: 04/19/23 08:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:38
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	ND	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	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	480000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	21J	50	12	25
Zinc	270J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW26042023
Lab Samp ID: D225-02G
Lab File ID: H6F26115
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 08:10
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 17:53
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	1.2J	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	20000	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	7600	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.5J	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	4.6J	5.0	1.2	2.5
Zinc	29J	100	25	50

Sample ID: TMW26042023
Lab Samp ID: D225-02T
Lab File ID: H6F26131
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Analyzed: 06/28/23 18:41
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	880000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW26042023
Lab Samp ID: D225-02G
Lab File ID: H6F26115
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 08:10
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 17:53
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	1.2J	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	20000	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	7600	500	100	250
Manganese	130	5.0	1.2	2.5
Nickel	1.5J	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	860000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.6J	5.0	1.2	2.5
Zinc	29J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 08:10
Project : USACE WINGATE	Date Received: 04/20/23
SDG NO. : 23D225	Date Extracted: 04/26/23 12:35
Sample ID: TMW26042023	Date Analyzed: 06/28/23 18:41
Lab Samp ID: D225-02T	Dilution Factor: 50
Lab File ID: H6F26131	Matrix: WATER
Ext Btch ID: IMD044W	% Moisture: NA
Calib. Ref.: H6F26120	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	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	7700	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	880000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	260J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:40
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	04/26/23 12:35
Sample ID:	TMW50042023	Date Analyzed:	06/28/23 17:56
Lab Samp ID:	D225-03G	Dilution Factor:	5
Lab File ID:	H6F26116	Matrix:	WATER
Ext Btch ID:	IMD044W	% Moisture:	NA
Calib. Ref.:	H6F26108	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	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	5400	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	580	500	100	250
Manganese	13	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	40	5.0	1.2	2.5
Zinc	29J	100	25	50

Sample ID:	TMW50042023	Date Analyzed:	06/28/23 18:50
Lab Samp ID:	D225-03T	Dilution Factor:	50
Lab File ID:	H6F26134	Matrix:	WATER
Ext Btch ID:	IMD044W	% Moisture:	NA
Calib. Ref.:	H6F26132	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	540000	10000	2500	5000

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 08:40
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	04/26/23 12:35
Sample ID:	TMW50042023	Date Analyzed:	06/28/23 17:56
Lab Samp ID:	D225-03G	Dilution Factor:	5
Lab File ID:	H6F26116	Matrix:	WATER
Ext Btch ID:	IMD044W	% Moisture:	NA
Calib. Ref.:	H6F26108	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	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	5400	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	580	500	100	250
Manganese	13	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	530000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	40	5.0	1.2	2.5
Zinc	29J	100	25	50

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW50042023
Lab Samp ID: D225-03T
Lab File ID: H6F26134
Ext Btch ID: IMD044W
Calib. Ref.: H6F26132

Date Collected: 04/19/23 08:40
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:50
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	17J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	5300J	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	20J	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	41J	50	12	25
Zinc	250J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 09:00
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	04/26/23 12:35
Sample ID:	SMW01042023	Date Analyzed:	06/28/23 17:59
Lab Samp ID:	D225-04G	Dilution Factor:	5
Lab File ID:	H6F26117	Matrix:	WATER
Ext Btch ID:	IMD044W	% Moisture:	NA
Calib. Ref.:	H6F26108	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	36	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	6600	500	100	250
Manganese	290	5.0	1.2	2.5
Nickel	2.2J	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	6.1	5.0	1.2	2.5
Zinc	30J	100	25	50

Sample ID:	SMW01042023	Date Analyzed:	06/28/23 18:53
Lab Samp ID:	D225-04T	Dilution Factor:	50
Lab File ID:	H6F26135	Matrix:	WATER
Ext Btch ID:	IMD044W	% Moisture:	NA
Calib. Ref.:	H6F26132	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: SMW01042023
Lab Samp ID: D225-04G
Lab File ID: H6F26117
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 09:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 17:59
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	2.3J	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	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	6600	500	100	250
Manganese	290	5.0	1.2	2.5
Nickel	2.2J	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	6.1	5.0	1.2	2.5
Zinc	30J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: SMW01042023
Lab Samp ID: D225-04T
Lab File ID: H6F26135
Ext Btch ID: IMD044W
Calib. Ref.: H6F26132

Date Collected: 04/19/23 09:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:53
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	35J	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	6600	5000	1000	2500
Manganese	300	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	260J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: SMW01042023D
Lab Samp ID: D225-05G
Lab File ID: H6F26118
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 09:05
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:02
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	2.4J	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	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	6400	500	100	250
Manganese	270	5.0	1.2	2.5
Nickel	1.9J	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	5.9	5.0	1.2	2.5
Zinc	29J	100	25	50

Sample ID: SMW01042023D
Lab Samp ID: D225-05T
Lab File ID: H6F26136
Ext Btch ID: IMD044W
Calib. Ref.: H6F26132

Date Analyzed: 06/28/23 18:56
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: SMW01042023D
Lab Samp ID: D225-05G
Lab File ID: H6F26118
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 09:05
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:02
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	2.4J	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	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	6400	500	100	250
Manganese	270	5.0	1.2	2.5
Nickel	1.9J	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	1000000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.9	5.0	1.2	2.5
Zinc	29J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: SMW01042023D
Lab Samp ID: D225-05T
Lab File ID: H6F26136
Ext Btch ID: IMD044W
Calib. Ref.: H6F26132

Date Collected: 04/19/23 09:05
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:56
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	35J	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	6600	5000	1000	2500
Manganese	290	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	250J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW31S042023
Lab Samp ID: D225-06G
Lab File ID: H6F26119
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 10:10
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:05
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	13	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	130000	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	21000	500	100	250
Manganese	9.6	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	7.2	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	42J	100	25	50

Sample ID: TMW31S042023
Lab Samp ID: D225-06T
Lab File ID: H6F26137
Ext Btch ID: IMD044W
Calib. Ref.: H6F26132

Date Analyzed: 06/28/23 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	560000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 10:10
Project : USACE WINGATE	Date Received: 04/20/23
SDG NO. : 23D225	Date Extracted: 04/26/23 12:35
Sample ID: TMW31S042023	Date Analyzed: 06/28/23 18:05
Lab Samp ID: D225-06G	Dilution Factor: 5
Lab File ID: H6F26119	Matrix: WATER
Ext Btch ID: IMD044W	% Moisture: NA
Calib. Ref.: H6F26108	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	130000	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	21000	500	100	250
Manganese	9.6	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	7.2	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	2.8J	5.0	1.2	2.5
Zinc	42J	100	25	50

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:10
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	04/26/23 12:35
Sample ID:	TMW31S042023	Date Analyzed:	06/28/23 18:58
Lab Samp ID:	D225-06T	Dilution Factor:	50
Lab File ID:	H6F26137	Matrix:	WATER
Ext Btch ID:	IMD044W	% Moisture:	NA
Calib. Ref.:	H6F26132	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	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	22000	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	560000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	260J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: BGMW11042023
Lab Samp ID: D225-07G
Lab File ID: H6F26122
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Collected: 04/19/23 12:20
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:15
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	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	83000	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	33000	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	800J	1000	250	500
Selenium	1.2J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.0J	5.0	1.2	2.5
Zinc	31J	100	25	50

Sample ID: BGMW11042023
Lab Samp ID: D225-07T
Lab File ID: H6F26138
Ext Btch ID: IMD044W
Calib. Ref.: H6F26132

Date Analyzed: 06/28/23 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	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: BGMW11042023
Lab Samp ID: D225-07G
Lab File ID: H6F26122
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Collected: 04/19/23 12:20
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:15
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	16	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	83000	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	33000	500	100	250
Manganese	150	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	800J	1000	250	500
Selenium	1.2J	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	3.0J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 12:20
Project : USACE WINGATE	Date Received: 04/20/23
SDG NO. : 23D225	Date Extracted: 04/26/23 12:35
Sample ID: BGMW11042023	Date Analyzed: 06/28/23 19:01
Lab Samp ID: D225-07T	Dilution Factor: 50
Lab File ID: H6F26138	Matrix: WATER
Ext Btch ID: IMD044W	% Moisture: NA
Calib. Ref.: H6F26132	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	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	34000	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	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	270J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW63042023
Lab Samp ID: D225-08G
Lab File ID: H6F26124
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Collected: 04/19/23 13:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 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	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	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	25	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	ND	5.0	1.2	2.5
Zinc	50J	100	25	50

Sample ID: TMW63042023
Lab Samp ID: D225-08T
Lab File ID: H6F26140
Ext Btch ID: IMD044W
Calib. Ref.: H6F26132

Date Analyzed: 06/28/23 19:07
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	680000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW63042023
Lab Samp ID: D225-08G
Lab File ID: H6F26124
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Collected: 04/19/23 13:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 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	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	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	25	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	670000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	50J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/19/23 13:00
Project : USACE WINGATE	Date Received: 04/20/23
SDG NO. : 23D225	Date Extracted: 04/26/23 12:35
Sample ID: TMW63042023	Date Analyzed: 06/28/23 19:07
Lab Samp ID: D225-08T	Dilution Factor: 50
Lab File ID: H6F26140	Matrix: WATER
Ext Btch ID: IMD044W	% Moisture: NA
Calib. Ref.: H6F26132	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	9400J	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	34J	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	260J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW08042023
Lab Samp ID: D225-09K
Lab File ID: H6F26128
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Collected: 04/19/23 13:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:32
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	7.5J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	410000	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	110000	2000	400	1000
Manganese	630	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	2100J	4000	1000	2000
Selenium	39	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	370J	400	100	200

Sample ID: TMW08042023
Lab Samp ID: D225-09T
Lab File ID: H6F26146
Ext Btch ID: IMD044W
Calib. Ref.: H6F26144

Date Analyzed: 06/28/23 19:25
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	4700000	40000	10000	20000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 13:00
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	04/26/23 12:35
Sample ID:	TMW08042023	Date Analyzed:	06/28/23 18:32
Lab Samp ID:	D225-09K	Dilution Factor:	20
Lab File ID:	H6F26128	Matrix:	WATER
Ext Btch ID:	IMD044W	% Moisture:	NA
Calib. Ref.:	H6F26120	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	7.5J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	410000	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	110000	2000	400	1000
Manganese	630	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	2100J	4000	1000	2000
Selenium	39	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	370J	400	100	200

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW08042023
Lab Samp ID: D225-09T
Lab File ID: H6F26146
Ext Btch ID: IMD044W
Calib. Ref.: H6F26144

Date Collected: 04/19/23 13:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 19:25
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
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	410000	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	110000	20000	4000	10000
Manganese	730	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	41J	200	30	60
Silver	ND	200	20	40
Sodium	4700000	40000	10000	20000
Thallium	ND	100	20	40
Vanadium	ND	200	50	100
Zinc	1300J	4000	1000	2000

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: QC19042023EB2
Lab Samp ID: D225-10
Lab File ID: H6F26113
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: 04/19/23 14:00
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 17:47
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	ND	1.0	0.12	0.25
Barium	0.46J	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	0.17J	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW27042023
Lab Samp ID: D225-11G
Lab File ID: H6F26129
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Collected: 04/19/23 10:20
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:35
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	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	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	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	ND	5.0	1.2	2.5
Zinc	39J	100	25	50

Sample ID: TMW27042023
Lab Samp ID: D225-11T
Lab File ID: H6F26147
Ext Btch ID: IMD044W
Calib. Ref.: H6F26144

Date Analyzed: 06/28/23 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	340000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: TMW27042023
Lab Samp ID: D225-11G
Lab File ID: H6F26129
Ext Btch ID: IMD044W
Calib. Ref.: H6F26120

Date Collected: 04/19/23 10:20
Date Received: 04/20/23
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 18:35
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	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	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	450J	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	ND	5.0	1.2	2.5
Zinc	39J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/19/23 10:20
Project	: USACE WINGATE	Date Received:	04/20/23
SDG NO.	: 23D225	Date Extracted:	04/26/23 12:35
Sample ID:	TMW27042023	Date Analyzed:	06/28/23 19:28
Lab Samp ID:	D225-11T	Dilution Factor:	50
Lab File ID:	H6F26147	Matrix:	WATER
Ext Btch ID:	IMD044W	% Moisture:	NA
Calib. Ref.:	H6F26144	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	23J	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	6500	5000	1000	2500
Manganese	570	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D225
Sample ID: MBLK1W
Lab Samp ID: IMD044WB
Lab File ID: H6F26110
Ext Btch ID: IMD044W
Calib. Ref.: H6F26108

Date Collected: NA
Date Received: NA
Date Extracted: 04/26/23 12:35
Date Analyzed: 06/28/23 17:39
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	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	0.43J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 04/20/23 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 HGE003WB. 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. HGE003WL/HGE003WC 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 D225-08M/D225-08S. 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
MERCURY BY COLD VAPOR

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

SDG NO. : 23D225
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	HGE003WB	1	NA	05/04/2317:44	05/04/2313:52	M47E004012	M47E004	23HGE003W	Method Blank
LCS1W	HGE003WL	1	NA	05/04/2317:46	05/04/2313:52	M47E004013	M47E004	23HGE003W	Lab Control Sample (LCS)
LCD1W	HGE003WC	1	NA	05/04/2317:48	05/04/2313:52	M47E004014	M47E004	23HGE003W	LCS Duplicate
TMW30042023	D225-01	1	NA	05/04/2317:49	05/04/2313:52	M47E004015	M47E004	23HGE003W	Field Sample
TMW26042023	D225-02	1	NA	05/04/2317:51	05/04/2313:52	M47E004016	M47E004	23HGE003W	Field Sample
TMW50042023	D225-03	1	NA	05/04/2317:53	05/04/2313:52	M47E004017	M47E004	23HGE003W	Field Sample
SMW01042023	D225-04	1	NA	05/04/2317:55	05/04/2313:52	M47E004018	M47E004	23HGE003W	Field Sample
SMW01042023D	D225-05	1	NA	05/04/2317:57	05/04/2313:52	M47E004019	M47E004	23HGE003W	Field Sample
TMW31S042023	D225-06	1	NA	05/04/2317:58	05/04/2313:52	M47E004020	M47E004	23HGE003W	Field Sample
BGMW11042023	D225-07	1	NA	05/04/2318:00	05/04/2313:52	M47E004021	M47E004	23HGE003W	Field Sample
TMW63042023MS	D225-08M	1	NA	05/04/2318:06	05/04/2313:52	M47E004024	M47E004	23HGE003W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	05/04/2318:08	05/04/2313:52	M47E004025	M47E004	23HGE003W	MS Duplicate (MSD)
TMW63042023	D225-08	1	NA	05/04/2318:12	05/04/2313:52	M47E004027	M47E004	23HGE003W	Field Sample
TMW08042023	D225-09	1	NA	05/04/2318:16	05/04/2313:52	M47E004029	M47E004	23HGE003W	Field Sample
QC19042023EB2	D225-10	1	NA	05/04/2318:18	05/04/2313:52	M47E004030	M47E004	23HGE003W	Field Sample
TMW27042023	D225-11	1	NA	05/04/2318:19	05/04/2313:52	M47E004031	M47E004	23HGE003W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225

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	HGE003WB	ND	1	NA	0.50	0.10	0.20	05/04/2317:44	05/04/2313:52	M47E004012	M47E004	23HGE003W	NA	NA
LCS1W	HGE003WL	2.5	1	NA	0.50	0.10	0.20	05/04/2317:46	05/04/2313:52	M47E004013	M47E004	23HGE003W	NA	NA
LCD1W	HGE003WC	2.6	1	NA	0.50	0.10	0.20	05/04/2317:48	05/04/2313:52	M47E004014	M47E004	23HGE003W	NA	NA
TMW30042023	D225-01	ND	1	NA	0.50	0.10	0.20	05/04/2317:49	05/04/2313:52	M47E004015	M47E004	23HGE003W	04/19/2308:00	04/20/23
TMW26042023	D225-02	ND	1	NA	0.50	0.10	0.20	05/04/2317:51	05/04/2313:52	M47E004016	M47E004	23HGE003W	04/19/2308:10	04/20/23
TMW50042023	D225-03	ND	1	NA	0.50	0.10	0.20	05/04/2317:53	05/04/2313:52	M47E004017	M47E004	23HGE003W	04/19/2308:40	04/20/23
SMW01042023	D225-04	0.17J	1	NA	0.50	0.10	0.20	05/04/2317:55	05/04/2313:52	M47E004018	M47E004	23HGE003W	04/19/2309:00	04/20/23
SMW01042023D	D225-05	0.20J	1	NA	0.50	0.10	0.20	05/04/2317:57	05/04/2313:52	M47E004019	M47E004	23HGE003W	04/19/2309:05	04/20/23
TMW31S042023	D225-06	ND	1	NA	0.50	0.10	0.20	05/04/2317:58	05/04/2313:52	M47E004020	M47E004	23HGE003W	04/19/2310:10	04/20/23
BGMW11042023	D225-07	ND	1	NA	0.50	0.10	0.20	05/04/2318:00	05/04/2313:52	M47E004021	M47E004	23HGE003W	04/19/2312:20	04/20/23
TMW63042023MS	D225-08M	2.4	1	NA	0.50	0.10	0.20	05/04/2318:06	05/04/2313:52	M47E004024	M47E004	23HGE003W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08S	2.6	1	NA	0.50	0.10	0.20	05/04/2318:08	05/04/2313:52	M47E004025	M47E004	23HGE003W	04/19/2313:00	04/20/23
TMW63042023	D225-08	ND	1	NA	0.50	0.10	0.20	05/04/2318:12	05/04/2313:52	M47E004027	M47E004	23HGE003W	04/19/2313:00	04/20/23
TMW08042023	D225-09	ND	1	NA	0.50	0.10	0.20	05/04/2318:16	05/04/2313:52	M47E004029	M47E004	23HGE003W	04/19/2313:00	04/20/23
QC19042023EB2	D225-10	0.11J	1	NA	0.50	0.10	0.20	05/04/2318:18	05/04/2313:52	M47E004030	M47E004	23HGE003W	04/19/2314:00	04/20/23
TMW27042023	D225-11	ND	1	NA	0.50	0.10	0.20	05/04/2318:19	05/04/2313:52	M47E004031	M47E004	23HGE003W	04/19/2310:20	04/20/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of eleven(11) water samples were received on 04/20/23 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 HGE004WB. 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. HGE004WL/HGE004WC 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 D225-08M/D225-08S. 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. : 23D225
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	HGE004WB	1	NA	05/04/2318:39	05/04/2314:36	M47E004042	M47E004	23HGE004W	Method Blank
LCS1W	HGE004WL	1	NA	05/04/2318:40	05/04/2314:36	M47E004043	M47E004	23HGE004W	Lab Control Sample (LCS)
LCD1W	HGE004WC	1	NA	05/04/2318:42	05/04/2314:36	M47E004044	M47E004	23HGE004W	LCS Duplicate
TMW30042023	D225-01	1	NA	05/04/2318:44	05/04/2314:36	M47E004045	M47E004	23HGE004W	Field Sample
TMW26042023	D225-02	1	NA	05/04/2318:49	05/04/2314:36	M47E004048	M47E004	23HGE004W	Field Sample
TMW50042023	D225-03	1	NA	05/04/2318:51	05/04/2314:36	M47E004049	M47E004	23HGE004W	Field Sample
SMW01042023	D225-04	1	NA	05/04/2318:53	05/04/2314:36	M47E004050	M47E004	23HGE004W	Field Sample
SMW01042023D	D225-05	1	NA	05/04/2318:56	05/04/2314:36	M47E004051	M47E004	23HGE004W	Field Sample
TMW31S042023	D225-06	1	NA	05/04/2318:57	05/04/2314:36	M47E004052	M47E004	23HGE004W	Field Sample
BGMW11042023	D225-07	1	NA	05/04/2318:59	05/04/2314:36	M47E004053	M47E004	23HGE004W	Field Sample
TMW63042023MS	D225-08M	1	NA	05/04/2319:01	05/04/2314:36	M47E004054	M47E004	23HGE004W	Matrix Spike Sample (MS)
TMW63042023MSD	D225-08S	1	NA	05/04/2319:02	05/04/2314:36	M47E004055	M47E004	23HGE004W	MS Duplicate (MSD)
TMW63042023	D225-08	1	NA	05/04/2319:06	05/04/2314:36	M47E004057	M47E004	23HGE004W	Field Sample
TMW08042023	D225-09	1	NA	05/04/2319:14	05/04/2314:36	M47E004061	M47E004	23HGE004W	Field Sample
QC19042023EB2	D225-10	1	NA	05/04/2319:16	05/04/2314:36	M47E004062	M47E004	23HGE004W	Field Sample
TMW27042023	D225-11	1	NA	05/04/2319:18	05/04/2314:36	M47E004063	M47E004	23HGE004W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225

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	HGE004WB	ND	1	NA	0.50	0.10	0.20	05/04/2318:39	05/04/2314:36	M47E004042	M47E004	23HGE004W	NA	NA
LCS1W	HGE004WL	2.6	1	NA	0.50	0.10	0.20	05/04/2318:40	05/04/2314:36	M47E004043	M47E004	23HGE004W	NA	NA
LCD1W	HGE004WC	2.4	1	NA	0.50	0.10	0.20	05/04/2318:42	05/04/2314:36	M47E004044	M47E004	23HGE004W	NA	NA
TMW30042023	D225-01	ND	1	NA	0.50	0.10	0.20	05/04/2318:44	05/04/2314:36	M47E004045	M47E004	23HGE004W	04/19/2308:00	04/20/23
TMW26042023	D225-02	ND	1	NA	0.50	0.10	0.20	05/04/2318:49	05/04/2314:36	M47E004048	M47E004	23HGE004W	04/19/2308:10	04/20/23
TMW50042023	D225-03	ND	1	NA	0.50	0.10	0.20	05/04/2318:51	05/04/2314:36	M47E004049	M47E004	23HGE004W	04/19/2308:40	04/20/23
SMW01042023	D225-04	ND	1	NA	0.50	0.10	0.20	05/04/2318:53	05/04/2314:36	M47E004050	M47E004	23HGE004W	04/19/2309:00	04/20/23
SMW01042023D	D225-05	ND	1	NA	0.50	0.10	0.20	05/04/2318:56	05/04/2314:36	M47E004051	M47E004	23HGE004W	04/19/2309:05	04/20/23
TMW31S042023	D225-06	ND	1	NA	0.50	0.10	0.20	05/04/2318:57	05/04/2314:36	M47E004052	M47E004	23HGE004W	04/19/2310:10	04/20/23
BGMW11042023	D225-07	ND	1	NA	0.50	0.10	0.20	05/04/2318:59	05/04/2314:36	M47E004053	M47E004	23HGE004W	04/19/2312:20	04/20/23
TMW63042023MS	D225-08M	2.6	1	NA	0.50	0.10	0.20	05/04/2319:01	05/04/2314:36	M47E004054	M47E004	23HGE004W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08S	2.5	1	NA	0.50	0.10	0.20	05/04/2319:02	05/04/2314:36	M47E004055	M47E004	23HGE004W	04/19/2313:00	04/20/23
TMW63042023	D225-08	ND	1	NA	0.50	0.10	0.20	05/04/2319:06	05/04/2314:36	M47E004057	M47E004	23HGE004W	04/19/2313:00	04/20/23
TMW08042023	D225-09	ND	1	NA	0.50	0.10	0.20	05/04/2319:14	05/04/2314:36	M47E004061	M47E004	23HGE004W	04/19/2313:00	04/20/23
QC19042023EB2	D225-10	ND	1	NA	0.50	0.10	0.20	05/04/2319:16	05/04/2314:36	M47E004062	M47E004	23HGE004W	04/19/2314:00	04/20/23
TMW27042023	D225-11	ND	1	NA	0.50	0.10	0.20	05/04/2319:18	05/04/2314:36	M47E004063	M47E004	23HGE004W	04/19/2310:20	04/20/23

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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23D225

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of eleven(11) water samples were received on 04/20/23 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. PLD011WB, PLE001WB and PLE002WB 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. PLD011WL/PLD011WC, PLE001WL/PLE001WC and PLE002WL/PLE002WC 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 D225-08M/D225-08S. 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.

Samples D225-02I, -04I, -05I, -07K 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. : 23D225

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	PLD011WB	ND	1	NA	0.20	0.050	0.10	04/28/2312:04	NA	23MD28007	MD28004	PLD011W	NA	NA
LCS1W	PLD011WL	0.20J	1	NA	0.20	0.050	0.10	04/28/2313:09	NA	23MD28008	MD28004	PLD011W	NA	NA
LCD1W	PLD011WC	0.18J	1	NA	0.20	0.050	0.10	04/28/2314:22	NA	23MD28009	MD28004	PLD011W	NA	NA
TMW50042023	D225-03	1.2	1	NA	0.20	0.050	0.10	04/28/2318:17	NA	23MD28021	MD28017	PLD011W	04/19/2308:40	04/20/23
TMW63042023	D225-08	ND	1	NA	0.20	0.050	0.10	04/28/2319:30	NA	23MD28026	MD28017	PLD011W	04/19/2313:00	04/20/23
TMW63042023MS	D225-08M	0.20J	1	NA	0.20	0.050	0.10	04/28/2319:45	NA	23MD28027	MD28017	PLD011W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08S	0.23	1	NA	0.20	0.050	0.10	04/28/2320:58	NA	23MD28029	MD28028	PLD011W	04/19/2313:00	04/20/23
TMW08042023	D225-09	ND	1	NA	0.20	0.050	0.10	04/28/2321:13	NA	23MD28030	MD28028	PLD011W	04/19/2313:00	04/20/23
QC19042023EB2	D225-10	ND	1	NA	0.20	0.050	0.10	04/28/2321:27	NA	23MD28031	MD28028	PLD011W	04/19/2314:00	04/20/23
TMW26042023	D225-02I	ND	5	NA	1.0	0.25	0.50	04/28/2322:11	NA	23MD28034	MD28028	PLD011W	04/19/2308:10	04/20/23
SMW01042023	D225-04I	ND	5	NA	1.0	0.25	0.50	04/28/2322:41	NA	23MD28036	MD28028	PLD011W	04/19/2309:00	04/20/23
SMW01042023D	D225-05I	ND	5	NA	1.0	0.25	0.50	04/28/2322:55	NA	23MD28037	MD28028	PLD011W	04/19/2309:05	04/20/23
TMW27042023	D225-11I	ND	5	NA	1.0	0.25	0.50	04/29/2301:51	NA	23MD28046	MD28039	PLD011W	04/19/2310:20	04/20/23
MBLK2W	PLE001WB	ND	1	NA	0.20	0.050	0.10	05/01/2311:35	NA	23ME01007	ME01004	PLE001W	NA	NA
LCS2W	PLE001WL	0.19J	1	NA	0.20	0.050	0.10	05/01/2311:50	NA	23ME01008	ME01004	PLE001W	NA	NA
LCD2W	PLE001WC	0.21	1	NA	0.20	0.050	0.10	05/01/2312:27	NA	23ME01009	ME01004	PLE001W	NA	NA
BGMW11042023	D225-07K	ND	20	NA	4.0	1.0	2.0	05/01/2318:12	NA	23ME01027	ME01017	PLE001W	04/19/2312:20	04/20/23
MBLK3W	PLE002WB	ND	1	NA	0.20	0.050	0.10	05/03/2311:50	NA	23ME03007	ME03004	PLE002W	NA	NA
LCS3W	PLE002WL	0.22	1	NA	0.20	0.050	0.10	05/03/2313:01	NA	23ME03008	ME03004	PLE002W	NA	NA
LCD3W	PLE002WC	0.22	1	NA	0.20	0.050	0.10	05/03/2313:16	NA	23ME03009	ME03004	PLE002W	NA	NA
TMW30042023	D225-01R	350	200	NA	40	10	20	05/03/2319:01	NA	23ME03025	ME03017	PLE002W	04/19/2308:00	04/20/23
TMW31S042023	D225-06R	600	200	NA	40	10	20	05/03/2319:31	NA	23ME03027	ME03017	PLE002W	04/19/2310:10	04/20/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD 9056A
BROMIDE

A total of ten(10) water samples were received on 04/20/23 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, two(2) method blanks were analyzed. ICD016WB and ICD018WB 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. ICD016WL/ICD016WC and ICD018WL/ICD018WC 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: D225-08M/D225-08S - Percent recovery for Bromide(0X) 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.

Sample D225-04I and D225-05I were reported at a 5X dilution factor due to high conductivity and brown color. Sample D225-07I and D225-09I were reported at a 2X and 5x dilution factor respectively due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD 9056A
CHLORIDE-CL

A total of ten(10) water samples were received on 04/20/23 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 ICD018WB. 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. ICD018WL/ICD018WC 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. Chloride-Cl was within MS QC limits in D225-08IM/D225-08IS. 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 : 23D225

METHOD 9056A
FLUORIDE

A total of ten(10) water samples were received on 04/20/23 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. ICD016WB and ICD018WB 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. ICD016WL/ICD016WC and ICD018WL/ICD018WC 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 D225-08M/D225-08S. 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 D225-04I and D225-05I were reported at a 5X dilution factor due to high conductivity and brown color. Sample D225-07I and D225-09I were reported at a 2X and 5x dilution factor respectively due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW9056A
NITRATE-N

A total of ten(10) water samples were received on 04/20/23 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, two(2) method blanks were analyzed. ICD016WB and ICD018WB 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. ICD016WL/ICD016WC and ICD018WL/ICD018WC 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 D225-08M/D225-08S. 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 D225-04I and D225-05I were reported at a 5X dilution factor due to high conductivity and brown color. Sample D225-07I and D225-09I were reported at a 2X and 5x dilution factor respectively due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD SW9056A
NITRITE-N

A total of ten(10) water samples were received on 04/20/23 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, two(2) method blanks were analyzed. ICD016WB and ICD018WB 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. ICD016WL/ICD016WC and ICD018WL/ICD018WC 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. Nitrite was within MS QC limits in D225-08M/D225-08S. 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 D225-04I and D225-05I were reported at a 5X dilution factor due to high conductivity and brown color. Sample D225-07I and D225-09I were reported at a 2X and 5x dilution factor respectively due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD 9056A
ORTHOPHOSPHATE-P

A total of ten(10) water samples were received on 04/20/23 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, two(2) method blanks were analyzed. ICD016WB and ICD018WB 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. ICD016WL/ICD016WC and ICD018WL/ICD018WC 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. Orthophosphate-P was within MS QC limits in D225-08M/D225-08S. 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 D225-04I and D225-05I were reported at a 5X dilution factor due to high conductivity and brown color. Sample D225-07I and D225-09I were reported at a 2X and 5x dilution factor respectively due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D225

METHOD 9056A
SULFATE

A total of ten(10) water samples were received on 04/20/23 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. ICD018WB and ICD022WB 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. ICD018WL/ICD018WC and ICD022WL/ICD022WC 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 D225-08JM/D225-08JS. 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. : 23D225

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	ICD016WB	ND	1	NA	0.5	0.13	0.25	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	0.96	1	NA	0.5	0.13	0.25	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	0.96	1	NA	0.5	0.13	0.25	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
TMW63042023	D225-08	0.39J	1	NA	0.5	0.13	0.25	04/20/2312:06	NA	AD16-82	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023DUP	D225-08D	0.39J	1	NA	0.5	0.13	0.25	04/20/2312:27	NA	AD16-83	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MS	D225-08M	1.2	1	NA	0.5	0.13	0.25	04/20/2312:47	NA	AD16-84	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08S	1.2	1	NA	0.5	0.13	0.25	04/20/2313:07	NA	AD16-85	AD16-80	ICD018W	04/19/2313:00	04/20/23
MBLK2W	ICD018WB	ND	1	NA	0.5	0.13	0.25	04/20/2314:44	NA	AD16-88	AD16-86	ICD018W	NA	NA
LCS2W	ICD018WL	1.0	1	NA	0.5	0.13	0.25	04/20/2315:04	NA	AD16-89	AD16-86	ICD018W	NA	NA
LCD2W	ICD018WC	1.0	1	NA	0.5	0.13	0.25	04/20/2315:25	NA	AD16-90	AD16-86	ICD018W	NA	NA
TMW30042023	D225-01	0.83	1	NA	0.5	0.13	0.25	04/20/2315:45	NA	AD16-91	AD16-86	ICD018W	04/19/2308:00	04/20/23
TMW26042023	D225-02	1.1	1	NA	0.5	0.13	0.25	04/20/2316:05	NA	AD16-92	AD16-86	ICD018W	04/19/2308:10	04/20/23
TMW50042023	D225-03	1.1	1	NA	0.5	0.13	0.25	04/20/2316:26	NA	AD16-93	AD16-86	ICD018W	04/19/2308:40	04/20/23
SMW01042023	D225-04I	1.1J	5	NA	2.5	0.65	1.2	04/20/2316:46	NA	AD16-94	AD16-86	ICD018W	04/19/2309:00	04/20/23
SMW01042023D	D225-05I	1.1J	5	NA	2.5	0.65	1.2	04/20/2317:06	NA	AD16-95	AD16-86	ICD018W	04/19/2309:05	04/20/23
TMW31S042023	D225-06	1.6	1	NA	0.5	0.13	0.25	04/20/2317:26	NA	AD16-96	AD16-86	ICD018W	04/19/2310:10	04/20/23
BGMW11042023	D225-07I	1.8	2	NA	1	0.26	0.5	04/20/2317:47	NA	AD16-97	AD16-86	ICD018W	04/19/2312:20	04/20/23
QC19042023EB2	D225-10	ND	1	NA	0.5	0.13	0.25	04/20/2318:48	NA	AD16-100	AD16-98	ICD018W	04/19/2314:00	04/20/23
TMW08042023	D225-09I	3.3	5	NA	2.5	0.65	1.2	04/20/2319:08	NA	AD16-101	AD16-98	ICD018W	04/19/2313:00	04/20/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225

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	ICD018WB	ND	1	NA	0.2	0.05	0.1	04/20/2314:44	NA	AD16-88	AD16-86	ICD018W	NA	NA
LCS1W	ICD018WL	1.9	1	NA	0.2	0.05	0.1	04/20/2315:04	NA	AD16-89	AD16-86	ICD018W	NA	NA
LCD1W	ICD018WC	1.9	1	NA	0.2	0.05	0.1	04/20/2315:25	NA	AD16-90	AD16-86	ICD018W	NA	NA
QC19042023EB2	D225-10	0.14J	1	NA	0.2	0.05	0.1	04/20/2318:48	NA	AD16-100	AD16-98	ICD018W	04/19/2314:00	04/20/23
TMW30042023	D225-01J	74	20	NA	4	1	2	04/20/2320:49	NA	AD16-106	AD16-104	ICD018W	04/19/2308:00	04/20/23
TMW26042023	D225-02I	260	40	NA	8	2	4	04/20/2321:30	NA	AD16-108	AD16-104	ICD018W	04/19/2308:10	04/20/23
TMW50042023	D225-03I	190	20	NA	4	1	2	04/20/2322:10	NA	AD16-110	AD16-104	ICD018W	04/19/2308:40	04/20/23
SMW01042023	D225-04J	660	100	NA	20	5	10	04/20/2322:51	NA	AD16-112	AD16-104	ICD018W	04/19/2309:00	04/20/23
SMW01042023D	D225-05J	670	100	NA	20	5	10	04/20/2323:11	NA	AD16-113	AD16-104	ICD018W	04/19/2309:05	04/20/23
TMW31S042023	D225-06J	180	20	NA	4	1	2	04/20/2323:32	NA	AD16-114	AD16-104	ICD018W	04/19/2310:10	04/20/23
BGMW11042023	D225-07K	390	200	NA	40	10	20	04/21/2301:13	NA	AD16-119	AD16-116	ICD018W	04/19/2312:20	04/20/23
TMW63042023	D225-08I	130	25	NA	5	1.2	2.5	04/21/2301:33	NA	AD16-120	AD16-116	ICD018W	04/19/2313:00	04/20/23
TMW63042023DUP	D225-08ID	130	25	NA	5	1.2	2.5	04/21/2301:54	NA	AD16-121	AD16-116	ICD018W	04/19/2313:00	04/20/23
TMW63042023MS	D225-08IM	180	25	NA	5	1.2	2.5	04/21/2302:14	NA	AD16-122	AD16-116	ICD018W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08IS	180	25	NA	5	1.2	2.5	04/21/2302:34	NA	AD16-123	AD16-116	ICD018W	04/19/2313:00	04/20/23
TMW08042023	D225-09J	1600	200	NA	40	10	20	04/21/2302:55	NA	AD16-124	AD16-116	ICD018W	04/19/2313:00	04/20/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225

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	ICD016WB	ND	1	NA	0.1	0.025	0.05	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	0.96	1	NA	0.1	0.025	0.05	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	0.96	1	NA	0.1	0.025	0.05	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
TMW63042023	D225-08	0.58	1	NA	0.1	0.025	0.05	04/20/2312:06	NA	AD16-82	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023DUP	D225-08D	0.58	1	NA	0.1	0.025	0.05	04/20/2312:27	NA	AD16-83	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MS	D225-08M	1.6	1	NA	0.1	0.025	0.05	04/20/2312:47	NA	AD16-84	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08S	1.6	1	NA	0.1	0.025	0.05	04/20/2313:07	NA	AD16-85	AD16-80	ICD018W	04/19/2313:00	04/20/23
MBLK2W	ICD018WB	ND	1	NA	0.1	0.025	0.05	04/20/2314:44	NA	AD16-88	AD16-86	ICD018W	NA	NA
LCS2W	ICD018WL	0.99	1	NA	0.1	0.025	0.05	04/20/2315:04	NA	AD16-89	AD16-86	ICD018W	NA	NA
LCD2W	ICD018WC	0.99	1	NA	0.1	0.025	0.05	04/20/2315:25	NA	AD16-90	AD16-86	ICD018W	NA	NA
TMW30042023	D225-01	0.43	1	NA	0.1	0.025	0.05	04/20/2315:45	NA	AD16-91	AD16-86	ICD018W	04/19/2308:00	04/20/23
TMW26042023	D225-02	2.0	1	NA	0.1	0.025	0.05	04/20/2316:05	NA	AD16-92	AD16-86	ICD018W	04/19/2308:10	04/20/23
TMW50042023	D225-03	0.47	1	NA	0.1	0.025	0.05	04/20/2316:26	NA	AD16-93	AD16-86	ICD018W	04/19/2308:40	04/20/23
SMW01042023	D225-04I	1.5	5	NA	0.5	0.12	0.25	04/20/2316:46	NA	AD16-94	AD16-86	ICD018W	04/19/2309:00	04/20/23
SMW01042023D	D225-05I	1.5	5	NA	0.5	0.12	0.25	04/20/2317:06	NA	AD16-95	AD16-86	ICD018W	04/19/2309:05	04/20/23
TMW31S042023	D225-06	0.39	1	NA	0.1	0.025	0.05	04/20/2317:26	NA	AD16-96	AD16-86	ICD018W	04/19/2310:10	04/20/23
BGMW11042023	D225-07I	1.6	2	NA	0.2	0.05	0.1	04/20/2317:47	NA	AD16-97	AD16-86	ICD018W	04/19/2312:20	04/20/23
QC19042023EB2	D225-10	ND	1	NA	0.1	0.025	0.05	04/20/2318:48	NA	AD16-100	AD16-98	ICD018W	04/19/2314:00	04/20/23
TMW08042023	D225-09I	0.73	5	NA	0.5	0.12	0.25	04/20/2319:08	NA	AD16-101	AD16-98	ICD018W	04/19/2313:00	04/20/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225

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	ICD016WB	ND	1	NA	0.1	0.03	0.06	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	1.0	1	NA	0.1	0.03	0.06	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	1.0	1	NA	0.1	0.03	0.06	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
TMW63042023	D225-08	ND	1	NA	0.1	0.03	0.06	04/20/2312:06	NA	AD16-82	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023DUP	D225-08D	ND	1	NA	0.1	0.03	0.06	04/20/2312:27	NA	AD16-83	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MS	D225-08M	1.0	1	NA	0.1	0.03	0.06	04/20/2312:47	NA	AD16-84	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08S	1.0	1	NA	0.1	0.03	0.06	04/20/2313:07	NA	AD16-85	AD16-80	ICD018W	04/19/2313:00	04/20/23
MBLK2W	ICD018WB	ND	1	NA	0.1	0.03	0.06	04/20/2314:44	NA	AD16-88	AD16-86	ICD018W	NA	NA
LCS2W	ICD018WL	1.0	1	NA	0.1	0.03	0.06	04/20/2315:04	NA	AD16-89	AD16-86	ICD018W	NA	NA
LCD2W	ICD018WC	1.0	1	NA	0.1	0.03	0.06	04/20/2315:25	NA	AD16-90	AD16-86	ICD018W	NA	NA
TMW26042023	D225-02	0.064J	1	NA	0.1	0.03	0.06	04/20/2316:05	NA	AD16-92	AD16-86	ICD018W	04/19/2308:10	04/20/23
TMW50042023	D225-03	0.13	1	NA	0.1	0.03	0.06	04/20/2316:26	NA	AD16-93	AD16-86	ICD018W	04/19/2308:40	04/20/23
SMW01042023	D225-04I	0.45J	5	NA	0.5	0.15	0.3	04/20/2316:46	NA	AD16-94	AD16-86	ICD018W	04/19/2309:00	04/20/23
SMW01042023D	D225-05I	ND	5	NA	0.5	0.15	0.3	04/20/2317:06	NA	AD16-95	AD16-86	ICD018W	04/19/2309:05	04/20/23
BGMW11042023	D225-07I	0.15J	2	NA	0.2	0.06	0.12	04/20/2317:47	NA	AD16-97	AD16-86	ICD018W	04/19/2312:20	04/20/23
QC19042023EB2	D225-10	0.074J	1	NA	0.1	0.03	0.06	04/20/2318:48	NA	AD16-100	AD16-98	ICD018W	04/19/2314:00	04/20/23
TMW08042023	D225-09I	5.5	5	NA	0.5	0.15	0.3	04/20/2319:08	NA	AD16-101	AD16-98	ICD018W	04/19/2313:00	04/20/23
TMW30042023	D225-01I	14	20	NA	2	0.6	1.2	04/20/2319:28	NA	AD16-102	AD16-98	ICD018W	04/19/2308:00	04/20/23
TMW31S042023	D225-06I	8.0	10	NA	1	0.3	0.6	04/20/2319:48	NA	AD16-103	AD16-98	ICD018W	04/19/2310:10	04/20/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225

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	ICD016WB	ND	1	NA	0.1	0.03	0.06	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	2.0	1	NA	0.1	0.03	0.06	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	2.0	1	NA	0.1	0.03	0.06	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
TMW63042023	D225-08	ND	1	NA	0.1	0.03	0.06	04/20/2312:06	NA	AD16-82	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023DUP	D225-08D	ND	1	NA	0.1	0.03	0.06	04/20/2312:27	NA	AD16-83	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MS	D225-08M	2.1	1	NA	0.1	0.03	0.06	04/20/2312:47	NA	AD16-84	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08S	2.1	1	NA	0.1	0.03	0.06	04/20/2313:07	NA	AD16-85	AD16-80	ICD018W	04/19/2313:00	04/20/23
MBLK2W	ICD018WB	ND	1	NA	0.1	0.03	0.06	04/20/2314:44	NA	AD16-88	AD16-86	ICD018W	NA	NA
LCS2W	ICD018WL	2.1	1	NA	0.1	0.03	0.06	04/20/2315:04	NA	AD16-89	AD16-86	ICD018W	NA	NA
LCD2W	ICD018WC	2.1	1	NA	0.1	0.03	0.06	04/20/2315:25	NA	AD16-90	AD16-86	ICD018W	NA	NA
TMW30042023	D225-01	ND	1	NA	0.1	0.03	0.06	04/20/2315:45	NA	AD16-91	AD16-86	ICD018W	04/19/2308:00	04/20/23
TMW26042023	D225-02	ND	1	NA	0.1	0.03	0.06	04/20/2316:05	NA	AD16-92	AD16-86	ICD018W	04/19/2308:10	04/20/23
TMW50042023	D225-03	ND	1	NA	0.1	0.03	0.06	04/20/2316:26	NA	AD16-93	AD16-86	ICD018W	04/19/2308:40	04/20/23
SMW01042023	D225-04I	ND	5	NA	0.5	0.15	0.3	04/20/2316:46	NA	AD16-94	AD16-86	ICD018W	04/19/2309:00	04/20/23
SMW01042023D	D225-05I	ND	5	NA	0.5	0.15	0.3	04/20/2317:06	NA	AD16-95	AD16-86	ICD018W	04/19/2309:05	04/20/23
TMW31S042023	D225-06	ND	1	NA	0.1	0.03	0.06	04/20/2317:26	NA	AD16-96	AD16-86	ICD018W	04/19/2310:10	04/20/23
BGMW11042023	D225-07I	ND	2	NA	0.2	0.06	0.12	04/20/2317:47	NA	AD16-97	AD16-86	ICD018W	04/19/2312:20	04/20/23
QC19042023EB2	D225-10	ND	1	NA	0.1	0.03	0.06	04/20/2318:48	NA	AD16-100	AD16-98	ICD018W	04/19/2314:00	04/20/23
TMW08042023	D225-09I	0.63	5	NA	0.5	0.15	0.3	04/20/2319:08	NA	AD16-101	AD16-98	ICD018W	04/19/2313:00	04/20/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225

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	ICD016WB	ND	1	NA	0.5	0.12	0.25	04/19/2309:15	NA	AD16-03	AD16-01	ICD016W	NA	NA
LCS1W	ICD016WL	1.9	1	NA	0.5	0.12	0.25	04/19/2309:35	NA	AD16-04	AD16-01	ICD016W	NA	NA
LCD1W	ICD016WC	1.9	1	NA	0.5	0.12	0.25	04/19/2309:55	NA	AD16-05	AD16-01	ICD016W	NA	NA
TMW63042023	D225-08	ND	1	NA	0.5	0.12	0.25	04/20/2312:06	NA	AD16-82	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023DUP	D225-08D	ND	1	NA	0.5	0.12	0.25	04/20/2312:27	NA	AD16-83	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MS	D225-08M	1.8	1	NA	0.5	0.12	0.25	04/20/2312:47	NA	AD16-84	AD16-80	ICD018W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08S	1.8	1	NA	0.5	0.12	0.25	04/20/2313:07	NA	AD16-85	AD16-80	ICD018W	04/19/2313:00	04/20/23
MBLK2W	ICD018WB	ND	1	NA	0.5	0.12	0.25	04/20/2314:44	NA	AD16-88	AD16-86	ICD018W	NA	NA
LCS2W	ICD018WL	1.9	1	NA	0.5	0.12	0.25	04/20/2315:04	NA	AD16-89	AD16-86	ICD018W	NA	NA
LCD2W	ICD018WC	1.9	1	NA	0.5	0.12	0.25	04/20/2315:25	NA	AD16-90	AD16-86	ICD018W	NA	NA
TMW30042023	D225-01	ND	1	NA	0.5	0.12	0.25	04/20/2315:45	NA	AD16-91	AD16-86	ICD018W	04/19/2308:00	04/20/23
TMW26042023	D225-02	ND	1	NA	0.5	0.12	0.25	04/20/2316:05	NA	AD16-92	AD16-86	ICD018W	04/19/2308:10	04/20/23
TMW50042023	D225-03	ND	1	NA	0.5	0.12	0.25	04/20/2316:26	NA	AD16-93	AD16-86	ICD018W	04/19/2308:40	04/20/23
SMW01042023	D225-04I	ND	5	NA	2.5	0.62	1.2	04/20/2316:46	NA	AD16-94	AD16-86	ICD018W	04/19/2309:00	04/20/23
SMW01042023D	D225-05I	ND	5	NA	2.5	0.62	1.2	04/20/2317:06	NA	AD16-95	AD16-86	ICD018W	04/19/2309:05	04/20/23
TMW31S042023	D225-06	ND	1	NA	0.5	0.12	0.25	04/20/2317:26	NA	AD16-96	AD16-86	ICD018W	04/19/2310:10	04/20/23
BGMW11042023	D225-07I	ND	2	NA	1	0.25	0.5	04/20/2317:47	NA	AD16-97	AD16-86	ICD018W	04/19/2312:20	04/20/23
QC19042023EB2	D225-10	ND	1	NA	0.5	0.12	0.25	04/20/2318:48	NA	AD16-100	AD16-98	ICD018W	04/19/2314:00	04/20/23
TMW08042023	D225-09I	ND	5	NA	2.5	0.62	1.2	04/20/2319:08	NA	AD16-101	AD16-98	ICD018W	04/19/2313:00	04/20/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D225

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	ICD018WB	ND	1	NA	0.5	0.13	0.25	04/20/2314:44	NA	AD16-88	AD16-86	ICD018W	NA	NA
LCS1W	ICD018WL	4.9	1	NA	0.5	0.13	0.25	04/20/2315:04	NA	AD16-89	AD16-86	ICD018W	NA	NA
LCD1W	ICD018WC	4.9	1	NA	0.5	0.13	0.25	04/20/2315:25	NA	AD16-90	AD16-86	ICD018W	NA	NA
QC19042023EB2	D225-10	0.18J	1	NA	0.5	0.13	0.25	04/20/2318:48	NA	AD16-100	AD16-98	ICD018W	04/19/2314:00	04/20/23
TMW30042023	D225-01K	580	100	NA	50	13	25	04/20/2321:10	NA	AD16-107	AD16-104	ICD018W	04/19/2308:00	04/20/23
TMW25042023	D225-02J	680	100	NA	50	13	25	04/20/2321:50	NA	AD16-109	AD16-104	ICD018W	04/19/2308:10	04/20/23
TMW50042023	D225-03J	520	100	NA	50	13	25	04/20/2322:31	NA	AD16-111	AD16-104	ICD018W	04/19/2308:40	04/20/23
SMW01042023	D225-04J	730	100	NA	50	13	25	04/20/2322:51	NA	AD16-112	AD16-104	ICD018W	04/19/2309:00	04/20/23
SMW01042023D	D225-05J	750	100	NA	50	13	25	04/20/2323:11	NA	AD16-113	AD16-104	ICD018W	04/19/2309:05	04/20/23
TMW31S042023	D225-06K	890	100	NA	50	13	25	04/20/2323:52	NA	AD16-115	AD16-104	ICD018W	04/19/2310:10	04/20/23
BGMW11042023	D225-07K	1400	200	NA	100	26	50	04/21/2301:13	NA	AD16-119	AD16-116	ICD018W	04/19/2312:20	04/20/23
TMW08042023	D225-09K	8900	1000	NA	500	130	250	04/21/2303:15	NA	AD16-125	AD16-116	ICD018W	04/19/2313:00	04/20/23
MBLK2W	ICD022WB	ND	1	NA	0.5	0.13	0.25	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS2W	ICD022WL	4.9	1	NA	0.5	0.13	0.25	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD2W	ICD022WC	4.9	1	NA	0.5	0.13	0.25	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
TMW63042023	D225-08J	980	100	NA	50	13	25	04/23/2305:59	NA	AD20-52	AD20-49	ICD022W	04/19/2313:00	04/20/23
TMW63042023DUP	D225-08JD	980	100	NA	50	13	25	04/23/2306:19	NA	AD20-53	AD20-49	ICD022W	04/19/2313:00	04/20/23
TMW63042023MS	D225-08JM	1500	100	NA	50	13	25	04/23/2306:40	NA	AD20-54	AD20-49	ICD022W	04/19/2313:00	04/20/23
TMW63042023MSD	D225-08JS	1500	100	NA	50	13	25	04/23/2307:00	NA	AD20-55	AD20-49	ICD022W	04/19/2313:00	04/20/23

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

Date: 05-26-2023
EMAX Batch No.: 23D249

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 04/21/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW18042023	D249-01	04/20/23	WATER	ANIONS BY IC
TMW39S042023	D249-02	04/20/23	WATER	ANIONS BY IC
BGMW08042023	D249-03	04/20/23	WATER	ANIONS BY IC
TMW01042023	D249-04	04/20/23	WATER	ANIONS BY IC
MW32042023	D249-05	04/20/23	WATER	ANIONS BY IC
MW03042023	D249-06	04/20/23	WATER	ANIONS BY IC
TMW10042023	D249-07	04/20/23	WATER	ANIONS BY IC
TMW10042023D	D249-08	04/20/23	WATER	ANIONS BY IC
QC20042023EB03	D249-09	04/20/23	WATER	ANIONS BY IC
TMW01042023MS	D249-04M	04/20/23	WATER	ANIONS BY IC
TMW01042023MSD	D249-04S	04/20/23	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,

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 CA002912022-24
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

WET CHEMICAL ANALYSES

SDG#: 23D249

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D249

METHOD 9056A
BROMIDE

A total of nine(9) water samples were received on 04/21/23 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 ICD020WB. 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. ICD020WL/ICD020WC 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 D249-04M/D249-04S. 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 D249-03I was reported at a 5X dilution factor due to high conductivity. Samples D249-07I and D249-08I 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 : 23D249

METHOD 9056A
CHLORIDE-CL

A total of nine(9) water samples were received on 04/21/23 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. ICD020WB and ICD024WB 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. ICD020WL/ICD020WC and ICD024WL/ICD024WC 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 D249-04JM/D249-04JS. 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 : 23D249

METHOD 9056A
FLUORIDE

A total of nine(9) water samples were received on 04/21/23 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 ICD020WB. 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. ICD020WL/ICD020WC 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 D249-04M/D249-04S. 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 D249-03I was reported at a 5X dilution factor due to high conductivity. Samples D249-07I and D249-08I 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 : 23D249

METHOD SW9056A
NITRATE-N

A total of nine(9) water samples were received on 04/21/23 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 ICD020WB. 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. ICD020WL/ICD020WC 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 D249-04IM/D249-04IS. 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 D249-03I was reported at a 5X dilution factor due to high conductivity. Samples D249-07I and D249-08I 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 : 23D249

METHOD SW9056A
NITRITE-N

A total of nine(9) water samples were received on 04/21/23 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 ICD020WB. 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. ICD020WL/ICD020WC 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 D249-04M/D249-04S. 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 D249-07I and D249-08I were reported at a 2X dilution factor due to high conductivity. Samples D249-05I and D249-06I were reported at a 2X dilution factor due to chloride interference. Sample D249-03J 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 : 23D249

METHOD 9056A
ORTHOPHOSPHATE-P

A total of nine(9) water samples were received on 04/21/23 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 ICD020WB. 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. ICD020WL/ICD020WC 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 D249-04M/D249-04S. 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 D249-03I was reported at a 5X dilution factor due to high conductivity. Samples D249-07I and D249-08I 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 : 23D249

METHOD 9056A
SULFATE

A total of nine(9) water samples were received on 04/21/23 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. ICD020WB and ICD022WB 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. ICD020WL/ICD020WC and ICD022WL/ICD022WC 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 D249-04KM/D249-04KS. 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. : 23D249

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	ICD020WB	ND	1	NA	0.5	0.13	0.25	04/21/2309:45	NA	AD18-03	AD18-01	ICD020W	NA	NA
LCS1W	ICD020WL	1.0	1	NA	0.5	0.13	0.25	04/21/2310:06	NA	AD18-04	AD18-01	ICD020W	NA	NA
LCD1W	ICD020WC	1.0	1	NA	0.5	0.13	0.25	04/21/2310:26	NA	AD18-05	AD18-01	ICD020W	NA	NA
TMW18042023	D249-01	0.29J	1	NA	0.5	0.13	0.25	04/21/2310:46	NA	AD18-06	AD18-01	ICD020W	04/20/2307:30	04/21/23
TMW39S042023	D249-02	2.1	1	NA	0.5	0.13	0.25	04/21/2311:06	NA	AD18-07	AD18-01	ICD020W	04/20/2307:30	04/21/23
BGMW08042023	D249-03I	3.9	5	NA	2.5	0.65	1.2	04/21/2311:27	NA	AD18-08	AD18-01	ICD020W	04/20/2307:40	04/21/23
MW32042023	D249-05	1.2	1	NA	0.5	0.13	0.25	04/21/2311:47	NA	AD18-09	AD18-01	ICD020W	04/20/2307:20	04/21/23
MW03042023	D249-06	0.68	1	NA	0.5	0.13	0.25	04/21/2312:07	NA	AD18-10	AD18-01	ICD020W	04/20/2309:50	04/21/23
TMW10042023	D249-07I	1.4	2	NA	1	0.26	0.5	04/21/2312:28	NA	AD18-11	AD18-01	ICD020W	04/20/2311:05	04/21/23
TMW10042023D	D249-08I	1.4	2	NA	1	0.26	0.5	04/21/2312:48	NA	AD18-12	AD18-01	ICD020W	04/20/2311:10	04/21/23
QC20042023EB03	D249-09	ND	1	NA	0.5	0.13	0.25	04/21/2313:49	NA	AD18-15	AD18-13	ICD020W	04/20/2314:00	04/21/23
TMW01042023	D249-04	1.9	1	NA	0.5	0.13	0.25	04/21/2314:09	NA	AD18-16	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023DUP	D249-04D	1.9	1	NA	0.5	0.13	0.25	04/21/2314:29	NA	AD18-17	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023MS	D249-04M	2.9	1	NA	0.5	0.13	0.25	04/21/2314:50	NA	AD18-18	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023MSD	D249-04S	2.9	1	NA	0.5	0.13	0.25	04/21/2315:10	NA	AD18-19	AD18-13	ICD020W	04/20/2308:20	04/21/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D249

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	ICD020WB	ND	1	NA	0.2	0.05	0.1	04/21/2309:45	NA	AD18-03	AD18-01	ICD020W	NA	NA
LCS1W	ICD020WL	1.9	1	NA	0.2	0.05	0.1	04/21/2310:06	NA	AD18-04	AD18-01	ICD020W	NA	NA
LCD1W	ICD020WC	1.9	1	NA	0.2	0.05	0.1	04/21/2310:26	NA	AD18-05	AD18-01	ICD020W	NA	NA
QC20042023EB03	D249-09	0.14J	1	NA	0.2	0.05	0.1	04/21/2313:49	NA	AD18-15	AD18-13	ICD020W	04/20/2314:00	04/21/23
TMW18042023	D249-01I	100	20	NA	4	1	2	04/21/2320:14	NA	AD18-34	AD18-32	ICD020W	04/20/2307:30	04/21/23
TMW39S042023	D249-02K	240	100	NA	20	5	10	04/21/2321:15	NA	AD18-37	AD18-32	ICD020W	04/20/2307:30	04/21/23
TMW01042023	D249-04J	200	40	NA	8	2	4	04/21/2322:16	NA	AD18-40	AD18-32	ICD020W	04/20/2308:20	04/21/23
TMW01042023DUP	D249-04JD	200	40	NA	8	2	4	04/21/2322:36	NA	AD18-41	AD18-32	ICD020W	04/20/2308:20	04/21/23
TMW01042023MS	D249-04JM	280	40	NA	8	2	4	04/21/2322:57	NA	AD18-42	AD18-32	ICD020W	04/20/2308:20	04/21/23
TMW01042023MSD	D249-04JS	280	40	NA	8	2	4	04/21/2323:17	NA	AD18-43	AD18-32	ICD020W	04/20/2308:20	04/21/23
MW32042023	D249-05K	270	40	NA	8	2	4	04/22/2300:18	NA	AD18-46	AD18-44	ICD020W	04/20/2307:20	04/21/23
MW03042023	D249-06K	370	40	NA	8	2	4	04/22/2300:58	NA	AD18-48	AD18-44	ICD020W	04/20/2309:50	04/21/23
TMW10042023	D249-07J	670	100	NA	20	5	10	04/22/2301:39	NA	AD18-50	AD18-44	ICD020W	04/20/2311:05	04/21/23
TMW10042023D	D249-08J	620	200	NA	40	10	20	04/22/2302:40	NA	AD18-53	AD18-44	ICD020W	04/20/2311:10	04/21/23
MBLK2W	ICD024WB	ND	1	NA	0.2	0.05	0.1	04/24/2315:01	NA	AD22-03	AD22-01	ICD024W	NA	NA
LCS2W	ICD024WL	1.9	1	NA	0.2	0.05	0.1	04/24/2315:22	NA	AD22-04	AD22-01	ICD024W	NA	NA
LCD2W	ICD024WC	1.9	1	NA	0.2	0.05	0.1	04/24/2315:42	NA	AD22-05	AD22-01	ICD024W	NA	NA
BGMW08042023	D249-03G	4900	1000	NA	200	50	100	04/24/2316:35	NA	AD22-06	AD22-01	ICD024W	04/20/2307:40	04/21/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D249

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	ICD020WB	ND	1	NA	0.1	0.025	0.05	04/21/2309:45	NA	AD18-03	AD18-01	ICD020W	NA	NA
LCS1W	ICD020WL	0.99	1	NA	0.1	0.025	0.05	04/21/2310:06	NA	AD18-04	AD18-01	ICD020W	NA	NA
LCD1W	ICD020WC	0.99	1	NA	0.1	0.025	0.05	04/21/2310:26	NA	AD18-05	AD18-01	ICD020W	NA	NA
TMW18042023	D249-01	2.0	1	NA	0.1	0.025	0.05	04/21/2310:46	NA	AD18-06	AD18-01	ICD020W	04/20/2307:30	04/21/23
TMW39S042023	D249-02	0.56	1	NA	0.1	0.025	0.05	04/21/2311:06	NA	AD18-07	AD18-01	ICD020W	04/20/2307:30	04/21/23
BGMW08042023	D249-03I	0.52	5	NA	0.5	0.12	0.25	04/21/2311:27	NA	AD18-08	AD18-01	ICD020W	04/20/2307:40	04/21/23
MW32042023	D249-05	0.35	1	NA	0.1	0.025	0.05	04/21/2311:47	NA	AD18-09	AD18-01	ICD020W	04/20/2307:20	04/21/23
MW03042023	D249-06	0.45	1	NA	0.1	0.025	0.05	04/21/2312:07	NA	AD18-10	AD18-01	ICD020W	04/20/2309:50	04/21/23
TMW10042023	D249-07I	0.88	2	NA	0.2	0.05	0.1	04/21/2312:28	NA	AD18-11	AD18-01	ICD020W	04/20/2311:05	04/21/23
TMW10042023D	D249-08I	0.87	2	NA	0.2	0.05	0.1	04/21/2312:48	NA	AD18-12	AD18-01	ICD020W	04/20/2311:10	04/21/23
QC20042023EB03	D249-09	0.057J	1	NA	0.1	0.025	0.05	04/21/2313:49	NA	AD18-15	AD18-13	ICD020W	04/20/2314:00	04/21/23
TMW01042023	D249-04	0.45	1	NA	0.1	0.025	0.05	04/21/2314:09	NA	AD18-16	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023DUP	D249-04D	0.46	1	NA	0.1	0.025	0.05	04/21/2314:29	NA	AD18-17	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023MS	D249-04M	1.5	1	NA	0.1	0.025	0.05	04/21/2314:50	NA	AD18-18	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023MSD	D249-04S	1.5	1	NA	0.1	0.025	0.05	04/21/2315:10	NA	AD18-19	AD18-13	ICD020W	04/20/2308:20	04/21/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D249

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	ICD020WB	ND	1	NA	0.1	0.03	0.06	04/21/2309:45	NA	AD18-03	AD18-01	ICD020W	NA	NA
LCS1W	ICD020WL	1.0	1	NA	0.1	0.03	0.06	04/21/2310:06	NA	AD18-04	AD18-01	ICD020W	NA	NA
LCD1W	ICD020WC	1.0	1	NA	0.1	0.03	0.06	04/21/2310:26	NA	AD18-05	AD18-01	ICD020W	NA	NA
TMW18042023	D249-01	0.064J	1	NA	0.1	0.03	0.06	04/21/2310:46	NA	AD18-06	AD18-01	ICD020W	04/20/2307:30	04/21/23
BGMW08042023	D249-03I	0.65	5	NA	0.5	0.15	0.3	04/21/2311:27	NA	AD18-08	AD18-01	ICD020W	04/20/2307:40	04/21/23
TMW10042023	D249-07I	0.16J	2	NA	0.2	0.06	0.12	04/21/2312:28	NA	AD18-11	AD18-01	ICD020W	04/20/2311:05	04/21/23
TMW10042023D	D249-08I	0.15J	2	NA	0.2	0.06	0.12	04/21/2312:48	NA	AD18-12	AD18-01	ICD020W	04/20/2311:10	04/21/23
QC20042023EB03	D249-09	ND	1	NA	0.1	0.03	0.06	04/21/2313:49	NA	AD18-15	AD18-13	ICD020W	04/20/2314:00	04/21/23
TMW39S042023	D249-02I	9.1	10	NA	1	0.3	0.6	04/21/2315:30	NA	AD18-20	AD18-13	ICD020W	04/20/2307:30	04/21/23
MW32042023	D249-05J	71	50	NA	5	1.5	3	04/21/2316:31	NA	AD18-23	AD18-13	ICD020W	04/20/2307:20	04/21/23
MW03042023	D249-06J	8.4	10	NA	1	0.3	0.6	04/21/2317:52	NA	AD18-27	AD18-24	ICD020W	04/20/2309:50	04/21/23
TMW01042023	D249-04I	10	20	NA	2	0.6	1.2	04/21/2318:13	NA	AD18-28	AD18-24	ICD020W	04/20/2308:20	04/21/23
TMW01042023DUP	D249-04ID	10	20	NA	2	0.6	1.2	04/21/2318:33	NA	AD18-29	AD18-24	ICD020W	04/20/2308:20	04/21/23
TMW01042023MS	D249-04IM	32	20	NA	2	0.6	1.2	04/21/2318:53	NA	AD18-30	AD18-24	ICD020W	04/20/2308:20	04/21/23
TMW01042023MSD	D249-04IS	32	20	NA	2	0.6	1.2	04/21/2319:13	NA	AD18-31	AD18-24	ICD020W	04/20/2308:20	04/21/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D249

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	ICD020WB	ND	1	NA	0.1	0.03	0.06	04/21/2309:45	NA	AD18-03	AD18-01	ICD020W	NA	NA
LCS1W	ICD020WL	2.1	1	NA	0.1	0.03	0.06	04/21/2310:06	NA	AD18-04	AD18-01	ICD020W	NA	NA
LCD1W	ICD020WC	2.1	1	NA	0.1	0.03	0.06	04/21/2310:26	NA	AD18-05	AD18-01	ICD020W	NA	NA
TMW18042023	D249-01	ND	1	NA	0.1	0.03	0.06	04/21/2310:46	NA	AD18-06	AD18-01	ICD020W	04/20/2307:30	04/21/23
TMW39S042023	D249-02	ND	1	NA	0.1	0.03	0.06	04/21/2311:06	NA	AD18-07	AD18-01	ICD020W	04/20/2307:30	04/21/23
TMW10042023	D249-07I	ND	2	NA	0.2	0.06	0.12	04/21/2312:28	NA	AD18-11	AD18-01	ICD020W	04/20/2311:05	04/21/23
TMW10042023D	D249-08I	ND	2	NA	0.2	0.06	0.12	04/21/2312:48	NA	AD18-12	AD18-01	ICD020W	04/20/2311:10	04/21/23
QC20042023EB03	D249-09	ND	1	NA	0.1	0.03	0.06	04/21/2313:49	NA	AD18-15	AD18-13	ICD020W	04/20/2314:00	04/21/23
TMW01042023	D249-04	ND	1	NA	0.1	0.03	0.06	04/21/2314:09	NA	AD18-16	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023DUP	D249-04D	ND	1	NA	0.1	0.03	0.06	04/21/2314:29	NA	AD18-17	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023MS	D249-04M	2.0	1	NA	0.1	0.03	0.06	04/21/2314:50	NA	AD18-18	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023MSD	D249-04S	2.0	1	NA	0.1	0.03	0.06	04/21/2315:10	NA	AD18-19	AD18-13	ICD020W	04/20/2308:20	04/21/23
BGMW08042023	D249-03J	ND	10	NA	1	0.3	0.6	04/21/2315:50	NA	AD18-21	AD18-13	ICD020W	04/20/2307:40	04/21/23
MW32042023	D249-05I	ND	2	NA	0.2	0.06	0.12	04/21/2316:11	NA	AD18-22	AD18-13	ICD020W	04/20/2307:20	04/21/23
MW03042023	D249-06I	ND	2	NA	0.2	0.06	0.12	04/21/2317:32	NA	AD18-26	AD18-24	ICD020W	04/20/2309:50	04/21/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D249
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	ICD020WB	ND	1	NA	0.5	0.12	0.25	04/21/2309:45	NA	AD18-03	AD18-01	ICD020W	NA	NA
LCS1W	ICD020WL	1.9	1	NA	0.5	0.12	0.25	04/21/2310:06	NA	AD18-04	AD18-01	ICD020W	NA	NA
LCD1W	ICD020WC	1.9	1	NA	0.5	0.12	0.25	04/21/2310:26	NA	AD18-05	AD18-01	ICD020W	NA	NA
TMW18042023	D249-01	ND	1	NA	0.5	0.12	0.25	04/21/2310:46	NA	AD18-06	AD18-01	ICD020W	04/20/2307:30	04/21/23
TMW39S042023	D249-02	ND	1	NA	0.5	0.12	0.25	04/21/2311:06	NA	AD18-07	AD18-01	ICD020W	04/20/2307:30	04/21/23
BGMW08042023	D249-03I	ND	5	NA	2.5	0.62	1.2	04/21/2311:27	NA	AD18-08	AD18-01	ICD020W	04/20/2307:40	04/21/23
MW32042023	D249-05	ND	1	NA	0.5	0.12	0.25	04/21/2311:47	NA	AD18-09	AD18-01	ICD020W	04/20/2307:20	04/21/23
MW03042023	D249-06	ND	1	NA	0.5	0.12	0.25	04/21/2312:07	NA	AD18-10	AD18-01	ICD020W	04/20/2309:50	04/21/23
TMW10042023	D249-07I	ND	2	NA	1	0.25	0.5	04/21/2312:28	NA	AD18-11	AD18-01	ICD020W	04/20/2311:05	04/21/23
TMW10042023D	D249-08I	ND	2	NA	1	0.25	0.5	04/21/2312:48	NA	AD18-12	AD18-01	ICD020W	04/20/2311:10	04/21/23
QC20042023EB03	D249-09	ND	1	NA	0.5	0.12	0.25	04/21/2313:49	NA	AD18-15	AD18-13	ICD020W	04/20/2314:00	04/21/23
TMW01042023	D249-04	ND	1	NA	0.5	0.12	0.25	04/21/2314:09	NA	AD18-16	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023DUP	D249-04D	ND	1	NA	0.5	0.12	0.25	04/21/2314:29	NA	AD18-17	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023MS	D249-04M	2.1	1	NA	0.5	0.12	0.25	04/21/2314:50	NA	AD18-18	AD18-13	ICD020W	04/20/2308:20	04/21/23
TMW01042023MSD	D249-04S	2.1	1	NA	0.5	0.12	0.25	04/21/2315:10	NA	AD18-19	AD18-13	ICD020W	04/20/2308:20	04/21/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D249

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	ICD020WB	ND	1	NA	0.5	0.13	0.25	04/21/2309:45	NA	AD18-03	AD18-01	ICD020W	NA	NA
LCS1W	ICD020WL	4.9	1	NA	0.5	0.13	0.25	04/21/2310:06	NA	AD18-04	AD18-01	ICD020W	NA	NA
LCD1W	ICD020WC	4.9	1	NA	0.5	0.13	0.25	04/21/2310:26	NA	AD18-05	AD18-01	ICD020W	NA	NA
QC20042023EB03	D249-09	0.22J	1	NA	0.5	0.13	0.25	04/21/2313:49	NA	AD18-15	AD18-13	ICD020W	04/20/2314:00	04/21/23
TMW18042023	D249-01J	1200	100	NA	50	13	25	04/21/2320:35	NA	AD18-35	AD18-32	ICD020W	04/20/2307:30	04/21/23
TMW39S042023	D249-02K	1200	100	NA	50	13	25	04/21/2321:15	NA	AD18-37	AD18-32	ICD020W	04/20/2307:30	04/21/23
BGMW0S042023	D249-03K	2400	400	NA	200	52	100	04/21/2321:35	NA	AD18-38	AD18-32	ICD020W	04/20/2307:40	04/21/23
MW32042023	D249-05T	1800	200	NA	100	26	50	04/22/2300:38	NA	AD18-47	AD18-44	ICD020W	04/20/2307:20	04/21/23
MW03042023	D249-06T	1400	200	NA	100	26	50	04/22/2301:19	NA	AD18-49	AD18-44	ICD020W	04/20/2309:50	04/21/23
TMW10042023	D249-07K	1700	200	NA	100	26	50	04/22/2301:59	NA	AD18-51	AD18-44	ICD020W	04/20/2311:05	04/21/23
TMW10042023D	D249-08J	1700	200	NA	100	26	50	04/22/2302:40	NA	AD18-53	AD18-44	ICD020W	04/20/2311:10	04/21/23
MBLK2W	ICD022WB	ND	1	NA	0.5	0.13	0.25	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS2W	ICD022WL	4.9	1	NA	0.5	0.13	0.25	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD2W	ICD022WC	4.9	1	NA	0.5	0.13	0.25	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
TMW01042023	D249-04K	920	100	NA	50	13	25	04/23/2307:20	NA	AD20-56	AD20-49	ICD022W	04/20/2308:20	04/21/23
TMW01042023DUP	D249-04KD	920	100	NA	50	13	25	04/23/2307:40	NA	AD20-57	AD20-49	ICD022W	04/20/2308:20	04/21/23
TMW01042023MS	D249-04KM	1400	100	NA	50	13	25	04/23/2308:01	NA	AD20-58	AD20-49	ICD022W	04/20/2308:20	04/21/23
TMW01042023MSD	D249-04KS	1400	100	NA	50	13	25	04/23/2308:21	NA	AD20-59	AD20-49	ICD022W	04/20/2308:20	04/21/23

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

Date: 07-06-2023
EMAX Batch No.: 23D258

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 04/22/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW29042023	D258-01	04/21/23	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
TMW23042023	D258-02	04/21/23	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
TMW41042023	D258-03	04/21/23	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
TMW07042023	D258-04	04/21/23	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

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

Sample ID	Control #	Col Date	Matrix	Analysis
TMW55042023	D258-05	04/21/23	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
TMW04042023	D258-06	04/21/23	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
TMW22042023	D258-07	04/21/23	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
TMW62042023	D258-08	04/21/23	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
TMW29042023	D258-09	04/21/23	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

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

Sample ID	Control #	Col Date	Matrix	Analysis
TMW02042023	D258-10	04/21/23	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
TMW02042023D	D258-11	04/21/23	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
TMW33042023	D258-12	04/21/23	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
TMW14A042023	D258-13	04/21/23	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
TMW51042023	D258-14	04/21/23	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
MW25042023	D258-15	04/21/23	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
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Sample ID	Control #	Col Date	Matrix	Analysis
TMW17042023	D258-16	04/21/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS ANIONS BY IC
TMW17042023D	D258-17	04/21/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS ANIONS BY IC
QC21042023TB05	D258-18	04/21/23	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 CA002912022-24
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/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of eighteen(18) water samples were received on 04/22/23 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 four(4)CCVs (Data file IDs: REC063, REC088, REC093 and REC113) associated with this SDG. All calibration requirements were satisfied. Note that "Minimum Response Factor" for all target analytes were within method recommended response factor 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. VO67E05B and VO67E06Q 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. VO67E05L/VO67E05C and VO67E06L/VO67E06C 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
VOLATILE ORGANICS BY GC/MS

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

SDG NO. : 23D258
Instrument ID : 67

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V067E05L	1	NA	05/03/2309:21	05/03/2309:21	REC064	RDC593	V067E05	Lab Control Sample (LCS)
LCD1W	V067E05C	1	NA	05/03/2309:46	05/03/2309:46	REC065	RDC593	V067E05	LCS Duplicate
MBLK1W	V067E05B	1	NA	05/03/2310:38	05/03/2310:38	REC067	RDC593	V067E05	Method Blank
TMW07042023	23D258-04	1	NA	05/03/2311:03	05/03/2311:03	REC068	RDC593	V067E05	Field Sample
TMW55042023	23D258-05	1	NA	05/03/2311:29	05/03/2311:29	REC069	RDC593	V067E05	Field Sample
TMW04042023	23D258-06	1	NA	05/03/2311:55	05/03/2311:55	REC070	RDC593	V067E05	Field Sample
TMW22042023	23D258-07	1	NA	05/03/2312:20	05/03/2312:20	REC071	RDC593	V067E05	Field Sample
TMW62042023	23D258-08	1	NA	05/03/2312:46	05/03/2312:46	REC072	RDC593	V067E05	Field Sample
TMW29042023	23D258-09	1	NA	05/03/2313:12	05/03/2313:12	REC073	RDC593	V067E05	Field Sample
TMW02042023	23D258-10	1	NA	05/03/2313:37	05/03/2313:37	REC074	RDC593	V067E05	Field Sample
TMW02042023D	23D258-11	1	NA	05/03/2314:03	05/03/2314:03	REC075	RDC593	V067E05	Field Sample
TMW33042023	23D258-12	1	NA	05/03/2314:28	05/03/2314:28	REC076	RDC593	V067E05	Field Sample
TMW14A042023	23D258-13	1	NA	05/03/2314:54	05/03/2314:54	REC077	RDC593	V067E05	Field Sample
TMW51042023	23D258-14	1	NA	05/03/2315:20	05/03/2315:20	REC078	RDC593	V067E05	Field Sample
MW25042023	23D258-15	1	NA	05/03/2315:45	05/03/2315:45	REC079	RDC593	V067E05	Field Sample
TMW17042023	23D258-16	1	NA	05/03/2316:11	05/03/2316:11	REC080	RDC593	V067E05	Field Sample
TMW17042023D	23D258-17	1	NA	05/03/2316:37	05/03/2316:37	REC081	RDC593	V067E05	Field Sample
LCS2W	V067E06L	1	NA	05/04/2307:41	05/04/2307:41	REC094	RDC593	V067E06	Lab Control Sample (LCS)
LCD2W	V067E06C	1	NA	05/04/2308:06	05/04/2308:06	REC095	RDC593	V067E06	LCS Duplicate
MBLK2W	V067E06Q	1	NA	05/04/2309:43	05/04/2309:43	REC099	RDC593	V067E06	Method Blank
QC21042023TB05	23D258-18	1	NA	05/04/2310:09	05/04/2310:09	REC100	RDC593	V067E06	Field Sample
MW29042023	23D258-Q1	1	NA	05/04/2310:34	05/04/2310:34	REC101	RDC593	V067E06	Field Sample
TMW23042023	23D258-02	1	NA	05/04/2311:00	05/04/2311:00	REC102	RDC593	V067E06	Field Sample
TMW41042023	23D258-03	1	NA	05/04/2311:26	05/04/2311:26	REC103	RDC593	V067E06	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/04/23 10:34
Sample ID	: MW29042023	Date Analyzed:	05/04/23 10:34
Lab Samp ID:	23D258-01	Dilution Factor:	1
Lab File ID:	REC101	Matrix:	WATER
Ext Btch ID:	VO67E06	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:25
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/04/23 11:00
Sample ID	: TMW23042023	Date Analyzed:	05/04/23 11:00
Lab Samp ID:	23D258-02	Dilution Factor:	1
Lab File ID:	REC102	Matrix:	WATER
Ext Btch ID:	V067E06	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.8	10.0	108	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 08:00
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 05/04/23 11:26
Sample ID : TMW41042023	Date Analyzed: 05/04/23 11:26
Lab Samp ID: 23D258-03	Dilution Factor: 1
Lab File ID: REC103	Matrix: WATER
Ext Btch ID: VO67E06	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:10
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/03/23 11:03
Sample ID	: TMW07042023	Date Analyzed:	05/03/23 11:03
Lab Samp ID:	23D258-04	Dilution Factor:	1
Lab File ID:	REC068	Matrix:	WATER
Ext Btch ID:	VO67E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 08:30
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 05/03/23 11:29
Sample ID : TMW55042023	Date Analyzed: 05/03/23 11:29
Lab Samp ID: 23D258-05	Dilution Factor: 1
Lab File ID: REC069	Matrix: WATER
Ext Btch ID: VO67E05	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.8	10.0	108	89-112
Dibromofluoromethane	11.0	10.0	110	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID : TMW04042023
Lab Samp ID: 23D258-06
Lab File ID: REC070
Ext Btch ID: VO67E05
Calib. Ref.: RDC593

Date Collected: 04/21/23 08:30
Date Received: 04/22/23
Date Extracted: 05/03/23 11:55
Date Analyzed: 05/03/23 11:55
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	10.9	10.0	109	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	11.0	10.0	110	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 08:55
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 05/03/23 12:20
Sample ID : TMW22042023	Date Analyzed: 05/03/23 12:20
Lab Samp ID: 23D258-07	Dilution Factor: 1
Lab File ID: REC071	Matrix: WATER
Ext Btch ID: V067E05	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	11.0	10.0	110	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:35
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/03/23 12:46
Sample ID	: TMW62042023	Date Analyzed:	05/03/23 12:46
Lab Samp ID:	23D258-08	Dilution Factor:	1
Lab File ID:	REC072	Matrix:	WATER
Ext Btch ID:	V067E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:40
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/03/23 13:12
Sample ID	: TMW29042023	Date Analyzed:	05/03/23 13:12
Lab Samp ID:	23D258-09	Dilution Factor:	1
Lab File ID:	REC073	Matrix:	WATER
Ext Btch ID:	VO67E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 09:40
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 05/03/23 13:37
Sample ID : TMW02042023	Date Analyzed: 05/03/23 13:37
Lab Samp ID: 23D258-10	Dilution Factor: 1
Lab File ID: REC074	Matrix: WATER
Ext Btch ID: V067E05	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:45
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/03/23 14:03
Sample ID	: TMW02042023D	Date Analyzed:	05/03/23 14:03
Lab Samp ID:	23D258-11	Dilution Factor:	1
Lab File ID:	REC075	Matrix:	WATER
Ext Btch ID:	VO67E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	11.0	10.0	110	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 10:25
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 05/03/23 14:28
Sample ID : TMW33042023	Date Analyzed: 05/03/23 14:28
Lab Samp ID: 23D258-12	Dilution Factor: 1
Lab File ID: REC076	Matrix: WATER
Ext Btch ID: VO67E05	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	36	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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/03/23 14:54
Sample ID	: TMW14A042023	Date Analyzed:	05/03/23 14:54
Lab Samp ID:	23D258-13	Dilution Factor:	1
Lab File ID:	REC077	Matrix:	WATER
Ext Btch ID:	VO67E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	11.1	10.0	111	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:45
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/03/23 15:20
Sample ID	: TMW51042023	Date Analyzed:	05/03/23 15:20
Lab Samp ID:	23D258-14	Dilution Factor:	1
Lab File ID:	REC078	Matrix:	WATER
Ext Btch ID:	VO67E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	05/03/23 15:45
Sample ID	: MW25042023	Date Analyzed:	05/03/23 15:45
Lab Samp ID:	23D258-15	Dilution Factor:	1
Lab File ID:	REC079	Matrix:	WATER
Ext Btch ID:	VQ67E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	1.6	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	10.9	10.0	109	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 13:40
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 05/03/23 16:11
Sample ID : TMW17042023	Date Analyzed: 05/03/23 16:11
Lab Samp ID: 23D258-16	Dilution Factor: 1
Lab File ID: REC080	Matrix: WATER
Ext Btch ID: VO67E05	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.8	10.0	108	85-114
Toluene-d8	11.1	10.0	111	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 13:45
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 05/03/23 16:37
Sample ID : TMW17042023D	Date Analyzed: 05/03/23 16:37
Lab Samp ID: 23D258-17	Dilution Factor: 1
Lab File ID: REC081	Matrix: WATER
Ext Btch ID: VO67E05	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	11.0	10.0	110	85-114
Toluene-d8	11.0	10.0	110	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 08:00
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 05/04/23 10:09
Sample ID : QC21042023TB05	Date Analyzed: 05/04/23 10:09
Lab Samp ID: 23D258-18	Dilution Factor: 1
Lab File ID: REC100	Matrix: WATER
Ext Btch ID: V067E06	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	11.0	10.0	110	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 25ml
Prepared by : VLu
Final Volume : 25ml
Analyzed by : VLu
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#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

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

A total of eleven(11) water samples were received on 04/22/23 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: RDJ423, RDJ424, RDJ458, RDJ459, REJ003, REJ005, REJ015 and REJ016) 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. SVD033WB - 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: SVD033WL/SVD033WC - Percent recoveries for 2-Nitrophenol, 4,6-Dinitro-2-Methylphenol and Benzoic Acid in LCS. RPDs for 2,4-Dinitrophenol(RPD=67*), 2-Nitrophenol(RPD=41*), 4,6-Dinitro-2-Methylphenol(RPD=81*), 4-Nitrophenol(RPD=44*), and Benzoic Acid(RPD=110*) 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 : 23D258

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

A total of eleven(11) water samples were received on 04/22/23 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: RDJ425, RDJ457, REJ004 and REJ014) 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. SVD033WB - 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: CLD033WL/CLD033WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=37*) 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.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

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

A total of eleven(11) water samples were received on 04/22/23 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: RDJ424, RDJ458, REJ005 and REJ015) 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. SVD033WB - 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: CLD033WL/CLD033WC - RPDs for Caprolactam(RPD=23*), 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.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

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

SDG NO. : 23D258
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	SVD033WB	1	NA	04/28/2314:47	04/26/2315:30	RDJ426	RCJ011	23SVD033W	Method Blank
LCS1W	SVD033WL	1	NA	04/28/2315:05	04/26/2315:30	RDJ427	RCJ011	23SVD033W	Lab Control Sample (LCS)
LCD1W	SVD033WC	1	NA	04/28/2315:24	04/26/2315:30	RDJ428	RCJ011	23SVD033W	LCS Duplicate
MW29042023	23D258-01	1	NA	04/28/2322:49	04/26/2315:30	RDJ452	RCJ011	23SVD033W	Field Sample
TMW41042023	23D258-03	1	NA	04/28/2323:08	04/26/2315:30	RDJ453	RCJ011	23SVD033W	Field Sample
TMW07042023	23D258-04	1	NA	04/28/2323:26	04/26/2315:30	RDJ454	RCJ011	23SVD033W	Field Sample
TMW55042023	23D258-05	1	NA	04/28/2323:45	04/26/2315:30	RDJ455	RCJ011	23SVD033W	Field Sample
TMW04042023	23D258-06	1	NA	04/29/2300:04	04/26/2315:30	RDJ456	RCJ011	23SVD033W	Field Sample
TMW22042023	23D258-07	1	NA	05/01/2313:08	04/26/2315:30	REJ006	RCJ011	23SVD033W	Field Sample
TMW62042023	23D258-08	1	NA	05/01/2313:26	04/26/2315:30	REJ007	RCJ011	23SVD033W	Field Sample
TMW33042023	23D258-12	1	NA	05/01/2313:45	04/26/2315:30	REJ008	RCJ011	23SVD033W	Field Sample
TMW14A042023	23D258-13	1	NA	05/01/2314:04	04/26/2315:30	REJ009	RCJ011	23SVD033W	Field Sample
TMW51042023	23D258-14	1	NA	05/01/2314:22	04/26/2315:30	REJ010	RCJ011	23SVD033W	Field Sample
MW25042023	23D258-15	1	NA	05/01/2314:41	04/26/2315:30	REJ011	RCJ011	23SVD033W	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. : 23D258
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	SVD033WB	1	NA	04/28/2314:47	04/26/2315:30	RDJ426	RCJ498	23SVD033W	Method Blank
LCS1W	CLD033WL	1	NA	04/28/2315:42	04/26/2315:30	RDJ429	RCJ498	23SVD033W	Lab Control Sample (LCS)
LCD1W	CLD033WC	1	NA	04/28/2316:01	04/26/2315:30	RDJ430	RCJ498	23SVD033W	LCS Duplicate
MW29042023	23D258-01	1	NA	04/28/2322:49	04/26/2315:30	RDJ452	RCJ498	23SVD033W	Field Sample
TMW41042023	23D258-03	1	NA	04/28/2323:08	04/26/2315:30	RDJ453	RCJ498	23SVD033W	Field Sample
TMW07042023	23D258-04	1	NA	04/28/2323:26	04/26/2315:30	RDJ454	RCJ498	23SVD033W	Field Sample
TMW55042023	23D258-05	1	NA	04/28/2323:45	04/26/2315:30	RDJ455	RCJ498	23SVD033W	Field Sample
TMW04042023	23D258-06	1	NA	04/29/2300:04	04/26/2315:30	RDJ456	RCJ498	23SVD033W	Field Sample
TMW22042023	23D258-07	1	NA	05/01/2313:08	04/26/2315:30	REJ006	RCJ498	23SVD033W	Field Sample
TMW62042023	23D258-08	1	NA	05/01/2313:26	04/26/2315:30	REJ007	RCJ498	23SVD033W	Field Sample
TMW33042023	23D258-12	1	NA	05/01/2313:45	04/26/2315:30	REJ008	RCJ498	23SVD033W	Field Sample
TMW14A042023	23D258-13	1	NA	05/01/2314:04	04/26/2315:30	REJ009	RCJ498	23SVD033W	Field Sample
TMW51042023	23D258-14	1	NA	05/01/2314:22	04/26/2315:30	REJ010	RCJ498	23SVD033W	Field Sample
MW25042023	23D258-15	1	NA	05/01/2314:41	04/26/2315:30	REJ011	RCJ498	23SVD033W	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. : 23D258
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	SVD033WB	1	NA	04/28/2314:47	04/26/2315:30	RDJ426	RCJ025	23SVD033W	Method Blank
LCS1W	CLD033WL	1	NA	04/28/2315:42	04/26/2315:30	RDJ429	RCJ025	23SVD033W	Lab Control Sample (LCS)
LCD1W	CLD033WC	1	NA	04/28/2316:01	04/26/2315:30	RDJ430	RCJ025	23SVD033W	LCS Duplicate
MW29042023	23D258-01	1	NA	04/28/2322:49	04/26/2315:30	RDJ452	RCJ025	23SVD033W	Field Sample
TMW41042023	23D258-03	1	NA	04/28/2323:08	04/26/2315:30	RDJ453	RCJ025	23SVD033W	Field Sample
TMW07042023	23D258-04	1	NA	04/28/2323:26	04/26/2315:30	RDJ454	RCJ025	23SVD033W	Field Sample
TMW55042023	23D258-05	1	NA	04/28/2323:45	04/26/2315:30	RDJ455	RCJ025	23SVD033W	Field Sample
TMW04042023	23D258-06	1	NA	04/29/2300:04	04/26/2315:30	RDJ456	RCJ025	23SVD033W	Field Sample
TMW22042023	23D258-07	1	NA	05/01/2313:08	04/26/2315:30	REJ006	RCJ025	23SVD033W	Field Sample
TMW62042023	23D258-08	1	NA	05/01/2313:26	04/26/2315:30	REJ007	RCJ025	23SVD033W	Field Sample
TMW33042023	23D258-12	1	NA	05/01/2313:45	04/26/2315:30	REJ008	RCJ025	23SVD033W	Field Sample
TMW14A042023	23D258-13	1	NA	05/01/2314:04	04/26/2315:30	REJ009	RCJ025	23SVD033W	Field Sample
TMW51042023	23D258-14	1	NA	05/01/2314:22	04/26/2315:30	REJ010	RCJ025	23SVD033W	Field Sample
MW25042023	23D258-15	1	NA	05/01/2314:41	04/26/2315:30	REJ011	RCJ025	23SVD033W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: MW29042023	Date Analyzed:	04/28/23 22:49
Lab Samp ID:	23D258-01	Dilution Factor:	1
Lab File ID:	RDJ452	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	55.0	70.8	78	43-140
2-Fluorobiphenyl	15.8	23.6	67	44-119
2-Fluorophenol	36.1	70.8	51	19-119
Nitrobenzene-d5	15.0	23.6	63	44-120
Phenol-d5	47.8	70.8	67	40-130
Terphenyl-d14	18.5	23.6	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: RCJ025 DCC Ref: RDJ424

Detection limits are reported relative to sample result significant figures.
Sample Amount : 850ml 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:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: MW29042023	Date Analyzed:	04/28/23 22:49
Lab Samp ID:	23D258-01	Dilution Factor:	1
Lab File ID:	RDJ452	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: MW29042023	Date Analyzed:	04/28/23 22:49
Lab Samp ID:	23D258-01	Dilution Factor:	1
Lab File ID:	RDJ452	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW41042023	Date Analyzed:	04/28/23 23:08
Lab Samp ID:	23D258-03	Dilution Factor:	1
Lab File ID:	RDJ453	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	52.4	69.6	75	43-140
2-Fluorobiphenyl	14.9	23.2	64	44-119
2-Fluorophenol	42.0	69.6	60	19-119
Nitrobenzene-d5	16.1	23.2	69	44-120
Phenol-d5	48.3	69.6	69	40-130
Terphenyl-d14	21.9	23.2	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: RCJ025 DCC Ref: RDJ424

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:	04/21/23 08:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW41042023	Date Analyzed:	04/28/23 23:08
Lab Samp ID:	23D258-03	Dilution Factor:	1
Lab File ID:	RDJ453	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/21/23 08:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW41042023	Date Analyzed:	04/28/23 23:08
Lab Samp ID:	23D258-03	Dilution Factor:	1
Lab File ID:	RDJ453	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID : TMW07042023
Lab Samp ID: 23D258-04
Lab File ID: RDJ454
Ext Btch ID: 23SVD033W
Calib. Ref.: RCJ011

Date Collected: 04/21/23 08:10
Date Received: 04/22/23
Date Extracted: 04/26/23 15:30
Date Analyzed: 04/28/23 23:26
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	47.3	69.6	68	43-140
2-Fluorobiphenyl	15.0	23.2	65	44-119
2-Fluorophenol	34.8	69.6	50	19-119
Nitrobenzene-d5	14.2	23.2	61	44-120
Phenol-d5	41.1	69.6	59	40-130
Terphenyl-d14	20.7	23.2	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: RCJ025 DCC Ref: RDJ424

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:10
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW07042023	Date Analyzed:	04/28/23 23:26
Lab Samp ID:	23D258-04	Dilution Factor:	1
Lab File ID:	RDJ454	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/21/23 08:10
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW07042023	Date Analyzed:	04/28/23 23:26
Lab Samp ID:	23D258-04	Dilution Factor:	1
Lab File ID:	RDJ454	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID : TMW55042023
Lab Samp ID: 23D258-05
Lab File ID: RDJ455
Ext Btch ID: 23SVD033W
Calib. Ref.: RCJ011

Date Collected: 04/21/23 08:30
Date Received: 04/22/23
Date Extracted: 04/26/23 15:30
Date Analyzed: 04/28/23 23:45
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	27.8	64.8	43	43-140
2-Fluorobiphenyl	11.7	21.6	54	44-119
2-Fluorophenol	12.4	64.8	19	19-119
Nitrobenzene-d5	12.8	21.6	59	44-120
Phenol-d5	26.7	64.8	41	40-130
Terphenyl-d14	18.3	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: RCJ025 DCC Ref: RDJ424
* Out of QC Limits

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW55042023	Date Analyzed:	04/28/23 23:45
Lab Samp ID:	23D258-05	Dilution Factor:	1
Lab File ID:	RDJ455	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW55042023	Date Analyzed:	04/28/23 23:45
Lab Samp ID:	23D258-05	Dilution Factor:	1
Lab File ID:	RDJ455	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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 : KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID : TMW04042023
Lab Samp ID: 23D258-06
Lab File ID: RDJ456
Ext Btch ID: 23SVD033W
Calib. Ref.: RCJ011

Date Collected: 04/21/23 08:30
Date Received: 04/22/23
Date Extracted: 04/26/23 15:30
Date Analyzed: 04/29/23 00:04
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	48.0	63.0	76	43-140
2-Fluorobiphenyl	14.5	21.0	69	44-119
2-Fluorophenol	27.4	63.0	43	19-119
Nitrobenzene-d5	12.2	21.0	58	44-120
Phenol-d5	37.6	63.0	60	40-130
Terphenyl-d14	18.5	21.0	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: RCJ025 DCC Ref: RDJ424

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW04042023	Date Analyzed:	04/29/23 00:04
Lab Samp ID:	23D258-06	Dilution Factor:	1
Lab File ID:	RDJ456	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW04042023	Date Analyzed:	04/29/23 00:04
Lab Samp ID:	23D258-06	Dilution Factor:	1
Lab File ID:	RDJ456	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:55
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW22042023	Date Analyzed:	05/01/23 13:08
Lab Samp ID:	23D258-07	Dilution Factor:	1
Lab File ID:	REJ006	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	54.4	71.4	76	43-140
2-Fluorobiphenyl	15.8	23.8	66	44-119
2-Fluorophenol	34.4	71.4	48	19-119
Nitrobenzene-d5	14.3	23.8	60	44-120
Phenol-d5	43.4	71.4	61	40-130
Terphenyl-d14	21.6	23.8	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: RCJ025 DCC Ref: REJ005

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml 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:	04/21/23 08:55
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW22042023	Date Analyzed:	05/01/23 13:08
Lab Samp ID:	23D258-07	Dilution Factor:	1
Lab File ID:	REJ006	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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 : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:55
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW22042023	Date Analyzed:	05/01/23 13:08
Lab Samp ID:	23D258-07	Dilution Factor:	1
Lab File ID:	REJ006	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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 : KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID : TMW62042023
Lab Samp ID: 23D258-08
Lab File ID: REJ007
Ext Btch ID: 23SVD033W
Calib. Ref.: RCJ011

Date Collected: 04/21/23 09:35
Date Received: 04/22/23
Date Extracted: 04/26/23 15:30
Date Analyzed: 05/01/23 13:26
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	45.4	66.0	69	43-140
2-Fluorobiphenyl	15.7	22.0	71	44-119
2-Fluorophenol	31.9	66.0	48	19-119
Nitrobenzene-d5	14.5	22.0	66	44-120
Phenol-d5	39.9	66.0	60	40-130
Terphenyl-d14	18.1	22.0	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: RCJ025 DCC Ref: REJ005

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:35
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW62042023	Date Analyzed:	05/01/23 13:26
Lab Samp ID:	23D258-08	Dilution Factor:	1
Lab File ID:	REJ007	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/21/23 09:35
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW62042023	Date Analyzed:	05/01/23 13:26
Lab Samp ID:	23D258-08	Dilution Factor:	1
Lab File ID:	REJ007	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID : TMW33042023
Lab Samp ID: 23D258-12
Lab File ID: REJ008
Ext Btch ID: 23SVD033W
Calib. Ref.: RCJ011

Date Collected: 04/21/23 10:25
Date Received: 04/22/23
Date Extracted: 04/26/23 15:30
Date Analyzed: 05/01/23 13:45
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	27.7	62.4	44	43-140
2-Fluorobiphenyl	18.0	20.8	87	44-119
2-Fluorophenol	21.4	62.4	34	19-119
Nitrobenzene-d5	17.5	20.8	84	44-120
Phenol-d5	33.4	62.4	53	40-130
Terphenyl-d14	19.6	20.8	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: RCJ025 DCC Ref: REJ005

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 10:25
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW33042023	Date Analyzed:	05/01/23 13:45
Lab Samp ID:	23D258-12	Dilution Factor:	1
Lab File ID:	REJ008	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by :	KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 10:25
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW33042023	Date Analyzed:	05/01/23 13:45
Lab Samp ID:	23D258-12	Dilution Factor:	1
Lab File ID:	REJ008	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID : TMW14A042023
Lab Samp ID: 23D258-13
Lab File ID: REJ009
Ext Btch ID: 23SVD033W
Calib. Ref.: RCJ011

Date Collected: 04/21/23 11:30
Date Received: 04/22/23
Date Extracted: 04/26/23 15:30
Date Analyzed: 05/01/23 14:04
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	46.4	64.8	72	43-140
2-Fluorobiphenyl	13.7	21.6	64	44-119
2-Fluorophenol	33.8	64.8	52	19-119
Nitrobenzene-d5	12.9	21.6	60	44-120
Phenol-d5	38.9	64.8	60	40-130
Terphenyl-d14	21.3	21.6	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: RCJ025 DCC Ref: REJ005

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW14A042023	Date Analyzed:	05/01/23 14:04
Lab Samp ID:	23D258-13	Dilution Factor:	1
Lab File ID:	REJ009	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW14A042023	Date Analyzed:	05/01/23 14:04
Lab Samp ID:	23D258-13	Dilution Factor:	1
Lab File ID:	REJ009	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID : TMW51042023
Lab Samp ID: 23D258-14
Lab File ID: REJ010
Ext Btch ID: 23SVD033W
Calib. Ref.: RCJ011

Date Collected: 04/21/23 11:45
Date Received: 04/22/23
Date Extracted: 04/26/23 15:30
Date Analyzed: 05/01/23 14:22
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	47.6	71.4	67	43-140
2-Fluorobiphenyl	13.9	23.8	59	44-119
2-Fluorophenol	32.1	71.4	45	19-119
Nitrobenzene-d5	12.4	23.8	52	44-120
Phenol-d5	40.2	71.4	56	40-130
Terphenyl-d14	22.3	23.8	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: RCJ025 DCC Ref: REJ005

Detection limits are reported relative to sample result significant figures.
Sample Amount : 840ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:45
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW51042023	Date Analyzed:	05/01/23 14:22
Lab Samp ID:	23D258-14	Dilution Factor:	1
Lab File ID:	REJ010	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ49B	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	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:45
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: TMW51042023	Date Analyzed:	05/01/23 14:22
Lab Samp ID:	23D258-14	Dilution Factor:	1
Lab File ID:	REJ010	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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 : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: MW25042023	Date Analyzed:	05/01/23 14:41
Lab Samp ID:	23D258-15	Dilution Factor:	1
Lab File ID:	REJ011	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	46.1	66.6	69	43-140
2-Fluorobiphenyl	14.9	22.2	67	44-119
2-Fluorophenol	38.6	66.6	58	19-119
Nitrobenzene-d5	15.5	22.2	70	44-120
Phenol-d5	45.7	66.6	69	40-130
Terphenyl-d14	18.4	22.2	83	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: RCJ025 DCC Ref: REJ005

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:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: MW25042023	Date Analyzed:	05/01/23 14:41
Lab Samp ID:	23D258-15	Dilution Factor:	1
Lab File ID:	REJ011	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 15:30
Sample ID	: MW25042023	Date Analyzed:	05/01/23 14:41
Lab Samp ID:	23D258-15	Dilution Factor:	1
Lab File ID:	REJ011	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

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

SDG#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

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

A total of eight(8) water samples were received on 04/22/23 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. VG39D12B - 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. VG39D12L/VG39D12C 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 D258-01M/D258-01S. 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 peak found in sample D258-12 was not included in sample rsults.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D258
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	VG39D12B	1	NA	04/25/2312:38	04/25/2312:38	ED25005A	ED25004A	23VG39D12	Method Blank
LCS1W	VG39D12L	1	NA	04/25/2313:14	04/25/2313:14	ED25006A	ED25004A	23VG39D12	Lab Control Sample (LCS)
LCD1W	VG39D12C	1	NA	04/25/2313:51	04/25/2313:51	ED25007A	ED25004A	23VG39D12	LCS Duplicate
MW29042023	D258-01	1	NA	04/25/2318:41	04/25/2318:41	ED25015A	ED25014A	23VG39D12	Field Sample
MW29042023MS	D258-01M	1	NA	04/25/2319:17	04/25/2319:17	ED25016A	ED25014A	23VG39D12	Matrix Spike Sample (MS)
MW29042023MSD	D258-01S	1	NA	04/25/2319:53	04/25/2319:53	ED25017A	ED25014A	23VG39D12	MS Duplicate (MSD)
TMW07042023	D258-04	1	NA	04/25/2320:29	04/25/2320:29	ED25018A	ED25014A	23VG39D12	Field Sample
TMW55042023	D258-05	1	NA	04/25/2321:05	04/25/2321:05	ED25019A	ED25014A	23VG39D12	Field Sample
TMW62042023	D258-08	1	NA	04/25/2321:41	04/25/2321:41	ED25020A	ED25014A	23VG39D12	Field Sample
TMW33042023	D258-12	1	NA	04/25/2322:17	04/25/2322:17	ED25021A	ED25014A	23VG39D12	Field Sample
TMW51042023	D258-14	1	NA	04/25/2322:53	04/25/2322:53	ED25022A	ED25014A	23VG39D12	Field Sample
MW25042023	D258-15	1	NA	04/25/2323:29	04/25/2323:29	ED25023A	ED25014A	23VG39D12	Field Sample
QC21042023TB05	D258-18	1	NA	04/26/2300:05	04/26/2300:05	ED25024A	ED25014A	23VG39D12	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:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/25/23 18:41
Sample ID	: MW29042023	Date Analyzed:	04/25/23 18:41
Lab Samp ID:	D258-01	Dilution Factor:	1
Lab File ID:	ED25015A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25014A	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	35.6	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:	04/21/23 08:10
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/25/23 20:29
Sample ID	: TMW07042023	Date Analyzed:	04/25/23 20:29
Lab Samp ID:	D258-04	Dilution Factor:	1
Lab File ID:	ED25018A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25014A	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	35.4	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: 04/21/23 08:30
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/25/23 21:05
Sample ID : TMW55042023	Date Analyzed: 04/25/23 21:05
Lab Samp ID: D258-05	Dilution Factor: 1
Lab File ID: ED25019A	Matrix: WATER
Ext Btch ID: 23VG39D12	% Moisture: NA
Calib. Ref.: ED25014A	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	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: 04/21/23 09:35
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/25/23 21:41
Sample ID : TMW62042023	Date Analyzed: 04/25/23 21:41
Lab Samp ID: D258-08	Dilution Factor: 1
Lab File ID: ED25020A	Matrix: WATER
Ext Btch ID: 23VG39D12	% Moisture: NA
Calib. Ref.: ED25014A	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	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:	04/21/23 10:25
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/25/23 22:17
Sample ID	: TMW33042023	Date Analyzed:	04/25/23 22:17
Lab Samp ID:	D258-12	Dilution Factor:	1
Lab File ID:	ED25021A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25014A	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	34.8	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: 04/21/23 11:45
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/25/23 22:53
Sample ID : TMW51042023	Date Analyzed: 04/25/23 22:53
Lab Samp ID: D258-14	Dilution Factor: 1
Lab File ID: ED25022A	Matrix: WATER
Ext Btch ID: 23VG39D12	% Moisture: NA
Calib. Ref.: ED25014A	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	35.0	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:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/25/23 23:29
Sample ID	: MW25042023	Date Analyzed:	04/25/23 23:29
Lab Samp ID:	D258-15	Dilution Factor:	1
Lab File ID:	ED25023A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25014A	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	33.9	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:	04/21/23 08:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 00:05
Sample ID	: QC21042023TB05	Date Analyzed:	04/26/23 00:05
Lab Samp ID:	D258-18	Dilution Factor:	1
Lab File ID:	ED25024A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25014A	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	35.2	40.0	88	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#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of seven(7) water samples were received on 04/22/23 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. DSD032WB - 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. DSD032WL/DSD032WC 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. : 23D258
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	DSD032WB	1	NA	04/27/2313:40	04/26/2312:15	LD26074A	LD26065A	23DSD032W	Method Blank
LCS1W	DSD032WL	1	NA	04/27/2313:59	04/26/2312:15	LD26075A	LD26065A	23DSD032W	Lab Control Sample (LCS)
LCD1W	DSD032WC	1	NA	04/27/2314:17	04/26/2312:15	LD26076A	LD26065A	23DSD032W	LCS Duplicate
MW29042023	D258-01	1	NA	04/27/2314:36	04/26/2312:15	LD26077A	LD26065A	23DSD032W	Field Sample
TMW07042023	D258-04	1	NA	04/27/2314:54	04/26/2312:15	LD26078A	LD26065A	23DSD032W	Field Sample
TMW55042023	D258-05	1	NA	04/27/2315:13	04/26/2312:15	LD26079A	LD26065A	23DSD032W	Field Sample
TMW62042023	D258-08	1	NA	04/27/2315:32	04/26/2312:15	LD26080A	LD26065A	23DSD032W	Field Sample
TMW33042023	D258-12	1	NA	04/27/2316:28	04/26/2312:15	LD26083A	LD26081A	23DSD032W	Field Sample
TMW51042023	D258-14	1	NA	04/27/2316:46	04/26/2312:15	LD26084A	LD26081A	23DSD032W	Field Sample
MW25042023	D258-15	1	NA	04/27/2317:05	04/26/2312:15	LD26085A	LD26081A	23DSD032W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 12:15
Sample ID	: MW29042023	Date Analyzed:	04/27/23 14:36
Lab Samp ID:	23D258-01	Dilution Factor:	1
Lab File ID:	LD26077A	Matrix:	WATER
Ext Btch ID:	23DSD032W	% Moisture:	NA
Calib. Ref.:	LD26065A	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	0.822	1.10	75	60-130
Hexacosane	0.244	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	: JMuert	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:10
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 12:15
Sample ID	: TMW07042023	Date Analyzed:	04/27/23 14:54
Lab Samp ID:	23D258-04	Dilution Factor:	1
Lab File ID:	LD26078A	Matrix:	WATER
Ext Btch ID:	23DSD032W	% Moisture:	NA
Calib. Ref.:	LD26065A	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	0.237	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	: JMuert	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 12:15
Sample ID	: TMW55042023	Date Analyzed:	04/27/23 15:13
Lab Samp ID:	23D258-05	Dilution Factor:	1
Lab File ID:	LD26079A	Matrix:	WATER
Ext Btch ID:	23DSD032W	% Moisture:	NA
Calib. Ref.:	LD26065A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.053J	0.52	0.052	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.824	1.05	78	60-130
Hexacosane	0.244	0.262	93	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 : JMuert Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:35
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 12:15
Sample ID	: TMW62042023	Date Analyzed:	04/27/23 15:32
Lab Samp ID:	23D258-08	Dilution Factor:	1
Lab File ID:	LD26080A	Matrix:	WATER
Ext Btch ID:	23DSD032W	% Moisture:	NA
Calib. Ref.:	LD26065A	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	0.841	1.04	81	60-130
Hexacosane	0.242	0.260	93	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 : JMuert Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 10:25
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 12:15
Sample ID	: TMW33042023	Date Analyzed:	04/27/23 16:28
Lab Samp ID:	23D258-12	Dilution Factor:	1
Lab File ID:	LD26083A	Matrix:	WATER
Ext Btch ID:	23DSD032W	% Moisture:	NA
Calib. Ref.:	LD26081A	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	0.789	1.00	79	60-130
Hexacosane	0.245	0.250	98	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 : JMuert Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:45
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 12:15
Sample ID	: TMW51042023	Date Analyzed:	04/27/23 16:46
Lab Samp ID:	23D258-14	Dilution Factor:	1
Lab File ID:	LD26084A	Matrix:	WATER
Ext Btch ID:	23DSD032W	% Moisture:	NA
Calib. Ref.:	LD26081A	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	0.891	1.08	83	60-130
Hexacosane	0.276	0.270	102	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	: JMuert	Analyzed by	: SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 12:15
Sample ID	: MW25042023	Date Analyzed:	04/27/23 17:05
Lab Samp ID:	23D258-15	Dilution Factor:	1
Lab File ID:	LD26085A	Matrix:	WATER
Ext Btch ID:	23DSD032W	% Moisture:	NA
Calib. Ref.:	LD26081A	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	0.849	1.03	82	60-130
Hexacosane	0.254	0.257	99	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 : JMuert Analyzed by : SDeeso

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW3520C/8081B
PESTICIDES

A total of seven(7) water samples were received on 04/22/23 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. CPD032WB - 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) LCS was analyzed. CPD032WL - recovery for all analytes were within LCS QC 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. : 23D258
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	CPD032WB	1	NA	05/02/2317:08	04/26/2313:30	RE02015	RE02013	23CPD032W	Method Blank
LCS1W	CPD032WL	1	NA	05/02/2317:29	04/26/2313:30	RE02016	RE02013	23CPD032W	Lab Control Sample (LCS)
MW29042023	D258-01	1	NA	05/02/2323:19	04/26/2313:30	RE02033	RE02027	23CPD032W	Field Sample
TMW23042023	D258-02	1	NA	05/02/2323:40	04/26/2313:30	RE02034	RE02027	23CPD032W	Field Sample
TMW41042023	D258-03	1	NA	05/03/2300:00	04/26/2313:30	RE02035	RE02027	23CPD032W	Field Sample
TMW55042023	D258-05	1	NA	05/03/2300:21	04/26/2313:30	RE02036	RE02027	23CPD032W	Field Sample
TMW62042023	D258-08	1	NA	05/03/2300:41	04/26/2313:30	RE02037	RE02027	23CPD032W	Field Sample
TMW51042023	D258-14	1	NA	05/03/2301:02	04/26/2313:30	RE02038	RE02027	23CPD032W	Field Sample
MW25042023	D258-15	1	NA	05/03/2302:24	04/26/2313:30	RE02042	RE02040	23CPD032W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 07:20
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID : MW29042023	Date Analyzed: 05/02/23 23:19
Lab Samp ID: D258-01	Dilution Factor: 1
Lab File ID: RE02033	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02027	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	(0.260) | 0.259	0.449	58	44-124
Decachlorobiphenyl	(0.325) | 0.316	0.449	72	30-135

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

Sample Amount : 890ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE02028	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 07:25
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID : TMW23042023	Date Analyzed: 05/02/23 23:40
Lab Samp ID: D258-02	Dilution Factor: 1
Lab File ID: RE02034	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02027	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	(0.280) | 0.265	0.440	64	44-124
Decachlorobiphenyl	(0.317) | 0.306	0.440	72	30-135

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

Sample Amount : 910ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE02028	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 08:00
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID : TMW41042023	Date Analyzed: 05/03/23 00:00
Lab Samp ID: D258-03	Dilution Factor: 1
Lab File ID: RE02035	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02027	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.047
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.047
beta-BHC	(ND) | ND	0.12	0.024	0.047
Heptachlor	(ND) | ND	0.12	0.024	0.047
delta-BHC	(ND) | ND	0.12	0.024	0.047
Aldrin	(ND) | ND	0.12	0.024	0.047
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.047
gamma-Chlordane	(ND) | ND	0.12	0.024	0.047
alpha-Chlordane	(ND) | ND	0.12	0.024	0.047
Endosulfan I	(ND) | ND	0.12	0.024	0.047
4,4'-DDE	(ND) | ND	0.12	0.024	0.047
Dieldrin	(ND) | ND	0.12	0.024	0.047
Endrin	(ND) | ND	0.12	0.024	0.047
4,4'-DDD	(ND) | ND	0.12	0.024	0.047
Endosulfan II	(ND) | ND	0.12	0.024	0.047
4,4'-DDT	(ND) | ND	0.12	0.024	0.047
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.047
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.047
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.29	0.59
Endrin Ketone	(ND) | ND	0.12	0.024	0.047

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.311 | (0.313)	0.471	66	44-124
Decachlorobiphenyl	(0.347) | 0.337	0.471	74	30-135

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

Sample Amount : 850ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE02028	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 13:30
Sample ID	: TMW55042023	Date Analyzed:	05/03/23 00:21
Lab Samp ID:	D258-05	Dilution Factor:	1
Lab File ID:	RE02036	Matrix:	WATER
Ext Btch ID:	23CPD032W	% Moisture:	NA
Calib. Ref.:	RE02027	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	(0.302) | 0.300	0.426	71	44-124
Decachlorobiphenyl	(0.315) | 0.304	0.426	74	30-135

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

Sample Amount	: 940ml	Final Volume :	10ml
Prepared by	: POreto	Analyzed by :	EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RE02028		

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:35
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 13:30
Sample ID	: TMW62042023	Date Analyzed:	05/03/23 00:41
Lab Samp ID:	D258-08	Dilution Factor:	1
Lab File ID:	RE02037	Matrix:	WATER
Ext Btch ID:	23CPD032W	% Moisture:	NA
Calib. Ref.:	RE02027	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	(0.282) | 0.278	0.412	68	44-124
Decachlorobiphenyl	(0.298) | 0.291	0.412	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml Final Volume : 10ml
Prepared by : POreto Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE02028

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 11:45
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID : TMW51042023	Date Analyzed: 05/03/23 01:02
Lab Samp ID: D258-14	Dilution Factor: 1
Lab File ID: RE02038	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02027	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	0.289 | (0.298)	0.440	68	44-124
Decachlorobiphenyl	(0.331) | 0.319	0.440	75	30-135

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

Sample Amount : 910ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE02028	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D258	Date Extracted:	04/26/23 13:30
Sample ID	: MW25042023	Date Analyzed:	05/03/23 02:24
Lab Samp ID:	D258-15	Dilution Factor:	1
Lab File ID:	RE02042	Matrix:	WATER
Ext Btch ID:	23CPD032W	% Moisture:	NA
Calib. Ref.:	RE02040	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	(0.309) | 0.309	0.440	70	44-124
Decachlorobiphenyl	(0.346) | 0.332	0.440	79	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 10ml
Prepared by : POreto Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE02041

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW3520C/8082A
PCBS

A total of five(5) water samples were received on 04/22/23 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. CPD032WB - 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) LCS was analyzed. 60D032WL - recovery for all analytes were within LCS QC 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. : 23D258
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	CPD032WB	1	NA	04/27/2313:43	04/26/2313:30	KD27004A	KD27002A	CPD032W	Method Blank
LCS1W	60D032WL	1	NA	04/27/2314:03	04/26/2313:30	KD27005A	KD27002A	CPD032W	Lab Control Sample (LCS)
MW29042023	D258-01	1.12	NA	04/27/2316:23	04/26/2313:30	KD27012A	KD27002A	CPD032W	Field Sample
TMW55042023	D258-05	1.06	NA	04/27/2316:43	04/26/2313:30	KD27013A	KD27002A	CPD032W	Field Sample
TMW62042023	D258-08	1.03	NA	04/27/2318:03	04/26/2313:30	KD27017A	KD27015A	CPD032W	Field Sample
TMW51042023	D258-14	1.10	NA	04/27/2318:23	04/26/2313:30	KD27018A	KD27015A	CPD032W	Field Sample
MW25042023	D258-15	1.10	NA	04/27/2318:43	04/26/2313:30	KD27019A	KD27015A	CPD032W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID: MW29042023	Date Analyzed: 04/27/23 16:23
Lab Samp ID: D258-01	Dilution Factor: 1.12
Lab File ID: KD27012A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27002A	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	(0.5889)|0.5221	0.4480	(131)|117	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID: TMW55042023	Date Analyzed: 04/27/23 16:43
Lab Samp ID: D258-05	Dilution Factor: 1.06
Lab File ID: KD27013A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27002A	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	(0.5436)|0.5006	0.4240	(128)|118	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID: TMW62042023	Date Analyzed: 04/27/23 18:03
Lab Samp ID: D258-08	Dilution Factor: 1.03
Lab File ID: KD27017A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27015A	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	(0.5453)|0.4955	0.4120	(132)|120	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID: TMW51042023	Date Analyzed: 04/27/23 18:23
Lab Samp ID: D258-14	Dilution Factor: 1.10
Lab File ID: KD27018A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27015A	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	(0.5756)|0.5302	0.4400	(131)|120	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 13:30
Sample ID: MW25042023	Date Analyzed: 04/27/23 18:43
Lab Samp ID: D258-15	Dilution Factor: 1.10
Lab File ID: KD27019A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27015A	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	(0.5821)|0.5354	0.4400	(132)|122	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#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD 8151A
HERBICIDES

A total of five(5) water samples were received on 04/22/23 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. HED007WB - 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. HED007WL/HED007WC 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.

Dalapon results were reported from channel A due to contamination observed in channel B.

LAB CHRONICLE
HERBICIDES

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

SDG NO. : 23D258
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	HED007WB	1	NA	04/28/2319:03	04/26/2311:00	WD28003A	WD28002A	HED007W	Method Blank
LCS1W	HED007WL	1	NA	04/28/2319:32	04/26/2311:00	WD28004A	WD28002A	HED007W	Lab Control Sample (LCS)
LCD1W	HED007WC	1	NA	04/28/2320:00	04/26/2311:00	WD28005A	WD28002A	HED007W	LCS Duplicate
MW29042023	D258-01	1	NA	04/29/2300:15	04/26/2311:00	WD28014A	WD28013A	HED007W	Field Sample
TMW55042023	D258-05	1	NA	04/29/2300:43	04/26/2311:00	WD28015A	WD28013A	HED007W	Field Sample
TMW62042023	D258-08	1	NA	04/29/2301:12	04/26/2311:00	WD28016A	WD28013A	HED007W	Field Sample
TMW51042023	D258-14	1	NA	04/29/2301:40	04/26/2311:00	WD28017A	WD28013A	HED007W	Field Sample
MW25042023	D258-15	1	NA	04/29/2302:08	04/26/2311:00	WD28018A	WD28013A	HED007W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 11:00
Sample ID: MW29042023	Date Analyzed: 04/29/23 00:15
Lab Samp ID: D258-01	Dilution Factor: 1
Lab File ID: WD28014A	Matrix : WATER
Ext Btch ID: HED007W	% Moisture : NA
Calib. Ref.: WD28013A	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)|0.90J	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	9.162|(9.598)	10.00	91.6|(96.0)	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 11:00
Sample ID: TMW55042023	Date Analyzed: 04/29/23 00:43
Lab Samp ID: D258-05	Dilution Factor: 1
Lab File ID: WD28015A	Matrix : WATER
Ext Btch ID: HED007W	% Moisture : NA
Calib. Ref.: WD28013A	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)|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	(ND)|ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.998|(9.231)	10.00	90.0|(92.3)	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.
Project : USACE WINGATE
Batch No. : 23D258
Sample ID: TMW62042023
Lab Samp ID: D258-08
Lab File ID: WD28016A
Ext Btch ID: HED007W
Calib. Ref.: WD28013A

Date Collected: 04/21/23
Date Received: 04/22/23
Date Extracted: 04/26/23 11:00
Date Analyzed: 04/29/23 01:12
Dilution Factor: 1
Matrix : WATER
% Moisture : NA
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)|0.25J	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	9.456|(10.05)	10.00	94.6|(101)	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 11:00
Sample ID: TMW51042023	Date Analyzed: 04/29/23 01:40
Lab Samp ID: D258-14	Dilution Factor: 1
Lab File ID: WD28017A	Matrix : WATER
Ext Btch ID: HED007W	% Moisture : NA
Calib. Ref.: WD28013A	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)|0.19J	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)|0.82J	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	8.907|(9.145)	10.00	89.1|(91.4)	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/26/23 11:00
Sample ID: MW25042023	Date Analyzed: 04/29/23 02:08
Lab Samp ID: D258-15	Dilution Factor: 1
Lab File ID: WD28018A	Matrix : WATER
Ext Btch ID: HED007W	% Moisture : NA
Calib. Ref.: WD28013A	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)|0.90J	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	9.280|(9.595)	10.00	92.8|(96.0)	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#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW8330B
EXPLOSIVES

A total of fourteen(14) water samples were received on 04/22/23 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. EXD015WB - 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. EXD015WL/EXD015WC 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 : 23D258

METHOD SW8330B
EXPLOSIVES

A total of fourteen(14) water samples were received on 04/22/23 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. EXD015WB - 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. 35D015WL/35D015WC 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. : 23D258
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	EXD015WB	1	NA	05/23/2318:45	04/27/2311:30	XE22038A	XE22027A	EXD015W	Method Blank
LCS1W	EXD015WL	1	NA	05/23/2319:33	04/27/2311:30	XE22039A	XE22027A	EXD015W	Lab Control Sample (LCS)
LCD1W	EXD015WC	1	NA	05/23/2320:30	04/27/2311:30	XE22040A	XE22027A	EXD015W	LCS Duplicate
MW29042023	D258-01	1	NA	05/24/2301:45	04/27/2311:30	XE22046A	XE22042A	EXD015W	Field Sample
TMW23042023	D258-02	1	NA	05/24/2302:33	04/27/2311:30	XE22047A	XE22042A	EXD015W	Field Sample
TMW23042023DL	D258-02I	10	NA	05/26/2313:33	04/27/2311:30	XE22114A	XE22107A	EXD015W	Diluted Sample
TMW41042023	D258-03	1	NA	05/24/2303:30	04/27/2311:30	XE22048A	XE22042A	EXD015W	Field Sample
TMW07042023	D258-04	1	NA	05/24/2304:18	04/27/2311:30	XE22049A	XE22042A	EXD015W	Field Sample
TMW55042023	D258-05	1	NA	05/24/2305:14	04/27/2311:30	XE22050A	XE22042A	EXD015W	Field Sample
TMW04042023	D258-06	1	NA	05/24/2306:03	04/27/2311:30	XE22051A	XE22042A	EXD015W	Field Sample
TMW22042023	D258-07	1	NA	05/24/2306:59	04/27/2311:30	XE22052A	XE22042A	EXD015W	Field Sample
TMW62042023	D258-08	1	NA	05/24/2307:48	04/27/2311:30	XE22053A	XE22042A	EXD015W	Field Sample
TMW29042023	D258-09	1	NA	05/24/2310:54	04/27/2311:30	XE22056A	XE22054A	EXD015W	Field Sample
TMW02042023	D258-10	1	NA	05/24/2311:43	04/27/2311:30	XE22057A	XE22054A	EXD015W	Field Sample
TMW02042023D	D258-11	1	NA	05/24/2312:39	04/27/2311:30	XE22058A	XE22054A	EXD015W	Field Sample
TMW14A042023	D258-13	1	NA	05/24/2313:28	04/27/2311:30	XE22059A	XE22054A	EXD015W	Field Sample
TMW51042023	D258-14	1	NA	05/24/2314:24	04/27/2311:30	XE22060A	XE22054A	EXD015W	Field Sample
MW25042023	D258-15	1	NA	05/24/2315:12	04/27/2311:30	XE22061A	XE22054A	EXD015W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D258
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	EXD015WB	1	NA	05/23/2318:45	04/27/2311:30	XE22038A	XE22028A	EXD015W	Method Blank
LCS1W	35D015WL	1	NA	05/24/2300:00	04/27/2311:30	XE22044A	XE22043A	EXD015W	Lab Control Sample (LCS)
LCD1W	35D015WC	1	NA	05/24/2300:48	04/27/2311:30	XE22045A	XE22043A	EXD015W	LCS Duplicate
MW29042023	D258-01	1	NA	05/24/2301:45	04/27/2311:30	XE22046A	XE22043A	EXD015W	Field Sample
TMW23042023	D258-02	1	NA	05/24/2302:33	04/27/2311:30	XE22047A	XE22043A	EXD015W	Field Sample
TMW41042023	D258-03	1	NA	05/24/2303:30	04/27/2311:30	XE22048A	XE22043A	EXD015W	Field Sample
TMW07042023	D258-04	1	NA	05/24/2304:18	04/27/2311:30	XE22049A	XE22043A	EXD015W	Field Sample
TMW55042023	D258-05	1	NA	05/24/2305:14	04/27/2311:30	XE22050A	XE22043A	EXD015W	Field Sample
TMW04042023	D258-06	1	NA	05/24/2306:03	04/27/2311:30	XE22051A	XE22043A	EXD015W	Field Sample
TMW22042023	D258-07	1	NA	05/24/2306:59	04/27/2311:30	XE22052A	XE22043A	EXD015W	Field Sample
TMW62042023	D258-08	1	NA	05/24/2307:48	04/27/2311:30	XE22053A	XE22043A	EXD015W	Field Sample
TMW29042023	D258-09	1	NA	05/24/2310:54	04/27/2311:30	XE22056A	XE22055A	EXD015W	Field Sample
TMW02042023	D258-10	1	NA	05/24/2311:43	04/27/2311:30	XE22057A	XE22055A	EXD015W	Field Sample
TMW02042023D	D258-11	1	NA	05/24/2312:39	04/27/2311:30	XE22058A	XE22055A	EXD015W	Field Sample
TMW14A042023	D258-13	1	NA	05/24/2313:28	04/27/2311:30	XE22059A	XE22055A	EXD015W	Field Sample
TMW51042023	D258-14	1	NA	05/24/2314:24	04/27/2311:30	XE22060A	XE22055A	EXD015W	Field Sample
MW25042023	D258-15	1	NA	05/24/2315:12	04/27/2311:30	XE22061A	XE22055A	EXD015W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: MW29042023	Date Analyzed: 05/24/23 01:45
Lab Samp ID: D258-01	Dilution Factor: 1
Lab File ID: XE22046A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22042A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: MW29042023	Date Analyzed: 05/24/23 01:45
Lab Samp ID: D258-01	Dilution Factor: 1
Lab File ID: XE22046A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22043A	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	: 04/21/23
Project	: USACE WINGATE	Date Received	: 04/22/23
Batch No.	: 23D258	Date Extracted	: 04/27/23 11:30
Sample ID	: TMW23042023	Date Analyzed	: 05/24/23 02:33 # 05/26/23 13:33
Lab Samp ID	: D258-02 #D258-02I	Dilution Factor	: 1 # 10
Lab File ID	: XE22047A #XE22114A	Matrix	: WATER
Ext Btch ID	: EXD015W	% Moisture	: NA
Calib. Ref.	: XE22042A #XE22107A	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	47	10	1.0	2.0
	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	3.55	4.000	88.9	60-140
#	3,4-DINITROTOLUENE	3.84	4.000	96.0	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW23042023	Date Analyzed: 05/24/23 02:33
Lab Samp ID: D258-02	Dilution Factor: 1
Lab File ID: XE22047A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22042A	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	48E	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	88.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW23042023	Date Analyzed: 05/24/23 02:33
Lab Samp ID: D258-02	Dilution Factor: 1
Lab File ID: XE22047A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22043A	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	88.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW23042023DL	Date Analyzed: 05/26/23 13:33
Lab Samp ID: D258-02I	Dilution Factor: 10
Lab File ID: XE22114A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22107A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	10	1.0	2.0
RDX	47	10	1.0	2.0
1,3,5-TRINITROBENZENE	ND	10	1.0	2.0
1,3-DINITROBENZENE	ND	10	1.0	2.0
TETRYL	ND	10	1.0	2.0
NITROBENZENE	ND	10	1.0	2.0
2,4,6-TRINITROTOLUENE	ND	10	1.0	2.0
4-AMINO-2,6-DINITROTOLUENE	ND	10	1.0	2.0
2-AMINO-4,6-DINITROTOLUENE	ND	10	1.0	2.0
2,6-DINITROTOLUENE	ND	10	1.0	2.0
2,4-DINITROTOLUENE	ND	10	1.0	2.0
2-NITROTOLUENE	ND	10	1.0	2.0
3-NITROTOLUENE	ND	10	1.0	2.0
4-NITROTOLUENE	ND	10	1.0	2.0

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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW41042023	Date Analyzed: 05/24/23 03:30
Lab Samp ID: D258-03	Dilution Factor: 1
Lab File ID: XE22048A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22042A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW41042023	Date Analyzed: 05/24/23 03:30
Lab Samp ID: D258-03	Dilution Factor: 1
Lab File ID: XE22048A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22043A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW07042023	Date Analyzed: 05/24/23 04:18
Lab Samp ID: D258-04	Dilution Factor: 1
Lab File ID: XE22049A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22042A	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	90.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW07042023	Date Analyzed: 05/24/23 04:18
Lab Samp ID: D258-04	Dilution Factor: 1
Lab File ID: XE22049A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22043A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW55042023	Date Analyzed: 05/24/23 05:14
Lab Samp ID: D258-05	Dilution Factor: 1
Lab File ID: XE22050A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22042A	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	3.29	4.000	82.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW55042023	Date Analyzed: 05/24/23 05:14
Lab Samp ID: D258-05	Dilution Factor: 1
Lab File ID: XE22050A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22043A	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	3.29	4.000	82.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW04042023	Date Analyzed: 05/24/23 06:03
Lab Samp ID: D258-06	Dilution Factor: 1
Lab File ID: XE22051A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22042A	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	1.8	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	1.5	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	0.76J	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	0.90J	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	90.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW04042023	Date Analyzed: 05/24/23 06:03
Lab Samp ID: D258-06	Dilution Factor: 1
Lab File ID: XE22051A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22043A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	0.45	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.60	4.000	90.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW22042023	Date Analyzed: 05/24/23 06:59
Lab Samp ID: D258-07	Dilution Factor: 1
Lab File ID: XE22052A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22042A	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	87.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW22042023	Date Analyzed: 05/24/23 06:59
Lab Samp ID: D258-07	Dilution Factor: 1
Lab File ID: XE22052A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22043A	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	87.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW62042023	Date Analyzed: 05/24/23 07:48
Lab Samp ID: D258-08	Dilution Factor: 1
Lab File ID: XE22053A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22042A	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	16	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	3.33	4.000	83.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW62042023	Date Analyzed: 05/24/23 07:48
Lab Samp ID: D258-08	Dilution Factor: 1
Lab File ID: XE22053A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22043A	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	3.33	4.000	83.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW29042023	Date Analyzed: 05/24/23 10:54
Lab Samp ID: D258-09	Dilution Factor: 1
Lab File ID: XE22056A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22054A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW29042023	Date Analyzed: 05/24/23 10:54
Lab Samp ID: D258-09	Dilution Factor: 1
Lab File ID: XE22056A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22055A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW02042023	Date Analyzed: 05/24/23 11:43
Lab Samp ID: D258-10	Dilution Factor: 1
Lab File ID: XE22057A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22054A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW02042023	Date Analyzed: 05/24/23 11:43
Lab Samp ID: D258-10	Dilution Factor: 1
Lab File ID: XE22057A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22055A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	0.24J	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW02042023D	Date Analyzed: 05/24/23 12:39
Lab Samp ID: D258-11	Dilution Factor: 1
Lab File ID: XE22058A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22054A	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	93.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW02042023D	Date Analyzed: 05/24/23 12:39
Lab Samp ID: D258-11	Dilution Factor: 1
Lab File ID: XE22058A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22055A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	0.24J	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.74	4.000	93.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW14A042023	Date Analyzed: 05/24/23 13:28
Lab Samp ID: D258-13	Dilution Factor: 1
Lab File ID: XE22059A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22054A	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	97.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW14A042023	Date Analyzed: 05/24/23 13:28
Lab Samp ID: D258-13	Dilution Factor: 1
Lab File ID: XE22059A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22055A	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	97.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW51042023	Date Analyzed: 05/24/23 14:24
Lab Samp ID: D258-14	Dilution Factor: 1
Lab File ID: XE22060A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22054A	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	91.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: TMW51042023	Date Analyzed: 05/24/23 14:24
Lab Samp ID: D258-14	Dilution Factor: 1
Lab File ID: XE22060A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22055A	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	91.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: MW25042023	Date Analyzed: 05/24/23 15:12
Lab Samp ID: D258-15	Dilution Factor: 1
Lab File ID: XE22061A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22054A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 11:30
Sample ID: MW25042023	Date Analyzed: 05/24/23 15:12
Lab Samp ID: D258-15	Dilution Factor: 1
Lab File ID: XE22061A	Matrix : WATER
Ext Btch ID: EXD015W	% Moisture : NA
Calib. Ref.: XE22055A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW8332
NITROGLYCERIN AND PETN

A total of fourteen(14) water samples were received on 04/22/23 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. EXD014WB - 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. EXD014WL/EXD014WC 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. : 23D258
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	EXD014WB	1	NA	05/16/2300:28	04/27/2312:00	NE15077A	NE15067A	EXD014W	Method Blank
LCS1W	EXD014WL	1	NA	05/16/2300:37	04/27/2312:00	NE15078A	NE15067A	EXD014W	Lab Control Sample (LCS)
LCD1W	EXD014WC	1	NA	05/16/2300:46	04/27/2312:00	NE15079A	NE15067A	EXD014W	LCS Duplicate
MW29042023	D258-01	1	NA	05/16/2301:04	04/27/2312:00	NE15081A	NE15080A	EXD014W	Field Sample
TMW23042023	D258-02	1	NA	05/16/2301:13	04/27/2312:00	NE15082A	NE15080A	EXD014W	Field Sample
TMW41042023	D258-03	1	NA	05/16/2301:22	04/27/2312:00	NE15083A	NE15080A	EXD014W	Field Sample
TMW07042023	D258-04	1	NA	05/16/2301:31	04/27/2312:00	NE15084A	NE15080A	EXD014W	Field Sample
TMW55042023	D258-05	1	NA	05/16/2301:41	04/27/2312:00	NE15085A	NE15080A	EXD014W	Field Sample
TMW04042023	D258-06	1	NA	05/16/2313:18	04/27/2312:00	NE15162A	NE15159A	EXD014W	Field Sample
TMW22042023	D258-07	1	NA	05/16/2301:59	04/27/2312:00	NE15087A	NE15080A	EXD014W	Field Sample
TMW62042023	D258-08	1	NA	05/16/2302:08	04/27/2312:00	NE15088A	NE15080A	EXD014W	Field Sample
TMW29042023	D258-09	1	NA	05/16/2302:17	04/27/2312:00	NE15089A	NE15080A	EXD014W	Field Sample
TMW02042023	D258-10	1	NA	05/16/2302:26	04/27/2312:00	NE15090A	NE15080A	EXD014W	Field Sample
TMW02042023D	D258-11	1	NA	05/16/2302:44	04/27/2312:00	NE15092A	NE15091A	EXD014W	Field Sample
TMW14A042023	D258-13	1	NA	05/16/2302:53	04/27/2312:00	NE15093A	NE15091A	EXD014W	Field Sample
TMW51042023	D258-14	1	NA	05/16/2303:02	04/27/2312:00	NE15094A	NE15091A	EXD014W	Field Sample
MW25042023	D258-15	1	NA	05/16/2303:11	04/27/2312:00	NE15095A	NE15091A	EXD014W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: MW29042023	Date Analyzed: 05/16/23 01:04
Lab Samp ID: D258-01	Dilution Factor: 1
Lab File ID: NE15081A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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	532	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW23042023	Date Analyzed: 05/16/23 01:13
Lab Samp ID: D258-02	Dilution Factor: 1
Lab File ID: NE15082A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW41042023	Date Analyzed: 05/16/23 01:22
Lab Samp ID: D258-03	Dilution Factor: 1
Lab File ID: NE15083A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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	519	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW07042023	Date Analyzed: 05/16/23 01:31
Lab Samp ID: D258-04	Dilution Factor: 1
Lab File ID: NE15084A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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	513	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW55042023	Date Analyzed: 05/16/23 01:41
Lab Samp ID: D258-05	Dilution Factor: 1
Lab File ID: NE15085A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW04042023	Date Analyzed: 05/16/23 13:18
Lab Samp ID: D258-06	Dilution Factor: 1
Lab File ID: NE15162A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15159A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW22042023	Date Analyzed: 05/16/23 01:59
Lab Samp ID: D258-07	Dilution Factor: 1
Lab File ID: NE15087A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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	515	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW62042023	Date Analyzed: 05/16/23 02:08
Lab Samp ID: D258-08	Dilution Factor: 1
Lab File ID: NE15088A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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	521	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW29042023	Date Analyzed: 05/16/23 02:17
Lab Samp ID: D258-09	Dilution Factor: 1
Lab File ID: NE15089A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW02042023	Date Analyzed: 05/16/23 02:26
Lab Samp ID: D258-10	Dilution Factor: 1
Lab File ID: NE15090A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15080A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW02042023D	Date Analyzed: 05/16/23 02:44
Lab Samp ID: D258-11	Dilution Factor: 1
Lab File ID: NE15092A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15091A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW14A042023	Date Analyzed: 05/16/23 02:53
Lab Samp ID: D258-13	Dilution Factor: 1
Lab File ID: NE15093A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15091A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: TMW51042023	Date Analyzed: 05/16/23 03:02
Lab Samp ID: D258-14	Dilution Factor: 1
Lab File ID: NE15094A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15091A	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: 04/21/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D258	Date Extracted: 04/27/23 12:00
Sample ID: MW25042023	Date Analyzed: 05/16/23 03:11
Lab Samp ID: D258-15	Dilution Factor: 1
Lab File ID: NE15095A	Matrix : WATER
Ext Btch ID: EXD014W	% Moisture : NA
Calib. Ref.: NE15091A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW6020A
METALS BY ICP-MS

A total of seventeen(17) water samples were received on 04/22/23 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. Manganese(0.43J <1/2 LOQ) was detected at trace level in IMD048WB. 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. IMD048WL/IMD048WC 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: D258-01M/D258-01S - Percent recoveries for Barium, Calcium(28X), Manganese(34X) and Sodium(307X) were not within MS/MSD QC limits. Percent recovery for Copper(18X) was not within MS QC limit. Percent recoveries for Aluminum, Iron, Magnesium and Potassium 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. : 23D258
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	IMD048WB	1	NA	06/29/2315:18	04/27/2313:17	H6F27058	H6F27056	IMD048W	Method Blank
LCS1W	IMD048WL	1	NA	06/29/2315:21	04/27/2313:17	H6F27059	H6F27056	IMD048W	Lab Control Sample (LCS)
LCD1W	IMD048WC	1	NA	06/29/2315:24	04/27/2313:17	H6F27060	H6F27056	IMD048W	LCS Duplicate
MW29042023	D258-01A	5	NA	06/29/2315:33	04/27/2313:17	H6F27061	H6F27056	IMD048W	Analytical Spike Sample
MW29042023	D258-01G	5	NA	06/29/2315:36	04/27/2313:17	H6F27062	H6F27056	IMD048W	Diluted Sample
MW29042023	D258-01J	25	NA	06/29/2315:39	04/27/2313:17	H6F27063	H6F27056	IMD048W	Diluted Sample
MW29042023MS	D258-01M	5	NA	06/29/2315:42	04/27/2313:17	H6F27064	H6F27056	IMD048W	Matrix Spike Sample (MS)
MW29042023MSD	D258-01S	5	NA	06/29/2315:45	04/27/2313:17	H6F27065	H6F27056	IMD048W	MS Duplicate (MSD)
TMW23042023	D258-02G	5	NA	06/29/2315:48	04/27/2313:17	H6F27066	H6F27056	IMD048W	Diluted Sample
TMW41042023	D258-03G	5	NA	06/29/2315:51	04/27/2313:17	H6F27067	H6F27056	IMD048W	Diluted Sample
TMW07042023	D258-04I	10	NA	06/29/2315:59	04/27/2313:17	H6F27070	H6F27068	IMD048W	Diluted Sample
TMW55042023	D258-05G	5	NA	06/29/2316:02	04/27/2313:17	H6F27071	H6F27068	IMD048W	Diluted Sample
TMW04042023	D258-06G	5	NA	06/29/2316:05	04/27/2313:17	H6F27072	H6F27068	IMD048W	Diluted Sample
TMW22042023	D258-07G	5	NA	06/29/2316:08	04/27/2313:17	H6F27073	H6F27068	IMD048W	Diluted Sample
TMW62042023	D258-08G	5	NA	06/29/2316:11	04/27/2313:17	H6F27074	H6F27068	IMD048W	Diluted Sample
TMW29042023	D258-09G	5	NA	06/29/2316:14	04/27/2313:17	H6F27075	H6F27068	IMD048W	Diluted Sample
TMW02042023	D258-10I	10	NA	06/29/2316:17	04/27/2313:17	H6F27076	H6F27068	IMD048W	Diluted Sample
TMW02042023D	D258-11I	10	NA	06/29/2316:20	04/27/2313:17	H6F27077	H6F27068	IMD048W	Diluted Sample
TMW33042023	D258-12I	10	NA	06/29/2316:23	04/27/2313:17	H6F27078	H6F27068	IMD048W	Diluted Sample
TMW14A042023	D258-13G	5	NA	06/29/2316:26	04/27/2313:17	H6F27079	H6F27068	IMD048W	Diluted Sample
TMW51042023	D258-14G	5	NA	06/29/2316:34	04/27/2313:17	H6F27082	H6F27080	IMD048W	Diluted Sample
MW25042023	D258-15G	5	NA	06/29/2316:37	04/27/2313:17	H6F27083	H6F27080	IMD048W	Diluted Sample
TMW17042023	D258-16G	5	NA	06/29/2316:40	04/27/2313:17	H6F27084	H6F27080	IMD048W	Diluted Sample
TMW17042023D	D258-17G	5	NA	06/29/2316:43	04/27/2313:17	H6F27085	H6F27080	IMD048W	Diluted Sample
MW29042023	D258-01A	50	NA	06/29/2316:46	04/27/2313:17	H6F27086	H6F27080	IMD048W	Analytical Spike Sample
MW29042023	D258-01T	50	NA	06/29/2316:49	04/27/2313:17	H6F27087	H6F27080	IMD048W	Diluted Sample
MW29042023	D258-01J	250	NA	06/29/2316:52	04/27/2313:17	H6F27088	H6F27080	IMD048W	Diluted Sample
MW29042023MS	D258-01M	50	NA	06/29/2316:55	04/27/2313:17	H6F27089	H6F27080	IMD048W	Matrix Spike Sample (MS)
MW29042023MSD	D258-01S	50	NA	06/29/2316:58	04/27/2313:17	H6F27090	H6F27080	IMD048W	MS Duplicate (MSD)
TMW23042023	D258-02T	50	NA	06/29/2317:01	04/27/2313:17	H6F27091	H6F27080	IMD048W	Diluted Sample
TMW41042023	D258-03T	50	NA	06/29/2317:09	04/27/2313:17	H6F27094	H6F27092	IMD048W	Diluted Sample
TMW07042023	D258-04T	50	NA	06/29/2317:12	04/27/2313:17	H6F27095	H6F27092	IMD048W	Diluted Sample
TMW55042023	D258-05T	50	NA	06/29/2317:15	04/27/2313:17	H6F27096	H6F27092	IMD048W	Diluted Sample
TMW04042023	D258-06T	50	NA	06/29/2317:18	04/27/2313:17	H6F27097	H6F27092	IMD048W	Diluted Sample
TMW22042023	D258-07T	50	NA	06/29/2317:21	04/27/2313:17	H6F27098	H6F27092	IMD048W	Diluted Sample
TMW62042023	D258-08T	50	NA	06/29/2317:24	04/27/2313:17	H6F27099	H6F27092	IMD048W	Diluted Sample
TMW29042023	D258-09T	50	NA	06/29/2317:27	04/27/2313:17	H6F27100	H6F27092	IMD048W	Diluted Sample
TMW02042023	D258-10T	50	NA	06/29/2317:30	04/27/2313:17	H6F27101	H6F27092	IMD048W	Diluted Sample
TMW02042023D	D258-11T	50	NA	06/29/2317:33	04/27/2313:17	H6F27102	H6F27092	IMD048W	Diluted Sample
TMW33042023	D258-12T	100	NA	06/29/2317:36	04/27/2313:17	H6F27103	H6F27092	IMD048W	Diluted Sample
TMW14A042023	D258-13T	50	NA	06/29/2317:45	04/27/2313:17	H6F27106	H6F27104	IMD048W	Diluted Sample
TMW51042023	D258-14T	50	NA	06/29/2317:47	04/27/2313:17	H6F27107	H6F27104	IMD048W	Diluted Sample
MW25042023	D258-15T	50	NA	06/29/2317:50	04/27/2313:17	H6F27108	H6F27104	IMD048W	Diluted Sample
TMW17042023	D258-16T	50	NA	06/29/2317:53	04/27/2313:17	H6F27109	H6F27104	IMD048W	Diluted Sample
TMW17042023D	D258-17T	50	NA	06/29/2317:56	04/27/2313:17	H6F27110	H6F27104	IMD048W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	MW29042023	Date Analyzed:	06/29/23 15:36
Lab Samp ID:	D258-01G	Dilution Factor:	5
Lab File ID:	H6F27062	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	2600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.9	5.0	0.62	1.2
Barium	88	5.0	1.2	2.5
Beryllium	1.4J	2.5	0.50	1.0
Cadmium	1.7J	5.0	0.50	1.0
Calcium	84000	1000	250	500
Chromium	9.7	5.0	0.50	1.0
Cobalt	6.3	3.7	0.50	1.0
Copper	530	10	2.5	5.0
Iron	2500	1000	120	250
Lead	8.8	5.0	0.25	0.50
Magnesium	10000	500	100	250
Manganese	1000	5.0	1.2	2.5
Nickel	18	5.0	1.2	2.5
Potassium	950J	1000	250	500
Selenium	9.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	21	5.0	1.2	2.5
Zinc	58J	100	25	50

Sample ID:	MW29042023	Date Analyzed:	06/29/23 16:49
Lab Samp ID:	D258-01T	Dilution Factor:	50
Lab File ID:	H6F27087	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27080	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	MW29042023	Date Analyzed:	06/29/23 15:36
Lab Samp ID:	D258-01G	Dilution Factor:	5
Lab File ID:	H6F27062	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	2600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.9	5.0	0.62	1.2
Barium	88	5.0	1.2	2.5
Beryllium	1.4J	2.5	0.50	1.0
Cadmium	1.7J	5.0	0.50	1.0
Calcium	84000	1000	250	500
Chromium	9.7	5.0	0.50	1.0
Cobalt	6.3	3.7	0.50	1.0
Copper	530	10	2.5	5.0
Iron	2500	1000	120	250
Lead	8.8	5.0	0.25	0.50
Magnesium	10000	500	100	250
Manganese	1000	5.0	1.2	2.5
Nickel	18	5.0	1.2	2.5
Potassium	950J	1000	250	500
Selenium	9.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	890000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	21	5.0	1.2	2.5
Zinc	58J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	MW29042023	Date Analyzed:	06/29/23 16:49
Lab Samp ID:	D258-01T	Dilution Factor:	50
Lab File ID:	H6F27087	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27080	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	2700J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	7.1J	50	6.2	12
Barium	90	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	85000	10000	2500	5000
Chromium	7.4J	50	5.0	10
Cobalt	6.3J	37	5.0	10
Copper	550	100	25	50
Iron	2700J	10000	1200	2500
Lead	9.4J	50	2.5	5.0
Magnesium	10000	5000	1000	2500
Manganese	1000	50	12	25
Nickel	20J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	9.4J	50	7.5	15
Silver	ND	50	5.0	10
Sodium	920000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	22J	50	12	25
Zinc	260J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW23042023
Lab Samp ID: D258-02G
Lab File ID: H6F27066
Ext Btch ID: IMD048W
Calib. Ref.: H6F27056

Date Collected: 04/21/23 07:25
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 15:48
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	780	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	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	22000	1000	250	500
Chromium	1.9J	5.0	0.50	1.0
Cobalt	0.70J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	420J	1000	120	250
Lead	1.3J	5.0	0.25	0.50
Magnesium	4700	500	100	250
Manganese	88	5.0	1.2	2.5
Nickel	1.6J	5.0	1.2	2.5
Potassium	550J	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: TMW23042023
Lab Samp ID: D258-02T
Lab File ID: H6F27091
Ext Btch ID: IMD048W
Calib. Ref.: H6F27080

Date Analyzed: 06/29/23 17:01
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	880000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:25
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW23042023	Date Analyzed:	06/29/23 15:48
Lab Samp ID:	D258-02G	Dilution Factor:	5
Lab File ID:	H6F27066	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27056	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	780	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	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	22000	1000	250	500
Chromium	1.9J	5.0	0.50	1.0
Cobalt	0.70J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	420J	1000	120	250
Lead	1.3J	5.0	0.25	0.50
Magnesium	4700	500	100	250
Manganese	88	5.0	1.2	2.5
Nickel	1.6J	5.0	1.2	2.5
Potassium	550J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:25
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW23042023	Date Analyzed:	06/29/23 17:01
Lab Samp ID:	D258-02T	Dilution Factor:	50
Lab File ID:	H6F27091	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27080	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	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	4900J	5000	1000	2500
Manganese	94	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:00
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW41042023	Date Analyzed:	06/29/23 15:51
Lab Samp ID:	D258-03G	Dilution Factor:	5
Lab File ID:	H6F27067	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27056	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	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	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	3800	500	100	250
Manganese	10	5.0	1.2	2.5
Nickel	1.6J	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	7.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW41042023	Date Analyzed:	06/29/23 17:09
Lab Samp ID:	D258-03T	Dilution Factor:	50
Lab File ID:	H6F27094	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	850000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:00
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW41042023	Date Analyzed:	06/29/23 15:51
Lab Samp ID:	D258-03G	Dilution Factor:	5
Lab File ID:	H6F27067	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27056	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	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	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	3800	500	100	250
Manganese	10	5.0	1.2	2.5
Nickel	1.6J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:00
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW41042023	Date Analyzed:	06/29/23 17:09
Lab Samp ID:	D258-03T	Dilution Factor:	50
Lab File ID:	H6F27094	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	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	850000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW07042023
Lab Samp ID: D258-04I
Lab File ID: H6F27070
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 08:10
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 15:59
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	15	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	61000	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	440	10	2.5	5.0
Nickel	3.4J	10	2.5	5.0
Potassium	2800	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	5.7J	10	2.5	5.0
Zinc	56J	200	50	100

Sample ID: TMW07042023
Lab Samp ID: D258-04T
Lab File ID: H6F27095
Ext Btch ID: IMD048W
Calib. Ref.: H6F27092

Date Analyzed: 06/29/23 17:12
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:10
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW07042023	Date Analyzed:	06/29/23 15:59
Lab Samp ID:	D258-04I	Dilution Factor:	10
Lab File ID:	H6F27070	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	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	61000	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	440	10	2.5	5.0
Nickel	3.4J	10	2.5	5.0
Potassium	2800	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	5.7J	10	2.5	5.0
Zinc	56J	200	50	100

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:10
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW07042023	Date Analyzed:	06/29/23 17:12
Lab Samp ID:	D258-04T	Dilution Factor:	50
Lab File ID:	H6F27095	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	62000	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	450	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW55042023
Lab Samp ID: D258-05G
Lab File ID: H6F27071
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 08:30
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:02
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	300J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.4J	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	7300	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.5J	10	2.5	5.0
Iron	240J	1000	120	250
Lead	0.28J	5.0	0.25	0.50
Magnesium	840	500	100	250
Manganese	9.0	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	780J	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	9.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW55042023
Lab Samp ID: D258-05T
Lab File ID: H6F27096
Ext Btch ID: IMD048W
Calib. Ref.: H6F27092

Date Analyzed: 06/29/23 17:15
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW55042023	Date Analyzed:	06/29/23 16:02
Lab Samp ID:	D258-05G	Dilution Factor:	5
Lab File ID:	H6F27071	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	300J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.4J	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	7300	1000	250	500
Chromium	1.6J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.5J	10	2.5	5.0
Iron	240J	1000	120	250
Lead	0.28J	5.0	0.25	0.50
Magnesium	840	500	100	250
Manganese	9.0	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	780J	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	9.6	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW55042023	Date Analyzed:	06/29/23 17:15
Lab Samp ID:	D258-05T	Dilution Factor:	50
Lab File ID:	H6F27096	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	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	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW04042023	Date Analyzed:	06/29/23 16:05
Lab Samp ID:	D258-06G	Dilution Factor:	5
Lab File ID:	H6F27072	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	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	0.89J	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	30000	1000	250	500
Chromium	3.1J	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	5500	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	520J	1000	250	500
Selenium	73	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	18	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW04042023	Date Analyzed:	06/29/23 17:18
Lab Samp ID:	D258-06T	Dilution Factor:	50
Lab File ID:	H6F27097	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	850000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW04042023	Date Analyzed:	06/29/23 16:05
Lab Samp ID:	D258-06G	Dilution Factor:	5
Lab File ID:	H6F27072	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	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	0.89J	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	30000	1000	250	500
Chromium	3.1J	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	5500	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	520J	1000	250	500
Selenium	73	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	18	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW04042023	Date Analyzed:	06/29/23 17:18
Lab Samp ID:	D258-06T	Dilution Factor:	50
Lab File ID:	H6F27097	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	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	5600	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	71	50	7.5	15
Silver	ND	50	5.0	10
Sodium	850000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW22042023
Lab Samp ID: D258-07G
Lab File ID: H6F27073
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 08:55
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:08
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	140J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.92J	5.0	0.62	1.2
Barium	21	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	12	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	500J	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	5.4	5.0	1.2	2.5
Zinc	36J	100	25	50

Sample ID: TMW22042023
Lab Samp ID: D258-07T
Lab File ID: H6F27098
Ext Btch ID: IMD048W
Calib. Ref.: H6F27092

Date Analyzed: 06/29/23 17:21
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	840000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:55
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW22042023	Date Analyzed:	06/29/23 16:08
Lab Samp ID:	D258-07G	Dilution Factor:	5
Lab File ID:	H6F27073	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	140J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.92J	5.0	0.62	1.2
Barium	21	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	12	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	500J	1000	250	500
Selenium	2.4J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	830000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	5.4	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:55
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW22042023	Date Analyzed:	06/29/23 17:21
Lab Samp ID:	D258-07T	Dilution Factor:	50
Lab File ID:	H6F27098	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	21J	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	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	840000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW62042023
Lab Samp ID: D258-08G
Lab File ID: H6F27074
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 09:35
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:11
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	780	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	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	34000	1000	250	500
Chromium	0.98J	5.0	0.50	1.0
Cobalt	1.0J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	390J	1000	120	250
Lead	1.1J	5.0	0.25	0.50
Magnesium	7000	500	100	250
Manganese	290	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	560J	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	3.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW62042023
Lab Samp ID: D258-08T
Lab File ID: H6F27099
Ext Btch ID: IMD048W
Calib. Ref.: H6F27092

Date Analyzed: 06/29/23 17:24
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	720000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW62042023
Lab Samp ID: D258-08G
Lab File ID: H6F27074
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 09:35
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:11
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	780	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	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	34000	1000	250	500
Chromium	0.98J	5.0	0.50	1.0
Cobalt	1.0J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	390J	1000	120	250
Lead	1.1J	5.0	0.25	0.50
Magnesium	7000	500	100	250
Manganese	290	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	560J	1000	250	500
Selenium	1.7J	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	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:35
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW62042023	Date Analyzed:	06/29/23 17:24
Lab Samp ID:	D258-08T	Dilution Factor:	50
Lab File ID:	H6F27099	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	34000	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	300	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW29042023
Lab Samp ID: D258-09G
Lab File ID: H6F27075
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 09:40
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:14
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	800	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	42	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	1.6J	5.0	0.50	1.0
Cobalt	0.60J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	410J	1000	120	250
Lead	1.1J	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	58	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	790J	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	6.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW29042023
Lab Samp ID: D258-09T
Lab File ID: H6F27100
Ext Btch ID: IMD048W
Calib. Ref.: H6F27092

Date Analyzed: 06/29/23 17:27
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW29042023	Date Analyzed:	06/29/23 16:14
Lab Samp ID:	D258-09G	Dilution Factor:	5
Lab File ID:	H6F27075	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	800	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	5.0	0.62	1.2
Barium	42	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	1.6J	5.0	0.50	1.0
Cobalt	0.60J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	410J	1000	120	250
Lead	1.1J	5.0	0.25	0.50
Magnesium	7700	500	100	250
Manganese	58	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	790J	1000	250	500
Selenium	17	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	6.5	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW29042023	Date Analyzed:	06/29/23 17:27
Lab Samp ID:	D258-09T	Dilution Factor:	50
Lab File ID:	H6F27100	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	42000	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	7900	5000	1000	2500
Manganese	62	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW02042023
Lab Samp ID: D258-10I
Lab File ID: H6F27076
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 09:40
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:17
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	9.1J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	25000	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	3300	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1300J	2000	500	1000
Selenium	75	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	43	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW02042023
Lab Samp ID: D258-10T
Lab File ID: H6F27101
Ext Btch ID: IMD048W
Calib. Ref.: H6F27092

Date Analyzed: 06/29/23 17:30
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW02042023	Date Analyzed:	06/29/23 16:17
Lab Samp ID:	D258-10I	Dilution Factor:	10
Lab File ID:	H6F27076	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	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	9.1J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	25000	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	3300	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1300J	2000	500	1000
Selenium	75	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	43	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW02042023	Date Analyzed:	06/29/23 17:30
Lab Samp ID:	D258-10T	Dilution Factor:	50
Lab File ID:	H6F27101	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	75	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW02042023D
Lab Samp ID: D258-11I
Lab File ID: H6F27077
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 09:45
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:20
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	8.4J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	24000	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	3000	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1300J	2000	500	1000
Selenium	71	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	43	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW02042023D
Lab Samp ID: D258-11T
Lab File ID: H6F27102
Ext Btch ID: IMD048W
Calib. Ref.: H6F27092

Date Analyzed: 06/29/23 17:33
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:45
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW02042023D	Date Analyzed:	06/29/23 16:20
Lab Samp ID:	D258-11I	Dilution Factor:	10
Lab File ID:	H6F27077	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	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	8.4J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	24000	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	3000	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1300J	2000	500	1000
Selenium	71	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	43	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:45
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW02042023D	Date Analyzed:	06/29/23 17:33
Lab Samp ID:	D258-11T	Dilution Factor:	50
Lab File ID:	H6F27102	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	72	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW33042023
Lab Samp ID: D258-12I
Lab File ID: H6F27078
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 10:25
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:23
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	16	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	330	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	3.9J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW33042023
Lab Samp ID: D258-12T
Lab File ID: H6F27103
Ext Btch ID: IMD048W
Calib. Ref.: H6F27092

Date Analyzed: 06/29/23 17:36
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2400000	20000	5000	10000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW33042023
Lab Samp ID: D258-12I
Lab File ID: H6F27078
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 10:25
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:23
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	16	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	330	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	2500000E	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 10:25
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW33042023	Date Analyzed:	06/29/23 17:36
Lab Samp ID:	D258-12T	Dilution Factor:	100
Lab File ID:	H6F27103	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27092	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	32000	10000	2000	5000
Manganese	340	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	2400000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW14A042023
Lab Samp ID: D258-13G
Lab File ID: H6F27079
Ext Btch ID: IMD048W
Calib. Ref.: H6F27068

Date Collected: 04/21/23 11:30
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:26
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	ND	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	3600	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	19	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	450J	500	100	250
Manganese	14	5.0	1.2	2.5
Nickel	2.1J	5.0	1.2	2.5
Potassium	550J	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: TMW14A042023
Lab Samp ID: D258-13T
Lab File ID: H6F27106
Ext Btch ID: IMD048W
Calib. Ref.: H6F27104

Date Analyzed: 06/29/23 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	450000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW14A042023	Date Analyzed:	06/29/23 16:26
Lab Samp ID:	D258-13G	Dilution Factor:	5
Lab File ID:	H6F27079	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27068	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	19	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3600	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	19	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	450J	500	100	250
Manganese	14	5.0	1.2	2.5
Nickel	2.1J	5.0	1.2	2.5
Potassium	550J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW14A042023	Date Analyzed:	06/29/23 17:45
Lab Samp ID:	D258-13T	Dilution Factor:	50
Lab File ID:	H6F27106	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27104	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	4400J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW51042023
Lab Samp ID: D258-14G
Lab File ID: H6F27082
Ext Btch ID: IMD048W
Calib. Ref.: H6F27080

Date Collected: 04/21/23 11:45
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:34
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	390J	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	20000	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	240J	1000	120	250
Lead	0.59J	5.0	0.25	0.50
Magnesium	3200	500	100	250
Manganese	62	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	970J	1000	250	500
Selenium	5.2	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	5.5	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW51042023
Lab Samp ID: D258-14T
Lab File ID: H6F27107
Ext Btch ID: IMD048W
Calib. Ref.: H6F27104

Date Analyzed: 06/29/23 17:47
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	720000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:45
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW51042023	Date Analyzed:	06/29/23 16:34
Lab Samp ID:	D258-14G	Dilution Factor:	5
Lab File ID:	H6F27082	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27080	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	390J	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	20000	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	240J	1000	120	250
Lead	0.59J	5.0	0.25	0.50
Magnesium	3200	500	100	250
Manganese	62	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	970J	1000	250	500
Selenium	5.2	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	5.5	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:45
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW51042023	Date Analyzed:	06/29/23 17:47
Lab Samp ID:	D258-14T	Dilution Factor:	50
Lab File ID:	H6F27107	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27104	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	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	3300J	5000	1000	2500
Manganese	67	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: MW25042023
Lab Samp ID: D258-15G
Lab File ID: H6F27083
Ext Btch ID: IMD048W
Calib. Ref.: H6F27080

Date Collected: 04/21/23 13:20
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:37
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	120J	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	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	21000	500	100	250
Manganese	31	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	820J	1000	250	500
Selenium	68	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: MW25042023
Lab Samp ID: D258-15T
Lab File ID: H6F27108
Ext Btch ID: IMD048W
Calib. Ref.: H6F27104

Date Analyzed: 06/29/23 17:50
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1400000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	MW25042023	Date Analyzed:	06/29/23 16:37
Lab Samp ID:	D258-15G	Dilution Factor:	5
Lab File ID:	H6F27083	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27080	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	120J	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	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	21000	500	100	250
Manganese	31	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	820J	1000	250	500
Selenium	68	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1400000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	MW25042023	Date Analyzed:	06/29/23 17:50
Lab Samp ID:	D258-15T	Dilution Factor:	50
Lab File ID:	H6F27108	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27104	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	21000	5000	1000	2500
Manganese	34J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW17042023
Lab Samp ID: D258-16G
Lab File ID: H6F27084
Ext Btch ID: IMD048W
Calib. Ref.: H6F27080

Date Collected: 04/21/23 13:40
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:40
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	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	0.29J	5.0	0.25	0.50
Magnesium	600	500	100	250
Manganese	13	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	720J	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: TMW17042023
Lab Samp ID: D258-16T
Lab File ID: H6F27109
Ext Btch ID: IMD048W
Calib. Ref.: H6F27104

Date Analyzed: 06/29/23 17:53
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	460000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW17042023	Date Analyzed:	06/29/23 16:40
Lab Samp ID:	D258-16G	Dilution Factor:	5
Lab File ID:	H6F27084	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27080	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	0.29J	5.0	0.25	0.50
Magnesium	600	500	100	250
Manganese	13	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	720J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW17042023	Date Analyzed:	06/29/23 17:53
Lab Samp ID:	D258-16T	Dilution Factor:	50
Lab File ID:	H6F27109	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27104	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	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	460000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW17042023D
Lab Samp ID: D258-17G
Lab File ID: H6F27085
Ext Btch ID: IMD048W
Calib. Ref.: H6F27080

Date Collected: 04/21/23 13:45
Date Received: 04/22/23
Date Extracted: 04/27/23 13:17
Date Analyzed: 06/29/23 16:43
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	15	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3800	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	600	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	740J	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: TMW17042023D
Lab Samp ID: D258-17T
Lab File ID: H6F27110
Ext Btch ID: IMD048W
Calib. Ref.: H6F27104

Date Analyzed: 06/29/23 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	480000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:45
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW17042023D	Date Analyzed:	06/29/23 16:43
Lab Samp ID:	D258-17G	Dilution Factor:	5
Lab File ID:	H6F27085	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27080	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	3800	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	600	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	740J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	480000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:45
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	TMW17042023D	Date Analyzed:	06/29/23 17:56
Lab Samp ID:	D258-17T	Dilution Factor:	50
Lab File ID:	H6F27110	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27104	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	4800J	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	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	480000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D258	Date Extracted:	04/27/23 13:17
Sample ID:	MBLK1W	Date Analyzed:	06/29/23 15:18
Lab Samp ID:	IMD048WB	Dilution Factor:	1
Lab File ID:	H6F27058	Matrix:	WATER
Ext Btch ID:	IMD048W	% Moisture:	NA
Calib. Ref.:	H6F27056	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	0.43J	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of seventeen(17) water samples were received on 04/22/23 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. Manganese(0.46J <1/2 LOQ) was detected at trace level in IMD049WB. 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. IMD049WL/IMD049WC 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. : 23D258
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	IMD049WB	1	NA	06/29/2318:05	04/27/2316:51	H6F27113	H6F27111	IMD049W	Method Blank
LCS1W	IMD049WL	1	NA	06/29/2318:08	04/27/2316:51	H6F27114	H6F27111	IMD049W	Lab Control Sample (LCS)
LCD1W	IMD049WC	1	NA	06/29/2318:11	04/27/2316:51	H6F27115	H6F27111	IMD049W	LCS Duplicate
MW29042023	D258-01G	5	NA	06/29/2318:14	04/27/2316:51	H6F27116	H6F27111	IMD049W	Diluted Sample
TMW23042023	D258-02G	5	NA	06/29/2318:17	04/27/2316:51	H6F27117	H6F27111	IMD049W	Diluted Sample
TMW41042023	D258-03G	5	NA	06/29/2318:20	04/27/2316:51	H6F27118	H6F27111	IMD049W	Diluted Sample
TMW07042023	D258-04I	10	NA	06/29/2318:23	04/27/2316:51	H6F27119	H6F27111	IMD049W	Diluted Sample
TMW55042023	D258-05G	5	NA	06/29/2318:25	04/27/2316:51	H6F27120	H6F27111	IMD049W	Diluted Sample
TMW04042023	D258-06G	5	NA	06/29/2318:28	04/27/2316:51	H6F27121	H6F27111	IMD049W	Diluted Sample
TMW22042023	D258-07G	5	NA	06/29/2318:31	04/27/2316:51	H6F27122	H6F27111	IMD049W	Diluted Sample
TMW62042023	D258-08G	5	NA	06/29/2318:40	04/27/2316:51	H6F27125	H6F27123	IMD049W	Diluted Sample
TMW29042023	D258-09G	5	NA	06/29/2318:43	04/27/2316:51	H6F27126	H6F27123	IMD049W	Diluted Sample
TMW02042023	D258-10I	10	NA	06/29/2318:46	04/27/2316:51	H6F27127	H6F27123	IMD049W	Diluted Sample
TMW02042023D	D258-11I	10	NA	06/29/2318:49	04/27/2316:51	H6F27128	H6F27123	IMD049W	Diluted Sample
TMW33042023	D258-12I	10	NA	06/29/2318:52	04/27/2316:51	H6F27129	H6F27123	IMD049W	Diluted Sample
TMW14A042023	D258-13G	5	NA	06/29/2318:55	04/27/2316:51	H6F27130	H6F27123	IMD049W	Diluted Sample
TMW51042023	D258-14G	5	NA	06/29/2318:58	04/27/2316:51	H6F27131	H6F27123	IMD049W	Diluted Sample
MW25042023	D258-15G	5	NA	06/29/2319:01	04/27/2316:51	H6F27132	H6F27123	IMD049W	Diluted Sample
TMW17042023	D258-16G	5	NA	06/29/2319:04	04/27/2316:51	H6F27133	H6F27123	IMD049W	Diluted Sample
TMW17042023D	D258-17G	5	NA	06/29/2319:06	04/27/2316:51	H6F27134	H6F27123	IMD049W	Diluted Sample
MW29042023	D258-01T	50	NA	06/29/2319:15	04/27/2316:51	H6F27137	H6F27135	IMD049W	Diluted Sample
TMW23042023	D258-02T	50	NA	06/29/2319:18	04/27/2316:51	H6F27138	H6F27135	IMD049W	Diluted Sample
TMW41042023	D258-03T	50	NA	06/29/2319:21	04/27/2316:51	H6F27139	H6F27135	IMD049W	Diluted Sample
TMW07042023	D258-04T	50	NA	06/29/2319:24	04/27/2316:51	H6F27140	H6F27135	IMD049W	Diluted Sample
TMW55042023	D258-05T	50	NA	06/29/2319:27	04/27/2316:51	H6F27141	H6F27135	IMD049W	Diluted Sample
TMW04042023	D258-06T	50	NA	06/29/2319:30	04/27/2316:51	H6F27142	H6F27135	IMD049W	Diluted Sample
TMW22042023	D258-07T	50	NA	06/29/2319:33	04/27/2316:51	H6F27143	H6F27135	IMD049W	Diluted Sample
TMW62042023	D258-08T	50	NA	06/29/2319:36	04/27/2316:51	H6F27144	H6F27135	IMD049W	Diluted Sample
TMW29042023	D258-09T	50	NA	06/29/2319:39	04/27/2316:51	H6F27145	H6F27135	IMD049W	Diluted Sample
TMW02042023	D258-10T	50	NA	06/29/2319:42	04/27/2316:51	H6F27146	H6F27135	IMD049W	Diluted Sample
TMW02042023D	D258-11T	50	NA	06/29/2319:50	04/27/2316:51	H6F27149	H6F27147	IMD049W	Diluted Sample
TMW33042023	D258-12T	100	NA	06/29/2319:53	04/27/2316:51	H6F27150	H6F27147	IMD049W	Diluted Sample
TMW14A042023	D258-13T	50	NA	06/29/2319:56	04/27/2316:51	H6F27151	H6F27147	IMD049W	Diluted Sample
TMW51042023	D258-14T	50	NA	06/29/2319:59	04/27/2316:51	H6F27152	H6F27147	IMD049W	Diluted Sample
MW25042023	D258-15T	50	NA	06/29/2320:02	04/27/2316:51	H6F27153	H6F27147	IMD049W	Diluted Sample
TMW17042023	D258-16T	50	NA	06/29/2320:05	04/27/2316:51	H6F27154	H6F27147	IMD049W	Diluted Sample
TMW17042023D	D258-17T	50	NA	06/29/2320:08	04/27/2316:51	H6F27155	H6F27147	IMD049W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: MW29042023
Lab Samp ID: D258-01G
Lab File ID: H6F27116
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 07:20
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:14
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	1.8J	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	41000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	45	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8700	500	100	250
Manganese	45	5.0	1.2	2.5
Nickel	5.1	5.0	1.2	2.5
Potassium	410J	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	4.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW29042023
Lab Samp ID: D258-01T
Lab File ID: H6F27137
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 19:15
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	950000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: MW29042023
Lab Samp ID: D258-01G
Lab File ID: H6F27116
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 07:20
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:14
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	1.8J	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	41000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	45	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8700	500	100	250
Manganese	45	5.0	1.2	2.5
Nickel	5.1	5.0	1.2	2.5
Potassium	410J	1000	250	500
Selenium	15	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	890000E	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	MW29042023	Date Analyzed:	06/29/23 19:15
Lab Samp ID:	D258-01T	Dilution Factor:	50
Lab File ID:	H6F27137	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27135	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	43000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	29J	100	25	50
Iron	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	9200	5000	1000	2500
Manganese	49J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW23042023
Lab Samp ID: D258-02G
Lab File ID: H6F27117
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 07:25
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:17
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	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	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	4500	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	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: TMW23042023
Lab Samp ID: D258-02T
Lab File ID: H6F27138
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 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	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 07:25
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D258	Date Extracted: 04/27/23 16:51
Sample ID: TMW23042023	Date Analyzed: 06/29/23 18:17
Lab Samp ID: D258-02G	Dilution Factor: 5
Lab File ID: H6F27117	Matrix: WATER
Ext Btch ID: IMD049W	% Moisture: NA
Calib. Ref.: H6F27111	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	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	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	4500	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	340J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 07:25
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW23042023	Date Analyzed:	06/29/23 19:18
Lab Samp ID:	D258-02T	Dilution Factor:	50
Lab File ID:	H6F27138	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27135	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	21J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	17000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	11000	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	4600J	5000	1000	2500
Manganese	78	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW41042023
Lab Samp ID: D258-03G
Lab File ID: H6F27118
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 08:00
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 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	ND	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	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	3700	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	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: TMW41042023
Lab Samp ID: D258-03T
Lab File ID: H6F27139
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 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	850000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW41042023
Lab Samp ID: D258-03G
Lab File ID: H6F27118
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 08:00
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 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	ND	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	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	3700	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	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	830000E	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW41042023
Lab Samp ID: D258-03T
Lab File ID: H6F27139
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Collected: 04/21/23 08:00
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 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)
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	15000	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	3700J	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	850000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW07042023
Lab Samp ID: D258-04I
Lab File ID: H6F27119
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 08:10
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:23
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	15	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	56000	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	10000	1000	200	500
Manganese	260	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	4100	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	3.9J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW07042023
Lab Samp ID: D258-04T
Lab File ID: H6F27140
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 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	1300000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:10
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW07042023	Date Analyzed:	06/29/23 18:23
Lab Samp ID:	D258-04I	Dilution Factor:	10
Lab File ID:	H6F27119	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27111	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	56000	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	10000	1000	200	500
Manganese	260	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	4100	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW07042023
Lab Samp ID: D258-04T
Lab File ID: H6F27140
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Collected: 04/21/23 08:10
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 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)
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	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	10000	5000	1000	2500
Manganese	410	50	12	25
Nickel	ND	50	12	25
Potassium	5200J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW55042023
Lab Samp ID: D258-05G
Lab File ID: H6F27120
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 08:30
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:25
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.2J	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	6800	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	730	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	730J	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: TMW55042023
Lab Samp ID: D258-05T
Lab File ID: H6F27141
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 19:27
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW55042023
Lab Samp ID: D258-05G
Lab File ID: H6F27120
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 08:30
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:25
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.2J	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	6800	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	730	500	100	250
Manganese	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	730J	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW55042023	Date Analyzed:	06/29/23 19:27
Lab Samp ID:	D258-05T	Dilution Factor:	50
Lab File ID:	H6F27141	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27135	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	6700J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW04042023
Lab Samp ID: D258-06G
Lab File ID: H6F27121
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 08:30
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 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	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.93J	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	30000	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	5500	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	73	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	18	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW04042023
Lab Samp ID: D258-06T
Lab File ID: H6F27142
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 19:30
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	830000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 08:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW04042023	Date Analyzed:	06/29/23 18:28
Lab Samp ID:	D258-06G	Dilution Factor:	5
Lab File ID:	H6F27121	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27111	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	0.93J	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	30000	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	5500	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	73	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	18	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW04042023
Lab Samp ID: D258-06T
Lab File ID: H6F27142
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Collected: 04/21/23 08:30
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:30
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	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	5600	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	830000	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW22042023
Lab Samp ID: D258-07G
Lab File ID: H6F27122
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 08:55
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:31
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	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	0.70J	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	ND	5.0	1.2	2.5
Potassium	530J	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	5.3	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW22042023
Lab Samp ID: D258-07T
Lab File ID: H6F27143
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 19:33
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	850000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW22042023
Lab Samp ID: D258-07G
Lab File ID: H6F27122
Ext Btch ID: IMD049W
Calib. Ref.: H6F27111

Date Collected: 04/21/23 08:55
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:31
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	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	0.70J	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	ND	5.0	1.2	2.5
Potassium	530J	1000	250	500
Selenium	2.5J	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	5.3	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW22042023
Lab Samp ID: D258-07T
Lab File ID: H6F27143
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Collected: 04/21/23 08:55
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:33
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	19J	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	850000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW62042023
Lab Samp ID: D258-08G
Lab File ID: H6F27125
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 09:35
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 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	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	28000	1000	250	500
Chromium	0.56J	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	6.9	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	510J	1000	250	500
Selenium	1.2J	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: TMW62042023
Lab Samp ID: D258-08T
Lab File ID: H6F27144
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 19:36
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	720000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW62042023
Lab Samp ID: D258-08G
Lab File ID: H6F27125
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 09:35
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 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	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	28000	1000	250	500
Chromium	0.56J	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	6.9	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	510J	1000	250	500
Selenium	1.2J	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	1.7J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:35
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW62042023	Date Analyzed:	06/29/23 19:36
Lab Samp ID:	D258-08T	Dilution Factor:	50
Lab File ID:	H6F27144	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27135	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	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	6800	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	720000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW29042023
Lab Samp ID: D258-09G
Lab File ID: H6F27126
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 09:40
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:43
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	1.0J	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	39000	1000	250	500
Chromium	1.0J	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	7300	500	100	250
Manganese	8.1	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	710J	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	4.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW29042023
Lab Samp ID: D258-09T
Lab File ID: H6F27145
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Analyzed: 06/29/23 19:39
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW29042023
Lab Samp ID: D258-09G
Lab File ID: H6F27126
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 09:40
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:43
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	1.0J	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	39000	1000	250	500
Chromium	1.0J	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	7300	500	100	250
Manganese	8.1	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	710J	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW29042023
Lab Samp ID: D258-09T
Lab File ID: H6F27145
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Collected: 04/21/23 09:40
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:39
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	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	7300	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW02042023	Date Analyzed:	06/29/23 18:46
Lab Samp ID:	D258-10I	Dilution Factor:	10
Lab File ID:	H6F27127	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27123	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	8.0J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	24000	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	2900	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1400J	2000	500	1000
Selenium	74	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	42	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID:	TMW02042023	Date Analyzed:	06/29/23 19:42
Lab Samp ID:	D258-10T	Dilution Factor:	50
Lab File ID:	H6F27146	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27135	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 09:40
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D258	Date Extracted: 04/27/23 16:51
Sample ID: TMW02042023	Date Analyzed: 06/29/23 18:46
Lab Samp ID: D258-10I	Dilution Factor: 10
Lab File ID: H6F27127	Matrix: WATER
Ext Btch ID: IMD049W	% Moisture: NA
Calib. Ref.: H6F27123	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	8.0J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	24000	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	2900	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1400J	2000	500	1000
Selenium	74	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	42	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW02042023
Lab Samp ID: D258-10T
Lab File ID: H6F27146
Ext Btch ID: IMD049W
Calib. Ref.: H6F27135

Date Collected: 04/21/23 09:40
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:42
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	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	3000J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	77	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW02042023D
Lab Samp ID: D258-11I
Lab File ID: H6F27128
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 09:45
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:49
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	7.8J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	24000	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	2800	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1400J	2000	500	1000
Selenium	74	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	43	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW02042023D
Lab Samp ID: D258-11T
Lab File ID: H6F27149
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Analyzed: 06/29/23 19:50
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 09:45
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW02042023D	Date Analyzed:	06/29/23 18:49
Lab Samp ID:	D258-11I	Dilution Factor:	10
Lab File ID:	H6F27128	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27123	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	7.8J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	24000	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	2800	1000	200	500
Manganese	ND	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1400J	2000	500	1000
Selenium	74	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	43	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW02042023D
Lab Samp ID: D258-11T
Lab File ID: H6F27149
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Collected: 04/21/23 09:45
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:50
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	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	3000J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	76	50	7.5	15
Silver	ND	50	5.0	10
Sodium	1100000	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW33042023
Lab Samp ID: D258-12I
Lab File ID: H6F27129
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 10:25
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:52
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	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	62	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	590J	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	3.4J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW33042023
Lab Samp ID: D258-12T
Lab File ID: H6F27150
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Analyzed: 06/29/23 19:53
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2400000	20000	5000	10000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 10:25
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D258	Date Extracted: 04/27/23 16:51
Sample ID: TMW33042023	Date Analyzed: 06/29/23 18:52
Lab Samp ID: D258-12I	Dilution Factor: 10
Lab File ID: H6F27129	Matrix: WATER
Ext Btch ID: IMD049W	% Moisture: NA
Calib. Ref.: H6F27123	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	62	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	590J	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	3.4J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW33042023
Lab Samp ID: D258-12T
Lab File ID: H6F27150
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Collected: 04/21/23 10:25
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:53
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	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	67J	100	25	50
Nickel	ND	100	25	50
Potassium	ND	20000	5000	10000
Selenium	ND	100	15	30
Silver	ND	100	10	20
Sodium	2400000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW14A042023
Lab Samp ID: D258-13G
Lab File ID: H6F27130
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 11:30
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:55
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	17	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	3300	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	410J	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	1.3J	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	98J	100	25	50

Sample ID: TMW14A042023
Lab Samp ID: D258-13T
Lab File ID: H6F27151
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Analyzed: 06/29/23 19:56
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	430000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 11:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW14A042023	Date Analyzed:	06/29/23 18:55
Lab Samp ID:	D258-13G	Dilution Factor:	5
Lab File ID:	H6F27130	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27123	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	3300	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	410J	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	1.3J	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	430000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	98J	100	25	50

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 11:30
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D258	Date Extracted: 04/27/23 16:51
Sample ID: TMW14A042023	Date Analyzed: 06/29/23 19:56
Lab Samp ID: D258-13T	Dilution Factor: 50
Lab File ID: H6F27151	Matrix: WATER
Ext Btch ID: IMD049W	% Moisture: NA
Calib. Ref.: H6F27147	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	3200J	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW51042023
Lab Samp ID: D258-14G
Lab File ID: H6F27131
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 11:45
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:58
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	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	33	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	1000	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	4.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW51042023
Lab Samp ID: D258-14T
Lab File ID: H6F27152
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Analyzed: 06/29/23 19:59
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	680000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW51042023
Lab Samp ID: D258-14G
Lab File ID: H6F27131
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 11:45
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 18:58
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	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	33	5.0	1.2	2.5
Nickel	1.3J	5.0	1.2	2.5
Potassium	1000	1000	250	500
Selenium	5.3	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW51042023
Lab Samp ID: D258-14T
Lab File ID: H6F27152
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Collected: 04/21/23 11:45
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:59
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	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	3000J	5000	1000	2500
Manganese	34J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: MW25042023
Lab Samp ID: D258-15G
Lab File ID: H6F27132
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 13:20
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:01
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	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	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	20000	500	100	250
Manganese	18	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	860J	1000	250	500
Selenium	67	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: MW25042023
Lab Samp ID: D258-15T
Lab File ID: H6F27153
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Analyzed: 06/29/23 20:02
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	MW25042023	Date Analyzed:	06/29/23 19:01
Lab Samp ID:	D258-15G	Dilution Factor:	5
Lab File ID:	H6F27132	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27123	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	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	20000	500	100	250
Manganese	18	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	860J	1000	250	500
Selenium	67	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	1300000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 13:20
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D258	Date Extracted: 04/27/23 16:51
Sample ID: MW25042023	Date Analyzed: 06/29/23 20:02
Lab Samp ID: D258-15T	Dilution Factor: 50
Lab File ID: H6F27153	Matrix: WATER
Ext Btch ID: IMD049W	% Moisture: NA
Calib. Ref.: H6F27147	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	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	20000	5000	1000	2500
Manganese	18J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	68	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW17042023
Lab Samp ID: D258-16G
Lab File ID: H6F27133
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 13:40
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:04
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	3400	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	530	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	740J	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: TMW17042023
Lab Samp ID: D258-16T
Lab File ID: H6F27154
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Analyzed: 06/29/23 20:05
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW17042023	Date Analyzed:	06/29/23 19:04
Lab Samp ID:	D258-16G	Dilution Factor:	5
Lab File ID:	H6F27133	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27123	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	3400	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	530	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	740J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/21/23 13:40
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	TMW17042023	Date Analyzed:	06/29/23 20:05
Lab Samp ID:	D258-16T	Dilution Factor:	50
Lab File ID:	H6F27154	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27147	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	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	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D258
Sample ID: TMW17042023D
Lab Samp ID: D258-17G
Lab File ID: H6F27134
Ext Btch ID: IMD049W
Calib. Ref.: H6F27123

Date Collected: 04/21/23 13:45
Date Received: 04/22/23
Date Extracted: 04/27/23 16:51
Date Analyzed: 06/29/23 19:06
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	3500	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	530	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	730J	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: TMW17042023D
Lab Samp ID: D258-17T
Lab File ID: H6F27155
Ext Btch ID: IMD049W
Calib. Ref.: H6F27147

Date Analyzed: 06/29/23 20:08
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 13:45
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D258	Date Extracted: 04/27/23 16:51
Sample ID: TMW17042023D	Date Analyzed: 06/29/23 19:06
Lab Samp ID: D258-17G	Dilution Factor: 5
Lab File ID: H6F27134	Matrix: WATER
Ext Btch ID: IMD049W	% Moisture: NA
Calib. Ref.: H6F27123	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	3500	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	530	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	730J	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/21/23 13:45
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D258	Date Extracted: 04/27/23 16:51
Sample ID: TMW17042023D	Date Analyzed: 06/29/23 20:08
Lab Samp ID: D258-17T	Dilution Factor: 50
Lab File ID: H6F27155	Matrix: WATER
Ext Btch ID: IMD049W	% Moisture: NA
Calib. Ref.: H6F27147	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	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	460000	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D258	Date Extracted:	04/27/23 16:51
Sample ID:	MBLK1W	Date Analyzed:	06/29/23 18:05
Lab Samp ID:	IMD049WB	Dilution Factor:	1
Lab File ID:	H6F27113	Matrix:	WATER
Ext Btch ID:	IMD049W	% Moisture:	NA
Calib. Ref.:	H6F27111	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	0.46J	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of seventeen(17) water samples were received on 04/22/23 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 HGE021WB. 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. HGE021WL/HGE021WC 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 D258-03M/D258-03S. 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. : 23D258
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	HGE021WB	1	NA	05/18/2317:55	05/18/2312:57	M47E019012	M47E019	23HGE021W	Method Blank
LCS1W	HGE021WL	1	NA	05/18/2317:56	05/18/2312:57	M47E019013	M47E019	23HGE021W	Lab Control Sample (LCS)
LCD1W	HGE021WC	1	NA	05/18/2317:58	05/18/2312:57	M47E019014	M47E019	23HGE021W	LCS Duplicate
MW29042023	D258-01	1	NA	05/18/2318:00	05/18/2312:57	M47E019015	M47E019	23HGE021W	Field Sample
TMW23042023	D258-02	1	NA	05/18/2318:02	05/18/2312:57	M47E019016	M47E019	23HGE021W	Field Sample
TMW41042023MS	D258-03M	1	NA	05/18/2318:04	05/18/2312:57	M47E019017	M47E019	23HGE021W	Matrix Spike Sample (MS)
TMW41042023MSD	D258-03S	1	NA	05/18/2318:06	05/18/2312:57	M47E019018	M47E019	23HGE021W	MS Duplicate (MSD)
TMW41042023	D258-03	1	NA	05/18/2318:10	05/18/2312:57	M47E019020	M47E019	23HGE021W	Field Sample
TMW07042023	D258-04	1	NA	05/18/2318:18	05/18/2312:57	M47E019024	M47E019	23HGE021W	Field Sample
TMW55042023	D258-05	1	NA	05/18/2318:20	05/18/2312:57	M47E019025	M47E019	23HGE021W	Field Sample
TMW04042023	D258-06	1	NA	05/18/2318:21	05/18/2312:57	M47E019026	M47E019	23HGE021W	Field Sample
TMW22042023	D258-07	1	NA	05/18/2318:23	05/18/2312:57	M47E019027	M47E019	23HGE021W	Field Sample
TMW62042023	D258-08	1	NA	05/18/2318:25	05/18/2312:57	M47E019028	M47E019	23HGE021W	Field Sample
TMW29042023	D258-09	1	NA	05/18/2318:26	05/18/2312:57	M47E019029	M47E019	23HGE021W	Field Sample
TMW02042023	D258-10	1	NA	05/18/2318:28	05/18/2312:57	M47E019030	M47E019	23HGE021W	Field Sample
TMW02042023D	D258-11	1	NA	05/18/2318:30	05/18/2312:57	M47E019031	M47E019	23HGE021W	Field Sample
TMW33042023	D258-12	1	NA	05/18/2318:32	05/18/2312:57	M47E019032	M47E019	23HGE021W	Field Sample
TMW14A042023	D258-13	1	NA	05/18/2318:33	05/18/2312:57	M47E019033	M47E019	23HGE021W	Field Sample
TMW51042023	D258-14	1	NA	05/18/2318:39	05/18/2312:57	M47E019036	M47E019	23HGE021W	Field Sample
MW25042023	D258-15	1	NA	05/18/2318:40	05/18/2312:57	M47E019037	M47E019	23HGE021W	Field Sample
TMW17042023	D258-16	1	NA	05/18/2318:42	05/18/2312:57	M47E019038	M47E019	23HGE021W	Field Sample
TMW17042023D	D258-17	1	NA	05/18/2318:44	05/18/2312:57	M47E019039	M47E019	23HGE021W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258

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	HGE021WB	ND	1	NA	0.50	0.10	0.20	05/18/2317:55	05/18/2312:57	M47E019012	M47E019	23HGE021W	NA	NA
LCS1W	HGE021WL	2.7	1	NA	0.50	0.10	0.20	05/18/2317:56	05/18/2312:57	M47E019013	M47E019	23HGE021W	NA	NA
LCD1W	HGE021WC	2.6	1	NA	0.50	0.10	0.20	05/18/2317:58	05/18/2312:57	M47E019014	M47E019	23HGE021W	NA	NA
MW29042023	D258-01	ND	1	NA	0.50	0.10	0.20	05/18/2318:00	05/18/2312:57	M47E019015	M47E019	23HGE021W	04/21/2307:20	04/22/23
TMW23042023	D258-02	ND	1	NA	0.50	0.10	0.20	05/18/2318:02	05/18/2312:57	M47E019016	M47E019	23HGE021W	04/21/2307:25	04/22/23
TMW41042023MS	D258-03M	2.7	1	NA	0.50	0.10	0.20	05/18/2318:04	05/18/2312:57	M47E019017	M47E019	23HGE021W	04/21/2308:00	04/22/23
TMW41042023MSD	D258-03S	2.7	1	NA	0.50	0.10	0.20	05/18/2318:06	05/18/2312:57	M47E019018	M47E019	23HGE021W	04/21/2308:00	04/22/23
TMW41042023	D258-03	ND	1	NA	0.50	0.10	0.20	05/18/2318:10	05/18/2312:57	M47E019020	M47E019	23HGE021W	04/21/2308:00	04/22/23
TMW07042023	D258-04	ND	1	NA	0.50	0.10	0.20	05/18/2318:18	05/18/2312:57	M47E019024	M47E019	23HGE021W	04/21/2308:10	04/22/23
TMW55042023	D258-05	ND	1	NA	0.50	0.10	0.20	05/18/2318:20	05/18/2312:57	M47E019025	M47E019	23HGE021W	04/21/2308:30	04/22/23
TMW04042023	D258-06	ND	1	NA	0.50	0.10	0.20	05/18/2318:21	05/18/2312:57	M47E019026	M47E019	23HGE021W	04/21/2308:30	04/22/23
TMW22042023	D258-07	ND	1	NA	0.50	0.10	0.20	05/18/2318:23	05/18/2312:57	M47E019027	M47E019	23HGE021W	04/21/2308:55	04/22/23
TMW62042023	D258-08	ND	1	NA	0.50	0.10	0.20	05/18/2318:25	05/18/2312:57	M47E019028	M47E019	23HGE021W	04/21/2309:35	04/22/23
TMW29042023	D258-09	ND	1	NA	0.50	0.10	0.20	05/18/2318:26	05/18/2312:57	M47E019029	M47E019	23HGE021W	04/21/2309:40	04/22/23
TMW02042023	D258-10	ND	1	NA	0.50	0.10	0.20	05/18/2318:28	05/18/2312:57	M47E019030	M47E019	23HGE021W	04/21/2309:40	04/22/23
TMW02042023D	D258-11	ND	1	NA	0.50	0.10	0.20	05/18/2318:30	05/18/2312:57	M47E019031	M47E019	23HGE021W	04/21/2309:45	04/22/23
TMW33042023	D258-12	ND	1	NA	0.50	0.10	0.20	05/18/2318:32	05/18/2312:57	M47E019032	M47E019	23HGE021W	04/21/2310:25	04/22/23
TMW14A042023	D258-13	ND	1	NA	0.50	0.10	0.20	05/18/2318:33	05/18/2312:57	M47E019033	M47E019	23HGE021W	04/21/2311:30	04/22/23
TMW51042023	D258-14	ND	1	NA	0.50	0.10	0.20	05/18/2318:39	05/18/2312:57	M47E019036	M47E019	23HGE021W	04/21/2311:45	04/22/23
MW25042023	D258-15	ND	1	NA	0.50	0.10	0.20	05/18/2318:40	05/18/2312:57	M47E019037	M47E019	23HGE021W	04/21/2313:20	04/22/23
TMW17042023	D258-16	ND	1	NA	0.50	0.10	0.20	05/18/2318:42	05/18/2312:57	M47E019038	M47E019	23HGE021W	04/21/2313:40	04/22/23
TMW17042023D	D258-17	ND	1	NA	0.50	0.10	0.20	05/18/2318:44	05/18/2312:57	M47E019039	M47E019	23HGE021W	04/21/2313:45	04/22/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of seventeen(17) water samples were received on 04/22/23 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 HGE022WB. 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. HGE022WL/HGE022WC 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 D258-03M/D258-03S. 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. : 23D258
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	HGE022WB	1	NA	05/18/2318:47	05/18/2313:52	M47E019041	M47E019	23HGE022W	Method Blank
LCS1W	HGE022WL	1	NA	05/18/2318:49	05/18/2313:52	M47E019042	M47E019	23HGE022W	Lab Control Sample (LCS)
LCD1W	HGE022WC	1	NA	05/18/2318:51	05/18/2313:52	M47E019043	M47E019	23HGE022W	LCS Duplicate
MW29042023	D258-01	1	NA	05/18/2318:53	05/18/2313:52	M47E019044	M47E019	23HGE022W	Field Sample
TMW23042023	D258-02	1	NA	05/18/2318:54	05/18/2313:52	M47E019045	M47E019	23HGE022W	Field Sample
TMW41042023MS	D258-03M	1	NA	05/18/2319:00	05/18/2313:52	M47E019048	M47E019	23HGE022W	Matrix Spike Sample (MS)
TMW41042023MSD	D258-03S	1	NA	05/18/2319:02	05/18/2313:52	M47E019049	M47E019	23HGE022W	MS Duplicate (MSD)
TMW41042023	D258-03	1	NA	05/18/2319:05	05/18/2313:52	M47E019051	M47E019	23HGE022W	Field Sample
TMW07042023	D258-04	1	NA	05/18/2319:09	05/18/2313:52	M47E019053	M47E019	23HGE022W	Field Sample
TMW55042023	D258-05	1	NA	05/18/2319:10	05/18/2313:52	M47E019054	M47E019	23HGE022W	Field Sample
TMW04042023	D258-06	1	NA	05/18/2319:13	05/18/2313:52	M47E019055	M47E019	23HGE022W	Field Sample
TMW22042023	D258-07	1	NA	05/18/2319:16	05/18/2313:52	M47E019056	M47E019	23HGE022W	Field Sample
TMW62042023	D258-08	1	NA	05/18/2319:18	05/18/2313:52	M47E019057	M47E019	23HGE022W	Field Sample
TMW29042023	D258-09	1	NA	05/18/2319:23	05/18/2313:52	M47E019060	M47E019	23HGE022W	Field Sample
TMW02042023	D258-10	1	NA	05/18/2319:25	05/18/2313:52	M47E019061	M47E019	23HGE022W	Field Sample
TMW02042023D	D258-11	1	NA	05/18/2319:27	05/18/2313:52	M47E019062	M47E019	23HGE022W	Field Sample
TMW33042023	D258-12	1	NA	05/18/2319:28	05/18/2313:52	M47E019063	M47E019	23HGE022W	Field Sample
TMW14A042023	D258-13	1	NA	05/18/2319:30	05/18/2313:52	M47E019064	M47E019	23HGE022W	Field Sample
TMW51042023	D258-14	1	NA	05/18/2319:32	05/18/2313:52	M47E019065	M47E019	23HGE022W	Field Sample
MW25042023	D258-15	1	NA	05/18/2319:34	05/18/2313:52	M47E019066	M47E019	23HGE022W	Field Sample
TMW17042023	D258-16	1	NA	05/18/2319:36	05/18/2313:52	M47E019067	M47E019	23HGE022W	Field Sample
TMW17042023D	D258-17	1	NA	05/18/2319:38	05/18/2313:52	M47E019068	M47E019	23HGE022W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258

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	HGE022WB	ND	1	NA	0.50	0.10	0.20	05/18/2318:47	05/18/2313:52	M47E019041	M47E019	23HGE022W	NA	NA
LCS1W	HGE022WL	2.5	1	NA	0.50	0.10	0.20	05/18/2318:49	05/18/2313:52	M47E019042	M47E019	23HGE022W	NA	NA
LCD1W	HGE022WC	2.6	1	NA	0.50	0.10	0.20	05/18/2318:51	05/18/2313:52	M47E019043	M47E019	23HGE022W	NA	NA
MW29042023	D258-01	ND	1	NA	0.50	0.10	0.20	05/18/2318:53	05/18/2313:52	M47E019044	M47E019	23HGE022W	04/21/2307:20	04/22/23
TMW23042023	D258-02	ND	1	NA	0.50	0.10	0.20	05/18/2318:54	05/18/2313:52	M47E019045	M47E019	23HGE022W	04/21/2307:25	04/22/23
TMW41042023MS	D258-03M	2.7	1	NA	0.50	0.10	0.20	05/18/2319:00	05/18/2313:52	M47E019048	M47E019	23HGE022W	04/21/2308:00	04/22/23
TMW41042023MSD	D258-03S	2.7	1	NA	0.50	0.10	0.20	05/18/2319:02	05/18/2313:52	M47E019049	M47E019	23HGE022W	04/21/2308:00	04/22/23
TMW41042023	D258-03	ND	1	NA	0.50	0.10	0.20	05/18/2319:05	05/18/2313:52	M47E019051	M47E019	23HGE022W	04/21/2308:00	04/22/23
TMW07042023	D258-04	ND	1	NA	0.50	0.10	0.20	05/18/2319:09	05/18/2313:52	M47E019053	M47E019	23HGE022W	04/21/2308:10	04/22/23
TMW55042023	D258-05	ND	1	NA	0.50	0.10	0.20	05/18/2319:10	05/18/2313:52	M47E019054	M47E019	23HGE022W	04/21/2308:30	04/22/23
TMW04042023	D258-06	ND	1	NA	0.50	0.10	0.20	05/18/2319:13	05/18/2313:52	M47E019055	M47E019	23HGE022W	04/21/2308:30	04/22/23
TMW22042023	D258-07	ND	1	NA	0.50	0.10	0.20	05/18/2319:16	05/18/2313:52	M47E019056	M47E019	23HGE022W	04/21/2308:55	04/22/23
TMW62042023	D258-08	ND	1	NA	0.50	0.10	0.20	05/18/2319:18	05/18/2313:52	M47E019057	M47E019	23HGE022W	04/21/2309:35	04/22/23
TMW29042023	D258-09	ND	1	NA	0.50	0.10	0.20	05/18/2319:23	05/18/2313:52	M47E019060	M47E019	23HGE022W	04/21/2309:40	04/22/23
TMW02042023	D258-10	ND	1	NA	0.50	0.10	0.20	05/18/2319:25	05/18/2313:52	M47E019061	M47E019	23HGE022W	04/21/2309:40	04/22/23
TMW02042023D	D258-11	ND	1	NA	0.50	0.10	0.20	05/18/2319:27	05/18/2313:52	M47E019062	M47E019	23HGE022W	04/21/2309:45	04/22/23
TMW33042023	D258-12	ND	1	NA	0.50	0.10	0.20	05/18/2319:28	05/18/2313:52	M47E019063	M47E019	23HGE022W	04/21/2310:25	04/22/23
TMW14A042023	D258-13	ND	1	NA	0.50	0.10	0.20	05/18/2319:30	05/18/2313:52	M47E019064	M47E019	23HGE022W	04/21/2311:30	04/22/23
TMW51042023	D258-14	ND	1	NA	0.50	0.10	0.20	05/18/2319:32	05/18/2313:52	M47E019065	M47E019	23HGE022W	04/21/2311:45	04/22/23
MW25042023	D258-15	ND	1	NA	0.50	0.10	0.20	05/18/2319:34	05/18/2313:52	M47E019066	M47E019	23HGE022W	04/21/2313:20	04/22/23
TMW17042023	D258-16	ND	1	NA	0.50	0.10	0.20	05/18/2319:36	05/18/2313:52	M47E019067	M47E019	23HGE022W	04/21/2313:40	04/22/23
TMW17042023D	D258-17	ND	1	NA	0.50	0.10	0.20	05/18/2319:38	05/18/2313:52	M47E019068	M47E019	23HGE022W	04/21/2313:45	04/22/23

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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23D258

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of fourteen(14) water samples were received on 04/22/23 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. PLE001WB and PLE002WB 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. PLE001WL/PLE001WC and PLE002WL/PLE002WC 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 D258-05M/D258-05S. 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.

Samples D258-01J, -02I, -07I, -08I, -09I, -15I, -16I and -17I 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. : 23D258
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	PLE001WB	ND	1	NA	0.20	0.050	0.10	05/01/2311:35	NA	23ME01007	ME01004	PLE001W	NA	NA
LCS1W	PLE001WL	0.19J	1	NA	0.20	0.050	0.10	05/01/2311:50	NA	23ME01008	ME01004	PLE001W	NA	NA
LCD1W	PLE001WC	0.21	1	NA	0.20	0.050	0.10	05/01/2312:27	NA	23ME01009	ME01004	PLE001W	NA	NA
TMW55042023	D258-05	ND	1	NA	0.20	0.050	0.10	05/01/2313:39	NA	23ME01013	ME01004	PLE001W	04/21/2308:30	04/22/23
TMW55042023MS	D258-05M	0.20	1	NA	0.20	0.050	0.10	05/01/2322:51	NA	23ME01042	ME01039	PLE001W	04/21/2308:30	04/22/23
TMW55042023MSD	D258-05S	0.22	1	NA	0.20	0.050	0.10	05/01/2323:05	NA	23ME01043	ME01039	PLE001W	04/21/2308:30	04/22/23
TMW23042023	D258-02I	ND	5	NA	1.0	0.25	0.50	05/02/2302:01	NA	23ME01053	ME01050	PLE001W	04/21/2307:25	04/22/23
TMW41042023	D258-03I	15	5	NA	1.0	0.25	0.50	05/02/2302:16	NA	23ME01054	ME01050	PLE001W	04/21/2308:00	04/22/23
TMW04042023	D258-06I	0.46J	5	NA	1.0	0.25	0.50	05/02/2302:45	NA	23ME01056	ME01050	PLE001W	04/21/2308:30	04/22/23
TMW22042023	D258-07I	ND	5	NA	1.0	0.25	0.50	05/02/2303:00	NA	23ME01057	ME01050	PLE001W	04/21/2308:55	04/22/23
TMW62042023	D258-08I	ND	5	NA	1.0	0.25	0.50	05/02/2303:14	NA	23ME01058	ME01050	PLE001W	04/21/2309:35	04/22/23
TMW29042023	D258-09I	ND	5	NA	1.0	0.25	0.50	05/02/2303:29	NA	23ME01059	ME01050	PLE001W	04/21/2309:40	04/22/23
TMW02042023	D258-10I	8.4	5	NA	1.0	0.25	0.50	05/02/2303:44	NA	23ME01060	ME01050	PLE001W	04/21/2309:40	04/22/23
MBLK2W	PLE002WB	ND	1	NA	0.20	0.050	0.10	05/03/2311:50	NA	23ME03007	ME03004	PLE002W	NA	NA
LCS2W	PLE002WL	0.22	1	NA	0.20	0.050	0.10	05/03/2313:01	NA	23ME03008	ME03004	PLE002W	NA	NA
LCD2W	PLE002WC	0.22	1	NA	0.20	0.050	0.10	05/03/2313:16	NA	23ME03009	ME03004	PLE002W	NA	NA
MW29042023	D258-01J	ND	10	NA	2.0	0.50	1.0	05/03/2313:52	NA	23ME03010	ME03004	PLE002W	04/21/2307:20	04/22/23
TMW02042023D	D258-11I	9.4	5	NA	1.0	0.25	0.50	05/03/2314:11	NA	23ME03011	ME03004	PLE002W	04/21/2309:45	04/22/23
TMW51042023	D258-14R	630	200	NA	40	10	20	05/03/2317:48	NA	23ME03020	ME03017	PLE002W	04/21/2311:45	04/22/23
MW25042023	D258-15I	ND	5	NA	1.0	0.25	0.50	05/03/2318:17	NA	23ME03022	ME03017	PLE002W	04/21/2313:20	04/22/23
TMW17042023	D258-16I	ND	5	NA	1.0	0.25	0.50	05/03/2318:32	NA	23ME03023	ME03017	PLE002W	04/21/2313:40	04/22/23
TMW17042023D	D258-17I	ND	5	NA	1.0	0.25	0.50	05/03/2318:47	NA	23ME03024	ME03017	PLE002W	04/21/2313:45	04/22/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD 9056A
BROMIDE

A total of seventeen(17) water samples were received on 04/22/23 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 ICD022WB. 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. ICD022WL/ICD022WC 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 D258-04I, 07I, 10I, 11I, 14I, and 15I were reported at a 2X dilution factor due to high conductivity. Samples D258-06I and D258-12I 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 : 23D258

METHOD 9056A
CHLORIDE-CL

A total of seventeen(17) water samples were received on 04/22/23 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. ICD022WB, ICD024WB and ICD032WB 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. ICD022WL/ICD022WC, ICD024WL/ICD024WC and ICD032WL/ICD032WC 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 : 23D258

METHOD 9056A
FLUORIDE

A total of seventeen(17) water samples were received on 04/22/23 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 ICD022WB. 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. ICD022WL/ICD022WC 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 D258-04I, 07I, 10I, 11I, 14I, and 15I were reported at a 2X dilution factor due to high conductivity. Samples D258-06I and D258-012I 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 : 23D258

METHOD SW9056A
NITRATE-N

A total of seventeen(17) water samples were received on 04/22/23 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 ICD022WB. 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. ICD022WL/ICD022WC 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 D258-04I and D258-12I were reported at a 2X and 5x dilution factor respectively due to high conductivity. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D258

METHOD SW9056A
NITRITE-N

A total of seventeen(17) water samples were received on 04/22/23 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 ICD022WB. 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. ICD022WL/ICD022WC 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 D258-04I, 07I, 10I, 11I, 14I, and 15I were reported at a 2X dilution factor due to high conductivity. Samples D258-06I was reported at a 5X dilution factor due to high conductivity. Sample D258-12J 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 : 23D258

METHOD 9056A
ORTHOPHOSPHATE-P

A total of seventeen(17) water samples were received on 04/22/23 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 ICD022WB. 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. ICD022WL/ICD022WC 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 D258-04I, 07I, 10I, 11I, 14I, and 15I were reported at a 2X dilution factor due to high conductivity. Samples D258-06I and D258-12I 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 : 23D258

METHOD 9056A
SULFATE

A total of seventeen(17) water samples were received on 04/22/23 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. ICD022WB, ICD024WB and ICD032WB 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. ICD022WL/ICD022WC, ICD024WL/ICD024WC and ICD032WL/ICD032WC 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. : 23D258

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	ICD022WB	ND	1	NA	0.5	0.13	0.25	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS1W	ICD022WL	0.99	1	NA	0.5	0.13	0.25	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD1W	ICD022WC	0.99	1	NA	0.5	0.13	0.25	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
MW29042023	D258-01	0.70	1	NA	0.5	0.13	0.25	04/22/2314:28	NA	AD20-06	AD20-01	ICD022W	04/21/2307:20	04/22/23
TMW23042023	D258-02	0.63	1	NA	0.5	0.13	0.25	04/22/2314:48	NA	AD20-07	AD20-01	ICD022W	04/21/2307:25	04/22/23
TMW41042023	D258-03	1.7	1	NA	0.5	0.13	0.25	04/22/2315:08	NA	AD20-08	AD20-01	ICD022W	04/21/2308:00	04/22/23
TMW07042023	D258-04I	0.70J	2	NA	1	0.26	0.5	04/22/2315:28	NA	AD20-09	AD20-01	ICD022W	04/21/2308:10	04/22/23
TMW55042023	D258-05	0.59	1	NA	0.5	0.13	0.25	04/22/2315:49	NA	AD20-10	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW04042023	D258-06I	1.6J	5	NA	2.5	0.65	1.2	04/22/2316:09	NA	AD20-11	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW22042023	D258-07I	0.90J	2	NA	1	0.26	0.5	04/22/2316:29	NA	AD20-12	AD20-01	ICD022W	04/21/2308:55	04/22/23
TMW62042023	D258-08	0.58	1	NA	0.5	0.13	0.25	04/22/2317:30	NA	AD20-15	AD20-13	ICD022W	04/21/2309:35	04/22/23
TMW29042023	D258-09	0.72	1	NA	0.5	0.13	0.25	04/22/2317:50	NA	AD20-16	AD20-13	ICD022W	04/21/2309:40	04/22/23
TMW02042023	D258-10I	2.0	2	NA	1	0.26	0.5	04/22/2318:10	NA	AD20-17	AD20-13	ICD022W	04/21/2309:40	04/22/23
TMW02042023D	D258-11I	2.0	2	NA	1	0.26	0.5	04/22/2318:31	NA	AD20-18	AD20-13	ICD022W	04/21/2309:45	04/22/23
TMW33042023	D258-12I	2.9	5	NA	2.5	0.65	1.2	04/22/2318:51	NA	AD20-19	AD20-13	ICD022W	04/21/2310:25	04/22/23
TMW14A042023	D258-13	0.80	1	NA	0.5	0.13	0.25	04/22/2319:11	NA	AD20-20	AD20-13	ICD022W	04/21/2311:30	04/22/23
TMW51042023	D258-14I	1.1	2	NA	1	0.26	0.5	04/22/2319:31	NA	AD20-21	AD20-13	ICD022W	04/21/2311:45	04/22/23
MW25042023	D258-15I	1.3	2	NA	1	0.26	0.5	04/22/2319:52	NA	AD20-22	AD20-13	ICD022W	04/21/2313:20	04/22/23
TMW17042023	D258-16	0.53	1	NA	0.5	0.13	0.25	04/22/2320:12	NA	AD20-23	AD20-13	ICD022W	04/21/2313:40	04/22/23
TMW17042023D	D258-17	0.53	1	NA	0.5	0.13	0.25	04/22/2320:32	NA	AD20-24	AD20-13	ICD022W	04/21/2313:45	04/22/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258

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	ICD022WB	ND	1	NA	0.2	0.05	0.1	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS1W	ICD022WL	1.9	1	NA	0.2	0.05	0.1	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD1W	ICD022WC	1.9	1	NA	0.2	0.05	0.1	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
TMW23042023	D258-02I	95	25	NA	5	1.2	2.5	04/22/2322:13	NA	AD20-29	AD20-25	ICD022W	04/21/2307:25	04/22/23
TMW62042023	D258-08I	64	25	NA	5	1.2	2.5	04/22/2323:55	NA	AD20-34	AD20-25	ICD022W	04/21/2309:35	04/22/23
TMW02042023	D258-10K	270	100	NA	20	5	10	04/23/2301:36	NA	AD20-39	AD20-37	ICD022W	04/21/2309:40	04/22/23
TMW02042023D	D258-11K	280	100	NA	20	5	10	04/23/2302:37	NA	AD20-42	AD20-37	ICD022W	04/21/2309:45	04/22/23
MW25042023	D258-15T	300	200	NA	40	10	20	04/23/2305:39	NA	AD20-51	AD20-49	ICD022W	04/21/2313:20	04/22/23
MBLK2W	ICD024WB	ND	1	NA	0.2	0.05	0.1	04/24/2315:01	NA	AD22-03	AD22-01	ICD024W	NA	NA
LCS2W	ICD024WL	1.9	1	NA	0.2	0.05	0.1	04/24/2315:22	NA	AD22-04	AD22-01	ICD024W	NA	NA
LCD2W	ICD024WC	1.9	1	NA	0.2	0.05	0.1	04/24/2315:42	NA	AD22-05	AD22-01	ICD024W	NA	NA
MW29042023	D258-01K	210	40	NA	8	2	4	04/24/2316:55	NA	AD22-07	AD22-01	ICD024W	04/21/2307:20	04/22/23
TMW41042023	D258-03J	250	40	NA	8	2	4	04/24/2317:56	NA	AD22-10	AD22-01	ICD024W	04/21/2308:00	04/22/23
TMW07042023	D258-04J	180	200	NA	40	10	20	04/24/2319:37	NA	AD22-15	AD22-13	ICD024W	04/21/2308:10	04/22/23
TMW55042023	D258-05I	130	25	NA	5	1.2	2.5	04/24/2319:57	NA	AD22-16	AD22-13	ICD024W	04/21/2308:30	04/22/23
TMW04042023	D258-06T	170	40	NA	8	2	4	04/24/2320:38	NA	AD22-18	AD22-13	ICD024W	04/21/2308:30	04/22/23
TMW22042023	D258-07K	150	20	NA	4	1	2	04/24/2321:19	NA	AD22-20	AD22-13	ICD024W	04/21/2308:55	04/22/23
MBLK3W	ICD032WB	ND	1	NA	0.2	0.05	0.1	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS3W	ICD032WL	1.8	1	NA	0.2	0.05	0.1	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD3W	ICD032WC	1.8	1	NA	0.2	0.05	0.1	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
TMW29042023	D258-09J	68	20	NA	4	1	2	04/29/2302:39	NA	AD30-45	AD30-43	ICD032W	04/21/2309:40	04/22/23
TMW33042023	D258-12K	890	100	NA	20	5	10	04/29/2303:20	NA	AD30-47	AD30-43	ICD032W	04/21/2310:25	04/22/23
TMW14A042023	D258-13J	150	25	NA	5	1.2	2.5	04/29/2304:00	NA	AD30-49	AD30-43	ICD032W	04/21/2311:30	04/22/23
TMW51042023	D258-14K	150	25	NA	5	1.2	2.5	04/29/2304:41	NA	AD30-51	AD30-43	ICD032W	04/21/2311:45	04/22/23
TMW17042023	D258-16I	130	25	NA	5	1.2	2.5	04/29/2305:21	NA	AD30-53	AD30-43	ICD032W	04/21/2313:40	04/22/23
TMW17042023D	D258-17I	130	25	NA	5	1.2	2.5	04/29/2306:42	NA	AD30-57	AD30-55	ICD032W	04/21/2313:45	04/22/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258

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	ICD022WB	ND	1	NA	0.1	0.025	0.05	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS1W	ICD022WL	0.97	1	NA	0.1	0.025	0.05	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD1W	ICD022WC	0.97	1	NA	0.1	0.025	0.05	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
MW29042023	D258-01	0.78	1	NA	0.1	0.025	0.05	04/22/2314:28	NA	AD20-06	AD20-01	ICD022W	04/21/2307:20	04/22/23
TMW23042023	D258-02	0.76	1	NA	0.1	0.025	0.05	04/22/2314:48	NA	AD20-07	AD20-01	ICD022W	04/21/2307:25	04/22/23
TMW41042023	D258-03	0.71	1	NA	0.1	0.025	0.05	04/22/2315:08	NA	AD20-08	AD20-01	ICD022W	04/21/2308:00	04/22/23
TMW07042023	D258-04I	0.56	2	NA	0.2	0.05	0.1	04/22/2315:28	NA	AD20-09	AD20-01	ICD022W	04/21/2308:10	04/22/23
TMW55042023	D258-05	0.70	1	NA	0.1	0.025	0.05	04/22/2315:49	NA	AD20-10	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW04042023	D258-06I	1.3	5	NA	0.5	0.12	0.25	04/22/2316:09	NA	AD20-11	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW22042023	D258-07I	0.96	2	NA	0.2	0.05	0.1	04/22/2316:29	NA	AD20-12	AD20-01	ICD022W	04/21/2308:55	04/22/23
TMW62042023	D258-08	0.98	1	NA	0.1	0.025	0.05	04/22/2317:30	NA	AD20-15	AD20-13	ICD022W	04/21/2309:35	04/22/23
TMW29042023	D258-09	1.2	1	NA	0.1	0.025	0.05	04/22/2317:50	NA	AD20-16	AD20-13	ICD022W	04/21/2309:40	04/22/23
TMW02042023	D258-10I	0.34	2	NA	0.2	0.05	0.1	04/22/2318:10	NA	AD20-17	AD20-13	ICD022W	04/21/2309:40	04/22/23
TMW02042023D	D258-11I	0.34	2	NA	0.2	0.05	0.1	04/22/2318:31	NA	AD20-18	AD20-13	ICD022W	04/21/2309:45	04/22/23
TMW33042023	D258-12I	0.64	5	NA	0.5	0.12	0.25	04/22/2318:51	NA	AD20-19	AD20-13	ICD022W	04/21/2310:25	04/22/23
TMW14A042023	D258-13	0.54	1	NA	0.1	0.025	0.05	04/22/2319:11	NA	AD20-20	AD20-13	ICD022W	04/21/2311:30	04/22/23
TMW51042023	D258-14I	0.43	2	NA	0.2	0.05	0.1	04/22/2319:31	NA	AD20-21	AD20-13	ICD022W	04/21/2311:45	04/22/23
MW25042023	D258-15I	0.37	2	NA	0.2	0.05	0.1	04/22/2319:52	NA	AD20-22	AD20-13	ICD022W	04/21/2313:20	04/22/23
TMW17042023	D258-16	0.83	1	NA	0.1	0.025	0.05	04/22/2320:12	NA	AD20-23	AD20-13	ICD022W	04/21/2313:40	04/22/23
TMW17042023D	D258-17	0.84	1	NA	0.1	0.025	0.05	04/22/2320:32	NA	AD20-24	AD20-13	ICD022W	04/21/2313:45	04/22/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258

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	ICD022WB	ND	1	NA	0.1	0.03	0.06	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS1W	ICD022WL	1.0	1	NA	0.1	0.03	0.06	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD1W	ICD022WC	1.0	1	NA	0.1	0.03	0.06	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
TMW07042023	D258-04I	0.19J	2	NA	0.2	0.06	0.12	04/22/2315:28	NA	AD20-09	AD20-01	ICD022W	04/21/2308:10	04/22/23
TMW55042023	D258-05	0.060J	1	NA	0.1	0.03	0.06	04/22/2315:49	NA	AD20-10	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW33042023	D258-12I	ND	5	NA	0.5	0.15	0.3	04/22/2318:51	NA	AD20-19	AD20-13	ICD022W	04/21/2310:25	04/22/23
TMW14A042023	D258-13	ND	1	NA	0.1	0.03	0.06	04/22/2319:11	NA	AD20-20	AD20-13	ICD022W	04/21/2311:30	04/22/23
TMW17042023	D258-16	ND	1	NA	0.1	0.03	0.06	04/22/2320:12	NA	AD20-23	AD20-13	ICD022W	04/21/2313:40	04/22/23
TMW17042023D	D258-17	ND	1	NA	0.1	0.03	0.06	04/22/2320:32	NA	AD20-24	AD20-13	ICD022W	04/21/2313:45	04/22/23
MW29042023	D258-01J	6.3	10	NA	1	0.3	0.6	04/22/2321:53	NA	AD20-28	AD20-25	ICD022W	04/21/2307:20	04/22/23
TMW23042023	D258-02I	19	25	NA	2.5	0.75	1.5	04/22/2322:13	NA	AD20-29	AD20-25	ICD022W	04/21/2307:25	04/22/23
TMW41042023	D258-03I	5.3	10	NA	1	0.3	0.6	04/22/2322:34	NA	AD20-30	AD20-25	ICD022W	04/21/2308:00	04/22/23
TMW04042023	D258-06K	42	50	NA	5	1.5	3	04/22/2323:14	NA	AD20-32	AD20-25	ICD022W	04/21/2308:30	04/22/23
TMW22042023	D258-07J	14	10	NA	1	0.3	0.6	04/22/2323:34	NA	AD20-33	AD20-25	ICD022W	04/21/2308:55	04/22/23
TMW62042023	D258-08I	24	25	NA	2.5	0.75	1.5	04/22/2323:55	NA	AD20-34	AD20-25	ICD022W	04/21/2309:35	04/22/23
TMW29042023	D258-09I	4.4	5	NA	0.5	0.15	0.3	04/23/2300:15	NA	AD20-35	AD20-25	ICD022W	04/21/2309:40	04/22/23
TMW02042023	D258-10K	81	100	NA	10	3	6	04/23/2301:36	NA	AD20-39	AD20-37	ICD022W	04/21/2309:40	04/22/23
TMW02042023D	D258-11K	83	100	NA	10	3	6	04/23/2302:37	NA	AD20-42	AD20-37	ICD022W	04/21/2309:45	04/22/23
TMW51042023	D258-14J	7.4	5	NA	0.5	0.15	0.3	04/23/2303:37	NA	AD20-45	AD20-37	ICD022W	04/21/2311:45	04/22/23
MW25042023	D258-15T	55	200	NA	20	6	12	04/23/2305:39	NA	AD20-51	AD20-49	ICD022W	04/21/2313:20	04/22/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258

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	ICD022WB	ND	1	NA	0.1	0.03	0.06	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS1W	ICD022WL	2.1	1	NA	0.1	0.03	0.06	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD1W	ICD022WC	2.1	1	NA	0.1	0.03	0.06	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
TMW23042023	D258-02	ND	1	NA	0.1	0.03	0.06	04/22/2314:48	NA	AD20-07	AD20-01	ICD022W	04/21/2307:25	04/22/23
TMW41042023	D258-03	ND	1	NA	0.1	0.03	0.06	04/22/2315:08	NA	AD20-08	AD20-01	ICD022W	04/21/2308:00	04/22/23
TMW07042023	D258-04I	ND	2	NA	0.2	0.06	0.12	04/22/2315:28	NA	AD20-09	AD20-01	ICD022W	04/21/2308:10	04/22/23
TMW55042023	D258-05	ND	1	NA	0.1	0.03	0.06	04/22/2315:49	NA	AD20-10	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW04042023	D258-06I	ND	5	NA	0.5	0.15	0.3	04/22/2316:09	NA	AD20-11	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW22042023	D258-07I	ND	2	NA	0.2	0.06	0.12	04/22/2316:29	NA	AD20-12	AD20-01	ICD022W	04/21/2308:55	04/22/23
TMW62042023	D258-08	ND	1	NA	0.1	0.03	0.06	04/22/2317:30	NA	AD20-15	AD20-13	ICD022W	04/21/2309:35	04/22/23
TMW29042023	D258-09	ND	1	NA	0.1	0.03	0.06	04/22/2317:50	NA	AD20-16	AD20-13	ICD022W	04/21/2309:40	04/22/23
TMW02042023	D258-10I	ND	2	NA	0.2	0.06	0.12	04/22/2318:10	NA	AD20-17	AD20-13	ICD022W	04/21/2309:40	04/22/23
TMW02042023D	D258-11I	ND	2	NA	0.2	0.06	0.12	04/22/2318:31	NA	AD20-18	AD20-13	ICD022W	04/21/2309:45	04/22/23
TMW14A042023	D258-13	ND	1	NA	0.1	0.03	0.06	04/22/2319:11	NA	AD20-20	AD20-13	ICD022W	04/21/2311:30	04/22/23
TMW51042023	D258-14I	ND	2	NA	0.2	0.06	0.12	04/22/2319:31	NA	AD20-21	AD20-13	ICD022W	04/21/2311:45	04/22/23
MW25042023	D258-15I	ND	2	NA	0.2	0.06	0.12	04/22/2319:52	NA	AD20-22	AD20-13	ICD022W	04/21/2313:20	04/22/23
TMW17042023	D258-16	ND	1	NA	0.1	0.03	0.06	04/22/2320:12	NA	AD20-23	AD20-13	ICD022W	04/21/2313:40	04/22/23
TMW17042023D	D258-17	ND	1	NA	0.1	0.03	0.06	04/22/2320:32	NA	AD20-24	AD20-13	ICD022W	04/21/2313:45	04/22/23
MW29042023	D258-01I	ND	2	NA	0.2	0.06	0.12	04/22/2321:33	NA	AD20-27	AD20-25	ICD022W	04/21/2307:20	04/22/23
TMW33042023	D258-12J	ND	10	NA	1	0.3	0.6	04/23/2303:17	NA	AD20-44	AD20-37	ICD022W	04/21/2310:25	04/22/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258

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	ICD022WB	ND	1	NA	0.5	0.12	0.25	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS1W	ICD022WL	1.9	1	NA	0.5	0.12	0.25	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD1W	ICD022WC	1.9	1	NA	0.5	0.12	0.25	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
MW29042023	D258-01	ND	1	NA	0.5	0.12	0.25	04/22/2314:28	NA	AD20-06	AD20-01	ICD022W	04/21/2307:20	04/22/23
TMW23042023	D258-02	ND	1	NA	0.5	0.12	0.25	04/22/2314:48	NA	AD20-07	AD20-01	ICD022W	04/21/2307:25	04/22/23
TMW41042023	D258-03	ND	1	NA	0.5	0.12	0.25	04/22/2315:08	NA	AD20-08	AD20-01	ICD022W	04/21/2308:00	04/22/23
TMW07042023	D258-04I	ND	2	NA	1	0.25	0.5	04/22/2315:28	NA	AD20-09	AD20-01	ICD022W	04/21/2308:10	04/22/23
TMW55042023	D258-05	ND	1	NA	0.5	0.12	0.25	04/22/2315:49	NA	AD20-10	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW04042023	D258-06I	ND	5	NA	2.5	0.62	1.2	04/22/2316:09	NA	AD20-11	AD20-01	ICD022W	04/21/2308:30	04/22/23
TMW22042023	D258-07I	ND	2	NA	1	0.25	0.5	04/22/2316:29	NA	AD20-12	AD20-01	ICD022W	04/21/2308:55	04/22/23
TMW62042023	D258-08	ND	1	NA	0.5	0.12	0.25	04/22/2317:30	NA	AD20-15	AD20-13	ICD022W	04/21/2309:35	04/22/23
TMW29042023	D258-09	ND	1	NA	0.5	0.12	0.25	04/22/2317:50	NA	AD20-16	AD20-13	ICD022W	04/21/2309:40	04/22/23
TMW02042023	D258-10I	ND	2	NA	1	0.25	0.5	04/22/2318:10	NA	AD20-17	AD20-13	ICD022W	04/21/2309:40	04/22/23
TMW02042023D	D258-11I	ND	2	NA	1	0.25	0.5	04/22/2318:31	NA	AD20-18	AD20-13	ICD022W	04/21/2309:45	04/22/23
TMW33042023	D258-12I	ND	5	NA	2.5	0.62	1.2	04/22/2318:51	NA	AD20-19	AD20-13	ICD022W	04/21/2310:25	04/22/23
TMW14A042023	D258-13	ND	1	NA	0.5	0.12	0.25	04/22/2319:11	NA	AD20-20	AD20-13	ICD022W	04/21/2311:30	04/22/23
TMW51042023	D258-14I	ND	2	NA	1	0.25	0.5	04/22/2319:31	NA	AD20-21	AD20-13	ICD022W	04/21/2311:45	04/22/23
MW25042023	D258-15I	ND	2	NA	1	0.25	0.5	04/22/2319:52	NA	AD20-22	AD20-13	ICD022W	04/21/2313:20	04/22/23
TMW17042023	D258-16	ND	1	NA	0.5	0.12	0.25	04/22/2320:12	NA	AD20-23	AD20-13	ICD022W	04/21/2313:40	04/22/23
TMW17042023D	D258-17	ND	1	NA	0.5	0.12	0.25	04/22/2320:32	NA	AD20-24	AD20-13	ICD022W	04/21/2313:45	04/22/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D258

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	ICD022WB	ND	1	NA	0.5	0.13	0.25	04/22/2313:27	NA	AD20-03	AD20-01	ICD022W	NA	NA
LCS1W	ICD022WL	4.9	1	NA	0.5	0.13	0.25	04/22/2313:47	NA	AD20-04	AD20-01	ICD022W	NA	NA
LCD1W	ICD022WC	4.9	1	NA	0.5	0.13	0.25	04/22/2314:07	NA	AD20-05	AD20-01	ICD022W	NA	NA
TMW02042023	D258-10K	1200	100	NA	50	13	25	04/23/2301:36	NA	AD20-39	AD20-37	ICD022W	04/21/2309:40	04/22/23
TMW02042023D	D258-11K	1200	100	NA	50	13	25	04/23/2302:37	NA	AD20-42	AD20-37	ICD022W	04/21/2309:45	04/22/23
MW25042023	D258-15T	1700	200	NA	100	26	50	04/23/2305:39	NA	AD20-51	AD20-49	ICD022W	04/21/2313:20	04/22/23
MBLK2W	ICD024WB	ND	1	NA	0.5	0.13	0.25	04/24/2315:01	NA	AD22-03	AD22-01	ICD024W	NA	NA
LCS2W	ICD024WL	4.9	1	NA	0.5	0.13	0.25	04/24/2315:22	NA	AD22-04	AD22-01	ICD024W	NA	NA
LCD2W	ICD024WC	4.9	1	NA	0.5	0.13	0.25	04/24/2315:42	NA	AD22-05	AD22-01	ICD024W	NA	NA
MW29042023	D258-01T	790	100	NA	50	13	25	04/24/2317:15	NA	AD22-08	AD22-01	ICD024W	04/21/2307:20	04/22/23
TMW23042023	D258-02J	560	100	NA	50	13	25	04/24/2317:35	NA	AD22-09	AD22-01	ICD024W	04/21/2307:25	04/22/23
TMW41042023	D258-03K	930	100	NA	50	13	25	04/24/2318:16	NA	AD22-11	AD22-01	ICD024W	04/21/2308:00	04/22/23
TMW07042023	D258-04J	1900	200	NA	100	26	50	04/24/2319:37	NA	AD22-15	AD22-13	ICD024W	04/21/2308:10	04/22/23
TMW55042023	D258-05J	770	100	NA	50	13	25	04/24/2320:18	NA	AD22-17	AD22-13	ICD024W	04/21/2308:30	04/22/23
TMW04042023	D258-06G	1100	200	NA	100	26	50	04/24/2320:58	NA	AD22-19	AD22-13	ICD024W	04/21/2308:30	04/22/23
TMW22042023	D258-07T	820	100	NA	50	13	25	04/24/2321:39	NA	AD22-21	AD22-13	ICD024W	04/21/2308:55	04/22/23
TMW62042023	D258-08J	680	100	NA	50	13	25	04/24/2321:59	NA	AD22-22	AD22-13	ICD024W	04/21/2309:35	04/22/23
MBLK3W	ICD032WB	ND	1	NA	0.5	0.13	0.25	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS3W	ICD032WL	4.7	1	NA	0.5	0.13	0.25	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD3W	ICD032WC	4.7	1	NA	0.5	0.13	0.25	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
TMW29042023	D258-09K	350	100	NA	50	13	25	04/29/2302:59	NA	AD30-46	AD30-43	ICD032W	04/21/2309:40	04/22/23
TMW33042023	D258-12T	3100	400	NA	200	52	100	04/29/2303:40	NA	AD30-48	AD30-43	ICD032W	04/21/2310:25	04/22/23
TMW14A042023	D258-13J	350	25	NA	12	3.3	6.2	04/29/2304:00	NA	AD30-49	AD30-43	ICD032W	04/21/2311:30	04/22/23
TMW51042023	D258-14T	990	100	NA	50	13	25	04/29/2305:01	NA	AD30-52	AD30-43	ICD032W	04/21/2311:45	04/22/23
TMW17042023	D258-16J	470	100	NA	50	13	25	04/29/2305:42	NA	AD30-54	AD30-43	ICD032W	04/21/2313:40	04/22/23
TMW17042023D	D258-17J	470	100	NA	50	13	25	04/29/2307:03	NA	AD30-58	AD30-55	ICD032W	04/21/2313:45	04/22/23

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

Date: 07-07-2023
EMAX Batch No.: 23D259

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 04/22/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW39S042023	D259-01	04/20/23	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
TMW01042023	D259-02	04/20/23	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
MW03042023	D259-03	04/20/23	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
TMW10042023	D259-04	04/20/23	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

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

Sample ID	Control #	Col Date	Matrix	Analysis
TMW10042023D	D259-05	04/20/23	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
QC20042023EB03	D259-06	04/20/23	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)
QC20042023TB04	D259-07	04/20/23	WATER	VOCS BY 8260C TPH GASOLINE
TMW01042023MS	D259-02M	04/20/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS
TMW01042023MSD	D259-02S	04/20/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 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,

for CP

Caspar J. Pang
Laboratory Director

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

NELAP Accredited Certificate Number CA002912022-24
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#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of seven(7) water samples were received on 04/22/23 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 four(4)CCVs (Data File IDs: REC031, REC051, REC093 and REC113) associated with this SDG. All calibration requirements were satisfied. Refer Note that "Minimum Response Factor" for all target analytes were within method recommended response factor 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. VO67E03B and VO67E06Q 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. VO67E03L/VO67E03Y and VO67E06L/VO67E06C 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. 23D259-02M/23D259-02S - 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. 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. : 23D259
Instrument ID : 67

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V067E03L	1	NA	05/02/2307:28	05/02/2307:28	REC032	RDC593	V067E03	Lab Control Sample (LCS)
MBLK1W	V067E03B	1	NA	05/02/2308:44	05/02/2308:44	REC035	RDC593	V067E03	Method Blank
QC20042023TB04	23D259-07	1	NA	05/02/2310:52	05/02/2310:52	REC040	RDC593	V067E03	Field Sample
QC20042023EB03	23D259-06	1	NA	05/02/2311:18	05/02/2311:18	REC041	RDC593	V067E03	Field Sample
TMW39S042023	23D259-01	1	NA	05/02/2311:43	05/02/2311:43	REC042	RDC593	V067E03	Field Sample
MW03042023	23D259-03	1	NA	05/02/2312:35	05/02/2312:35	REC044	RDC593	V067E03	Field Sample
TMW10042023	23D259-04	1	NA	05/02/2313:00	05/02/2313:00	REC045	RDC593	V067E03	Field Sample
TMW10042023D	23D259-05	1	NA	05/02/2313:26	05/02/2313:26	REC046	RDC593	V067E03	Field Sample
LCD1W	V067E03Y	1	NA	05/02/2313:52	05/02/2313:52	REC047	RDC593	V067E03	LCS Duplicate
LCS2W	V067E06L	1	NA	05/04/2307:41	05/04/2307:41	REC094	RDC593	V067E06	Lab Control Sample (LCS)
LCD2W	V067E06C	1	NA	05/04/2308:06	05/04/2308:06	REC095	RDC593	V067E06	LCS Duplicate
MBLK2W	V067E06Q	1	NA	05/04/2309:43	05/04/2309:43	REC099	RDC593	V067E06	Method Blank
TMW01042023	23D259-02N	1	NA	05/04/2314:26	05/04/2314:26	REC110	RDC593	V067E06	Field Sample
TMW01042023MS	23D259-02M	1	NA	05/04/2314:51	05/04/2314:51	REC111	RDC593	V067E06	Matrix Spike Sample (MS)
TMW01042023MSD	23D259-02S	1	NA	05/04/2315:17	05/04/2315:17	REC112	RDC593	V067E06	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 07:30
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 05/02/23 11:43
Sample ID : TMW39S042023	Date Analyzed: 05/02/23 11:43
Lab Samp ID: 23D259-01	Dilution Factor: 1
Lab File ID: REC042	Matrix: WATER
Ext Btch ID: V067E03	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	11.0	10.0	110	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 08:20
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	05/04/23 14:26
Sample ID	: TMW01042023	Date Analyzed:	05/04/23 14:26
Lab Samp ID:	23D259-02N	Dilution Factor:	1
Lab File ID:	REC110	Matrix:	WATER
Ext Btch ID:	VO67E06	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 09:50
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 05/02/23 12:35
Sample ID : MW03042023	Date Analyzed: 05/02/23 12:35
Lab Samp ID: 23D259-03	Dilution Factor: 1
Lab File ID: REC044	Matrix: WATER
Ext Btch ID: V067E03	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.9	10.0	109	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:05
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	05/02/23 13:00
Sample ID	: TMW10042023	Date Analyzed:	05/02/23 13:00
Lab Samp ID:	23D259-04	Dilution Factor:	1
Lab File ID:	REC045	Matrix:	WATER
Ext Btch ID:	V067E03	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:10
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	05/02/23 13:26
Sample ID	: TMW10042023D	Date Analyzed:	05/02/23 13:26
Lab Samp ID:	23D259-05	Dilution Factor:	1
Lab File ID:	REC046	Matrix:	WATER
Ext Btch ID:	V067E03	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	11.0	10.0	110	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 14:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	05/02/23 11:18
Sample ID	: QC20042023EB03	Date Analyzed:	05/02/23 11:18
Lab Samp ID:	23D259-06	Dilution Factor:	1
Lab File ID:	REC041	Matrix:	WATER
Ext Btch ID:	VO67E03	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	0.92J	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	1.1	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	0.38J	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	11.1	10.0	111	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D259
Sample ID : QC20042023TB04
Lab Samp ID: 23D259-07
Lab File ID: REC040
Ext Btch ID: V067E03
Calib. Ref.: RDC593

Date Collected: 04/20/23 08:00
Date Received: 04/22/23
Date Extracted: 05/02/23 10:52
Date Analyzed: 05/02/23 10:52
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	11.0	10.0	110	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

Notes:
Sample Amount : 25ml
Prepared by : VLu
Final Volume : 25ml
Analyzed by : VLu
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#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

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

A total of two(2) water samples were received on 04/22/23 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: RDJ423, RDJ42, RDJ458, RDJ459, REJ003, REJ005, REJ015 and REJ016) 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. SVD033WB - 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: SVD033WL/SVD033WC - Percent recoveries for 2-Nitrophenol, 4,6-Dinitro-2-Methylphenol and Benzoic Acid in LCS. RPDs for 2,4-Dinitrophenol(RPD=67*), 2-Nitrophenol(RPD=41*), 4,6-Dinitro-2-Methylphenol(RPD=81*), 4-Nitrophenol(RPD=44*), and Benzoic Acid(RPD=110*) 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 : 23D259

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

A total of two(2) water samples were received on 04/22/23 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: RDJ425, RDJ457, REJ004 and REJ014) 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. SVD033WB - 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: CLD033WL/CLD033WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=37*) 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 : 23D259

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

A total of two(2) water samples were received on 04/22/23 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: RDJ424, RDJ458, REJ005 and REJ015) 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. SVD033WB - 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: CLD033WL/CLD033WC - RPDs for Caprolactam(RPD=23*), 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.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

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

SDG NO. : 23D259
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	SVD033WB	1	NA	04/28/2314:47	04/26/2315:30	RDJ426	RCJ011	23SVD033W	Method Blank
LCS1W	SVD033WL	1	NA	04/28/2315:05	04/26/2315:30	RDJ427	RCJ011	23SVD033W	Lab Control Sample (LCS)
LCD1W	SVD033WC	1	NA	04/28/2315:24	04/26/2315:30	RDJ428	RCJ011	23SVD033W	LCS Duplicate
TMW39S042023	23D259-01	1	NA	05/01/2314:59	04/26/2315:30	REJ012	RCJ011	23SVD033W	Field Sample
QC20042023EB03	23D259-06	1	NA	05/01/2315:18	04/26/2315:30	REJ013	RCJ011	23SVD033W	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. : 23D259
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	SVD033WB	1	NA	04/28/2314:47	04/26/2315:30	RDJ426	RCJ498	23SVD033W	Method Blank
LCS1W	CLD033WL	1	NA	04/28/2315:42	04/26/2315:30	RDJ429	RCJ498	23SVD033W	Lab Control Sample (LCS)
LCD1W	CLD033WC	1	NA	04/28/2316:01	04/26/2315:30	RDJ430	RCJ498	23SVD033W	LCS Duplicate
TMW39S042023	23D259-01	1	NA	05/01/2314:59	04/26/2315:30	REJ012	RCJ498	23SVD033W	Field Sample
QC20042023EB03	23D259-06	1	NA	05/01/2315:18	04/26/2315:30	REJ013	RCJ498	23SVD033W	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. : 23D259
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	SVD033WB	1	NA	04/28/2314:47	04/26/2315:30	RDJ426	RCJ025	23SVD033W	Method Blank
LCS1W	CLD033WL	1	NA	04/28/2315:42	04/26/2315:30	RDJ429	RCJ025	23SVD033W	Lab Control Sample (LCS)
LCD1W	CLD033WC	1	NA	04/28/2316:01	04/26/2315:30	RDJ430	RCJ025	23SVD033W	LCS Duplicate
TMW39S042023	23D259-01	1	NA	05/01/2314:59	04/26/2315:30	REJ012	RCJ025	23SVD033W	Field Sample
QC20042023EB03	23D259-06	1	NA	05/01/2315:18	04/26/2315:30	REJ013	RCJ025	23SVD033W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 07:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 15:30
Sample ID	: TMW39S042023	Date Analyzed:	05/01/23 14:59
Lab Samp ID:	23D259-01	Dilution Factor:	1
Lab File ID:	REJ012	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	42.1	63.0	67	43-140
2-Fluorobiphenyl	13.1	21.0	62	44-119
2-Fluorophenol	28.6	63.0	45	19-119
Nitrobenzene-d5	11.6	21.0	55	44-120
Phenol-d5	36.4	63.0	58	40-130
Terphenyl-d14	18.3	21.0	87	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: RCJ025 DCC Ref: REJ005

Detection limits are reported relative to sample result significant figures.
Sample Amount : 950ml 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:	04/20/23 07:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 15:30
Sample ID	: TMW39S042023	Date Analyzed:	05/01/23 14:59
Lab Samp ID:	23D259-01	Dilution Factor:	1
Lab File ID:	REJ012	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by :	KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 07:30
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 15:30
Sample ID	: TMW39S042023	Date Analyzed:	05/01/23 14:59
Lab Samp ID:	23D259-01	Dilution Factor:	1
Lab File ID:	REJ012	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by :	KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D259
Sample ID : QC20042023EB03
Lab Samp ID: 23D259-06
Lab File ID: REJ013
Ext Btch ID: 23SVD033W
Calib. Ref.: RCJ011

Date Collected: 04/20/23 14:00
Date Received: 04/22/23
Date Extracted: 04/26/23 15:30
Date Analyzed: 05/01/23 15:18
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	34.2	62.4	55	43-140
2-Fluorobiphenyl	10.8	20.8	52	44-119
2-Fluorophenol	23.5	62.4	38	19-119
Nitrobenzene-d5	10.2	20.8	49	44-120
Phenol-d5	30.4	62.4	49	40-130
Terphenyl-d14	19.9	20.8	95	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: RCJ025 DCC Ref: REJ005

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 14:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 15:30
Sample ID	: QC20042023EB03	Date Analyzed:	05/01/23 15:18
Lab Samp ID:	23D259-06	Dilution Factor:	1
Lab File ID:	REJ013	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ498	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 : JMuert Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 14:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 15:30
Sample ID	: QC20042023EB03	Date Analyzed:	05/01/23 15:18
Lab Samp ID:	23D259-06	Dilution Factor:	1
Lab File ID:	REJ013	Matrix:	WATER
Ext Btch ID:	23SVD033W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

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

SDG#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

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

A total of five(5) water samples were received on 04/22/23 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. VG39D12B - 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. VG39D12L/VG39D12C 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
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D259
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	VG39D12B	1	NA	04/25/2312:38	04/25/2312:38	ED25005A	ED25004A	23VG39D12	Method Blank
LCS1W	VG39D12L	1	NA	04/25/2313:14	04/25/2313:14	ED25006A	ED25004A	23VG39D12	Lab Control Sample (LCS)
LCD1W	VG39D12C	1	NA	04/25/2313:51	04/25/2313:51	ED25007A	ED25004A	23VG39D12	LCS Duplicate
MW03042023	D259-03	1	NA	04/26/2301:17	04/26/2301:17	ED25026A	ED25025A	23VG39D12	Field Sample
TMW10042023	D259-04	1	NA	04/26/2301:53	04/26/2301:53	ED25027A	ED25025A	23VG39D12	Field Sample
TMW10042023D	D259-05	1	NA	04/26/2302:29	04/26/2302:29	ED25028A	ED25025A	23VG39D12	Field Sample
QC20042023EB03	D259-06	1	NA	04/26/2303:05	04/26/2303:05	ED25029A	ED25025A	23VG39D12	Field Sample
QC20042023TB04	D259-07	1	NA	04/26/2303:41	04/26/2303:41	ED25030A	ED25025A	23VG39D12	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: 04/20/23 09:50
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/26/23 01:17
Sample ID : MW03042023	Date Analyzed: 04/26/23 01:17
Lab Samp ID: D259-03	Dilution Factor: 1
Lab File ID: ED25026A	Matrix: WATER
Ext Btch ID: 23VG39D12	% Moisture: NA
Calib. Ref.: ED25025A	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	34.7	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:	04/20/23 11:05
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 01:53
Sample ID	: TMW10042023	Date Analyzed:	04/26/23 01:53
Lab Samp ID:	D259-04	Dilution Factor:	1
Lab File ID:	ED25027A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25025A	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	34.5	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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:10
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 02:29
Sample ID	: TMW10042023D	Date Analyzed:	04/26/23 02:29
Lab Samp ID:	D259-05	Dilution Factor:	1
Lab File ID:	ED25028A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25025A	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:	04/20/23 14:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 03:05
Sample ID	: QC20042023EB03	Date Analyzed:	04/26/23 03:05
Lab Samp ID:	D259-06	Dilution Factor:	1
Lab File ID:	ED25029A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25025A	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	34.3	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:	04/20/23 08:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/26/23 03:41
Sample ID	: QC20042023TB04	Date Analyzed:	04/26/23 03:41
Lab Samp ID:	D259-07	Dilution Factor:	1
Lab File ID:	ED25030A	Matrix:	WATER
Ext Btch ID:	23VG39D12	% Moisture:	NA
Calib. Ref.:	ED25025A	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	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#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 04/22/23 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. DSD031WB - 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. DSD031WL/DSD031WC 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.
Samples D259-04, and -06 displayed a mixed fuel pattern.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

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

SDG NO. : 23D259
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	DSD031WB	1	NA	04/26/2319:25	04/25/2313:15	LD26020A	LD26018A	23DSD031W	Method Blank
LCS1W	DSD031WL	1	NA	04/26/2319:44	04/25/2313:15	LD26021A	LD26018A	23DSD031W	Lab Control Sample (LCS)
LCD1W	DSD031WC	1	NA	04/26/2320:03	04/25/2313:15	LD26022A	LD26018A	23DSD031W	LCS Duplicate
MW03042023	D259-03	1	NA	04/27/2302:50	04/25/2313:15	LD26044A	LD26033A	23DSD031W	Field Sample
TMW10042023	D259-04	1	NA	04/27/2305:18	04/25/2313:15	LD26052A	LD26045A	23DSD031W	Field Sample
TMW10042023D	D259-05	1	NA	04/27/2305:36	04/25/2313:15	LD26053A	LD26045A	23DSD031W	Field Sample
QC20042023EB03	D259-06	1	NA	04/27/2305:55	04/25/2313:15	LD26054A	LD26045A	23DSD031W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 09:50
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/25/23 13:15
Sample ID	: MW03042023	Date Analyzed:	04/27/23 02:50
Lab Samp ID:	23D259-03	Dilution Factor:	1
Lab File ID:	LD26044A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26033A	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	0.884	1.05	84	60-130
Hexacosane	0.270	0.262	103	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:	04/20/23 11:05
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/25/23 13:15
Sample ID	: TMW10042023	Date Analyzed:	04/27/23 05:18
Lab Samp ID:	23D259-04	Dilution Factor:	1
Lab File ID:	LD26052A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26045A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	3.1	0.52	0.052	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	1.03	1.04	99	60-130
Hexacosane	0.275	0.260	106	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

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:10
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/25/23 13:15
Sample ID	: TMW10042023D	Date Analyzed:	04/27/23 05:36
Lab Samp ID:	23D259-05	Dilution Factor:	1
Lab File ID:	LD26053A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26045A	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	0.924	1.11	83	60-130
Hexacosane	0.290	0.278	105	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:	04/20/23 14:00
Project	: USACE WINGATE	Date Received:	04/22/23
Batch No.	: 23D259	Date Extracted:	04/25/23 13:15
Sample ID	: QC20042023EB03	Date Analyzed:	04/27/23 05:55
Lab Samp ID:	23D259-06	Dilution Factor:	1
Lab File ID:	LD26054A	Matrix:	WATER
Ext Btch ID:	23DSD031W	% Moisture:	NA
Calib. Ref.:	LD26045A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.14J	0.53	0.053	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.858	1.06	81	60-130
Hexacosane	0.266	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW3520C/8081B
PESTICIDES

A total of two(2) water samples were received on 04/22/23 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. CPD032WB - 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) LCS was analyzed. CPD032WL - recovery for all analytes were within LCS QC 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. : 23D259
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	CPD032WB	1	NA	05/02/2317:08	04/26/2313:30	RE02015	RE02013	23CPD032W	Method Blank
LCS1W	CPD032WL	1	NA	05/02/2317:29	04/26/2313:30	RE02016	RE02013	23CPD032W	Lab Control Sample (LCS)
TMW39S042023	D259-01	1	NA	05/03/2302:45	04/26/2313:30	RE02043	RE02040	23CPD032W	Field Sample
QC20042023EB03	D259-06	1	NA	05/03/2303:05	04/26/2313:30	RE02044	RE02040	23CPD032W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 07:30
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/26/23 13:30
Sample ID : TMW39S042023	Date Analyzed: 05/03/23 02:45
Lab Samp ID: D259-01	Dilution Factor: 1
Lab File ID: RE02043	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02040	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.047
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.047
beta-BHC	(ND) | ND	0.12	0.024	0.047
Heptachlor	(ND) | ND	0.12	0.024	0.047
delta-BHC	(ND) | ND	0.12	0.024	0.047
Aldrin	(ND) | ND	0.12	0.024	0.047
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.047
gamma-Chlordane	(ND) | ND	0.12	0.024	0.047
alpha-Chlordane	(ND) | ND	0.12	0.024	0.047
Endosulfan I	(ND) | ND	0.12	0.024	0.047
4,4'-DDE	(ND) | ND	0.12	0.024	0.047
Dieldrin	(ND) | ND	0.12	0.024	0.047
Endrin	(ND) | ND	0.12	0.024	0.047
4,4'-DDD	(ND) | ND	0.12	0.024	0.047
Endosulfan II	(ND) | ND	0.12	0.024	0.047
4,4'-DDT	(ND) | ND	0.12	0.024	0.047
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.047
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.047
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.29	0.59
Endrin Ketone	(ND) | ND	0.12	0.024	0.047

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.294 | (0.302)	0.471	64	44-124
Decachlorobiphenyl	(0.336) | 0.328	0.471	71	30-135

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

Sample Amount : 850ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE02041	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 14:00
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/26/23 13:30
Sample ID : QC20042023EB03	Date Analyzed: 05/03/23 03:05
Lab Samp ID: D259-06	Dilution Factor: 1
Lab File ID: RE02044	Matrix: WATER
Ext Btch ID: 23CPD032W	% Moisture: NA
Calib. Ref.: RE02040	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.049
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.049
beta-BHC	(ND) | ND	0.12	0.024	0.049
Heptachlor	(ND) | ND	0.12	0.024	0.049
delta-BHC	(ND) | ND	0.12	0.024	0.049
Aldrin	(ND) | ND	0.12	0.024	0.049
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.049
gamma-Chlordane	(ND) | ND	0.12	0.024	0.049
alpha-Chlordane	(ND) | ND	0.12	0.024	0.049
Endosulfan I	(ND) | ND	0.12	0.024	0.049
4,4'-DDE	(ND) | ND	0.12	0.024	0.049
Dieldrin	(ND) | ND	0.12	0.024	0.049
Endrin	(ND) | ND	0.12	0.024	0.049
4,4'-DDD	(ND) | ND	0.12	0.024	0.049
Endosulfan II	(ND) | ND	0.12	0.024	0.049
4,4'-DDT	(ND) | ND	0.12	0.024	0.049
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.049
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.049
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.30	0.61
Endrin Ketone	(ND) | ND	0.12	0.024	0.049

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.317 | (0.324)	0.488	66	44-124
Decachlorobiphenyl	(0.365) | 0.355	0.488	75	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 820ml Final Volume : 10ml
Prepared by : POreto Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE02041

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW3520C/8082A
PCBS

One(1) water sample was received on 04/22/23 to be analyzed for PCBs in accordance with Method SW3520C/8082A and project specific requirements.

Holding Time
The sample was 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. CPD032WB - 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) LCS was analyzed. 60D032WL - recovery for all analytes were within LCS QC 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
The sample was 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. : 23D259
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	CPD032WB	1	NA	04/27/2313:43	04/26/2313:30	KD27004A	KD27002A	CPD032W	Method Blank
LCS1W	60D032WL	1	NA	04/27/2314:03	04/26/2313:30	KD27005A	KD27002A	CPD032W	Lab Control Sample (LCS)
QC20042023EB03	D259-06	1.22	NA	04/27/2319:03	04/26/2313:30	KD27020A	KD27015A	CPD032W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/26/23 13:30
Sample ID: QC20042023EB03	Date Analyzed: 04/27/23 19:03
Lab Samp ID: D259-06	Dilution Factor: 1.22
Lab File ID: KD27020A	Matrix : WATER
Ext Btch ID: CPD032W	% Moisture : NA
Calib. Ref.: KD27015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.2	0.30	0.61
PCB-1221	(ND)|ND	1.2	0.30	0.61
PCB-1232	(ND)|ND	1.2	0.30	0.61
PCB-1242	(ND)|ND	1.2	0.30	0.61
PCB-1248	(ND)|ND	1.2	0.30	0.61
PCB-1254	(ND)|ND	1.2	0.30	0.61
PCB-1260	(ND)|ND	1.2	0.30	0.61

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.6346)|0.5814	0.4880	(130)|119	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#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD 8151A
HERBICIDES

One(1) water sample was received on 04/22/23 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
The sample was 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. HED007WB - 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. HED007WL/HED007WC 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
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Dalapon results were reported from channel A due to contamination observed in channel B.

LAB CHRONICLE
HERBICIDES

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

SDG NO. : 23D259
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	HED007WB	1	NA	04/28/2319:03	04/26/2311:00	WD28003A	WD28002A	HED007W	Method Blank
LCS1W	HED007WL	1	NA	04/28/2319:32	04/26/2311:00	WD28004A	WD28002A	HED007W	Lab Control Sample (LCS)
LCD1W	HED007WC	1	NA	04/28/2320:00	04/26/2311:00	WD28005A	WD28002A	HED007W	LCS Duplicate
QC20042023EB03	D259-06	1	NA	04/28/2322:50	04/26/2311:00	WD28011A	WD28002A	HED007W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/26/23 11:00
Sample ID: QC20042023EB03	Date Analyzed: 04/28/23 22:50
Lab Samp ID: D259-06	Dilution Factor: 1
Lab File ID: WD28011A	Matrix : WATER
Ext Btch ID: HED007W	% Moisture : NA
Calib. Ref.: WD28002A	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)|0.94J	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	8.867|(9.621)	10.00	88.7|(96.2)	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#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW8330B
EXPLOSIVES

A total of six(6) water samples were received on 04/22/23 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. EXD013WB - 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. EXD013WL/EXD013WC 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 : 23D259

METHOD SW8330B
EXPLOSIVES

A total of six(6) water samples were received on 04/22/23 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. EXD013WB - 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. 35D013WL/35D013WC 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. : 23D259
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	EXD013WB	1	NA	05/22/2318:16	04/25/2311:00	XE22010A	XE22002A	EXD013W	Method Blank
LCS1W	EXD013WL	1	NA	05/22/2319:04	04/25/2311:00	XE22011A	XE22002A	EXD013W	Lab Control Sample (LCS)
LCD1W	EXD013WC	1	NA	05/22/2320:01	04/25/2311:00	XE22012A	XE22002A	EXD013W	LCS Duplicate
TMW39S042023	D259-01	1	NA	05/23/2313:30	04/25/2311:00	XE22032A	XE22027A	EXD013W	Field Sample
TMW01042023	D259-02	1	NA	05/23/2314:18	04/25/2311:00	XE22033A	XE22027A	EXD013W	Field Sample
MW03042023	D259-03	1	NA	05/23/2315:15	04/25/2311:00	XE22034A	XE22027A	EXD013W	Field Sample
TMW10042023	D259-04	1	NA	05/23/2316:03	04/25/2311:00	XE22035A	XE22027A	EXD013W	Field Sample
TMW10042023D	D259-05	1	NA	05/23/2317:00	04/25/2311:00	XE22036A	XE22027A	EXD013W	Field Sample
QC20042023EB03	D259-06	1	NA	05/23/2317:48	04/25/2311:00	XE22037A	XE22027A	EXD013W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D259
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	EXD013WB	1	NA	05/22/2318:16	04/25/2311:00	XE22010A	XE22003A	EXD013W	Method Blank
LCS1W	35D013WL	1	NA	05/22/2320:49	04/25/2311:00	XE22013A	XE22003A	EXD013W	Lab Control Sample (LCS)
LCD1W	35D013WC	1	NA	05/22/2321:46	04/25/2311:00	XE22014A	XE22003A	EXD013W	LCS Duplicate
TMW39S042023	D259-01	1	NA	05/23/2313:30	04/25/2311:00	XE22032A	XE22028A	EXD013W	Field Sample
TMW01042023	D259-02	1	NA	05/23/2314:18	04/25/2311:00	XE22033A	XE22028A	EXD013W	Field Sample
MW03042023	D259-03	1	NA	05/23/2315:15	04/25/2311:00	XE22034A	XE22028A	EXD013W	Field Sample
TMW10042023	D259-04	1	NA	05/23/2316:03	04/25/2311:00	XE22035A	XE22028A	EXD013W	Field Sample
TMW10042023D	D259-05	1	NA	05/23/2317:00	04/25/2311:00	XE22036A	XE22028A	EXD013W	Field Sample
QC20042023EB03	D259-06	1	NA	05/23/2317:48	04/25/2311:00	XE22037A	XE22028A	EXD013W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: TMW39S042023	Date Analyzed: 05/23/23 13:30
Lab Samp ID: D259-01	Dilution Factor: 1
Lab File ID: XE22032A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22027A	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	3.57	4.000	89.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: TMW39S042023	Date Analyzed: 05/23/23 13:30
Lab Samp ID: D259-01	Dilution Factor: 1
Lab File ID: XE22032A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22028A	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	3.57	4.000	89.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: TMW01042023	Date Analyzed: 05/23/23 14:18
Lab Samp ID: D259-02	Dilution Factor: 1
Lab File ID: XE22033A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22027A	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: TMW01042023	Date Analyzed: 05/23/23 14:18
Lab Samp ID: D259-02	Dilution Factor: 1
Lab File ID: XE22033A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22028A	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: MW03042023	Date Analyzed: 05/23/23 15:15
Lab Samp ID: D259-03	Dilution Factor: 1
Lab File ID: XE22034A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22027A	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: MW03042023	Date Analyzed: 05/23/23 15:15
Lab Samp ID: D259-03	Dilution Factor: 1
Lab File ID: XE22034A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22028A	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: TMW10042023	Date Analyzed: 05/23/23 16:03
Lab Samp ID: D259-04	Dilution Factor: 1
Lab File ID: XE22035A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22027A	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: TMW10042023	Date Analyzed: 05/23/23 16:03
Lab Samp ID: D259-04	Dilution Factor: 1
Lab File ID: XE22035A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22028A	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	95.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: TMW10042023D	Date Analyzed: 05/23/23 17:00
Lab Samp ID: D259-05	Dilution Factor: 1
Lab File ID: XE22036A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22027A	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	97.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: TMW10042023D	Date Analyzed: 05/23/23 17:00
Lab Samp ID: D259-05	Dilution Factor: 1
Lab File ID: XE22036A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22028A	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	97.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: QC20042023EB03	Date Analyzed: 05/23/23 17:48
Lab Samp ID: D259-06	Dilution Factor: 1
Lab File ID: XE22037A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22027A	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	4.06	4.000	102	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 11:00
Sample ID: QC20042023EB03	Date Analyzed: 05/23/23 17:48
Lab Samp ID: D259-06	Dilution Factor: 1
Lab File ID: XE22037A	Matrix : WATER
Ext Btch ID: EXD013W	% Moisture : NA
Calib. Ref.: XE22028A	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	4.06	4.000	102	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#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW8332
NITROGLYCERIN AND PETN

A total of six(6) water samples were received on 04/22/23 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. EXD012WB - 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. EXD012WL/EXD012WC 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. : 23D259
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	EXD012WB	1	NA	05/15/2321:18	04/25/2316:15	NE15056A	NE15053A	EXD012W	Method Blank
LCS1W	EXD012WL	1	NA	05/15/2321:27	04/25/2316:15	NE15057A	NE15053A	EXD012W	Lab Control Sample (LCS)
LCD1W	EXD012WC	1	NA	05/15/2321:36	04/25/2316:15	NE15058A	NE15053A	EXD012W	LCS Duplicate
TMW39S042023	D259-01	1	NA	05/15/2323:34	04/25/2316:15	NE15071A	NE15067A	EXD012W	Field Sample
TMW01042023	D259-02	1	NA	05/15/2323:43	04/25/2316:15	NE15072A	NE15067A	EXD012W	Field Sample
MW03042023	D259-03	1	NA	05/15/2323:52	04/25/2316:15	NE15073A	NE15067A	EXD012W	Field Sample
TMW10042023	D259-04	1	NA	05/16/2300:01	04/25/2316:15	NE15074A	NE15067A	EXD012W	Field Sample
TMW10042023D	D259-05	1	NA	05/16/2300:10	04/25/2316:15	NE15075A	NE15067A	EXD012W	Field Sample
QC20042023EB03	D259-06	1	NA	05/16/2300:19	04/25/2316:15	NE15076A	NE15067A	EXD012W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 16:15
Sample ID: TMW39S042023	Date Analyzed: 05/15/23 23:34
Lab Samp ID: D259-01	Dilution Factor: 1
Lab File ID: NE15071A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15067A	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 16:15
Sample ID: TMW01042023	Date Analyzed: 05/15/23 23:43
Lab Samp ID: D259-02	Dilution Factor: 1
Lab File ID: NE15072A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15067A	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 16:15
Sample ID: MW03042023	Date Analyzed: 05/15/23 23:52
Lab Samp ID: D259-03	Dilution Factor: 1
Lab File ID: NE15073A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15067A	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 16:15
Sample ID: TMW10042023	Date Analyzed: 05/16/23 00:01
Lab Samp ID: D259-04	Dilution Factor: 1
Lab File ID: NE15074A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15067A	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	517	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 16:15
Sample ID: TMW10042023D	Date Analyzed: 05/16/23 00:10
Lab Samp ID: D259-05	Dilution Factor: 1
Lab File ID: NE15075A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15067A	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	507	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: 04/20/23
Project : USACE WINGATE	Date Received: 04/22/23
Batch No. : 23D259	Date Extracted: 04/25/23 16:15
Sample ID: QC20042023EB03	Date Analyzed: 05/16/23 00:19
Lab Samp ID: D259-06	Dilution Factor: 1
Lab File ID: NE15076A	Matrix : WATER
Ext Btch ID: EXD012W	% Moisture : NA
Calib. Ref.: NE15067A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW6020A
METALS BY ICP-MS

A total of six(6) water samples were received on 04/22/23 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 projects.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IMD047WB - 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. IMD047WL/IMD047WC 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 were analyzed and the following were noted: D259-02M/D259-02S - Percent recoveries for Lead and Sodium(190X) were not within MS/MSD QC limits. Percent recovery for Calcium(38X) was not within MS QC limit. Percent recovery for 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. : 23D259
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	IMD047WB	1	NA	06/26/2317:09	04/27/2313:16	H6F24062	H6F24060	IMD047W	Method Blank
LCS1W	IMD047WL	1	NA	06/26/2317:12	04/27/2313:16	H6F24063	H6F24060	IMD047W	Lab Control Sample (LCS)
LCD1W	IMD047WC	1	NA	06/26/2317:15	04/27/2313:16	H6F24064	H6F24060	IMD047W	LCS Duplicate
TMW39S042023	D259-01G	5	NA	06/23/2317:24	04/27/2313:16	H6F22085	H6F22080	IMD047W	Diluted Sample
TMW01042023	D259-02A	5	NA	06/23/2317:27	04/27/2313:16	H6F22086	H6F22080	IMD047W	Analytical Spike Sample
TMW01042023	D259-02G	5	NA	06/23/2317:30	04/27/2313:16	H6F22087	H6F22080	IMD047W	Diluted Sample
TMW01042023	D259-02J	25	NA	06/23/2317:33	04/27/2313:16	H6F22088	H6F22080	IMD047W	Diluted Sample
TMW01042023MS	D259-02M	5	NA	06/23/2317:36	04/27/2313:16	H6F22089	H6F22080	IMD047W	Matrix Spike Sample (MS)
TMW01042023MSD	D259-02S	5	NA	06/23/2317:39	04/27/2313:16	H6F22090	H6F22080	IMD047W	MS Duplicate (MSD)
MW03042023	D259-03G	5	NA	06/23/2317:42	04/27/2313:16	H6F22091	H6F22080	IMD047W	Diluted Sample
TMW10042023	D259-04I	10	NA	06/23/2317:51	04/27/2313:16	H6F22094	H6F22092	IMD047W	Diluted Sample
TMW10042023D	D259-05I	10	NA	06/23/2317:54	04/27/2313:16	H6F22095	H6F22092	IMD047W	Diluted Sample
QC20042023EB03	D259-06	1	NA	06/23/2317:56	04/27/2313:16	H6F22096	H6F22092	IMD047W	Field Sample
TMW39S042023	D259-01T	50	NA	06/23/2317:59	04/27/2313:16	H6F22097	H6F22092	IMD047W	Diluted Sample
TMW01042023	D259-02A	50	NA	06/23/2318:02	04/27/2313:16	H6F22098	H6F22092	IMD047W	Analytical Spike Sample
TMW01042023	D259-02T	50	NA	06/23/2318:05	04/27/2313:16	H6F22099	H6F22092	IMD047W	Diluted Sample
TMW01042023	D259-02J	250	NA	06/23/2318:08	04/27/2313:16	H6F22100	H6F22092	IMD047W	Diluted Sample
TMW01042023MS	D259-02M	50	NA	06/23/2318:11	04/27/2313:16	H6F22101	H6F22092	IMD047W	Matrix Spike Sample (MS)
TMW01042023MSD	D259-02S	50	NA	06/23/2318:14	04/27/2313:16	H6F22102	H6F22092	IMD047W	MS Duplicate (MSD)
MW03042023	D259-03T	50	NA	06/23/2318:17	04/27/2313:16	H6F22103	H6F22092	IMD047W	Diluted Sample
TMW10042023	D259-04T	50	NA	06/23/2318:26	04/27/2313:16	H6F22106	H6F22104	IMD047W	Diluted Sample
TMW10042023D	D259-05T	50	NA	06/23/2318:29	04/27/2313:16	H6F22107	H6F22104	IMD047W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW39S042023
Lab Samp ID: D259-01G
Lab File ID: H6F22085
Ext Btch ID: IMD047W
Calib. Ref.: H6F22080

Date Collected: 04/20/23 07:30
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/23/23 17:24
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	180J	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	74000	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	17000	500	100	250
Manganese	18	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	400J	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	3.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW39S042023
Lab Samp ID: D259-01T
Lab File ID: H6F22097
Ext Btch ID: IMD047W
Calib. Ref.: H6F22092

Date Analyzed: 06/23/23 17:59
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	850000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 07:30
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D259	Date Extracted: 04/27/23 13:16
Sample ID: TMW39S042023	Date Analyzed: 06/23/23 17:24
Lab Samp ID: D259-01G	Dilution Factor: 5
Lab File ID: H6F22085	Matrix: WATER
Ext Btch ID: IMD047W	% Moisture: NA
Calib. Ref.: H6F22080	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	180J	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	74000	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	17000	500	100	250
Manganese	18	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	9.9	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	830000E	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 07:30
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW39S042023	Date Analyzed:	06/23/23 17:59
Lab Samp ID:	D259-01T	Dilution Factor:	50
Lab File ID:	H6F22097	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F22092	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	72000	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	21J	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	850000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW01042023
Lab Samp ID: D259-02G
Lab File ID: H6F22087
Ext Btch ID: IMD047W
Calib. Ref.: H6F22080

Date Collected: 04/20/23 08:20
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/23/23 17:30
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	0.89J	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	120000	1000	250	500
Chromium	ND	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	21000	500	100	250
Manganese	18	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	260J	1000	250	500
Selenium	3.1J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	14	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW01042023
Lab Samp ID: D259-02T
Lab File ID: H6F22099
Ext Btch ID: IMD047W
Calib. Ref.: H6F22092

Date Analyzed: 06/23/23 18:05
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 08:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW01042023	Date Analyzed:	06/23/23 17:30
Lab Samp ID:	D259-02G	Dilution Factor:	5
Lab File ID:	H6F22087	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F22080	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	0.89J	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	120000	1000	250	500
Chromium	ND	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	21000	500	100	250
Manganese	18	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	260J	1000	250	500
Selenium	3.1J	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	14	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 08:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW01042023	Date Analyzed:	06/23/23 18:05
Lab Samp ID:	D259-02T	Dilution Factor:	50
Lab File ID:	H6F22099	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F22092	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	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	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: MW03042023
Lab Samp ID: D259-03G
Lab File ID: H6F22091
Ext Btch ID: IMD047W
Calib. Ref.: H6F22080

Date Collected: 04/20/23 09:50
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/23/23 17:42
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	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	93000	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	17000	500	100	250
Manganese	88	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	330J	1000	250	500
Selenium	25	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: MW03042023
Lab Samp ID: D259-03T
Lab File ID: H6F22103
Ext Btch ID: IMD047W
Calib. Ref.: H6F22092

Date Analyzed: 06/23/23 18:17
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 09:50
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	MW03042023	Date Analyzed:	06/23/23 17:42
Lab Samp ID:	D259-03G	Dilution Factor:	5
Lab File ID:	H6F22091	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F22080	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	93000	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	17000	500	100	250
Manganese	88	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	330J	1000	250	500
Selenium	25	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 09:50
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	MW03042023	Date Analyzed:	06/23/23 18:17
Lab Samp ID:	D259-03T	Dilution Factor:	50
Lab File ID:	H6F22103	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F22092	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	93000	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	93	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	25J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW10042023
Lab Samp ID: D259-04I
Lab File ID: H6F22094
Ext Btch ID: IMD047W
Calib. Ref.: H6F22092

Date Collected: 04/20/23 11:05
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/23/23 17:51
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	53000	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	13000	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	ND	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW10042023
Lab Samp ID: D259-04T
Lab File ID: H6F22106
Ext Btch ID: IMD047W
Calib. Ref.: H6F22104

Date Analyzed: 06/23/23 18:26
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:05
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW10042023	Date Analyzed:	06/23/23 17:51
Lab Samp ID:	D259-04I	Dilution Factor:	10
Lab File ID:	H6F22094	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F22092	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	53000	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	13000	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:05
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW10042023	Date Analyzed:	06/23/23 18:26
Lab Samp ID:	D259-04T	Dilution Factor:	50
Lab File ID:	H6F22106	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F22104	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	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	13000	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW10042023D
Lab Samp ID: D259-05I
Lab File ID: H6F22095
Ext Btch ID: IMD047W
Calib. Ref.: H6F22092

Date Collected: 04/20/23 11:10
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/23/23 17:54
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	13	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	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	13000	1000	200	500
Manganese	18	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	2.5J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW10042023D
Lab Samp ID: D259-05T
Lab File ID: H6F22107
Ext Btch ID: IMD047W
Calib. Ref.: H6F22104

Date Analyzed: 06/23/23 18:29
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1500000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:10
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW10042023D	Date Analyzed:	06/23/23 17:54
Lab Samp ID:	D259-05I	Dilution Factor:	10
Lab File ID:	H6F22095	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F22092	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	53000	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	13000	1000	200	500
Manganese	18	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	1600000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	2.5J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW10042023D
Lab Samp ID: D259-05T
Lab File ID: H6F22107
Ext Btch ID: IMD047W
Calib. Ref.: H6F22104

Date Collected: 04/20/23 11:10
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/23/23 18:29
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	51000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	1700J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	13000	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	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 : CKaing
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 14:00
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D259	Date Extracted: 04/27/23 13:16
Sample ID: QC20042023EB03	Date Analyzed: 06/23/23 17:56
Lab Samp ID: D259-06	Dilution Factor: 1
Lab File ID: H6F22096	Matrix: WATER
Ext Btch ID: IMD047W	% Moisture: NA
Calib. Ref.: H6F22092	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	MBLK1W	Date Analyzed:	06/26/23 17:09
Lab Samp ID:	IMD047WB	Dilution Factor:	1
Lab File ID:	H6F24062	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F24060	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of six(6) water samples were received on 04/22/23 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. Chromium(0.10J <1/2 LOQ) was detected at trace level in IMD047WB. 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. IMD047WL/IMD047WC 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: D259-02M/D259-02S - Percent recoveries for Calcium(35X), Sodium(197X) and Zinc were not within MS/MSD QC limits. Percent recoveries for Iron and Potassium 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
DISSOLVED METALS BY ICP-MS

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

SDG NO. : 23D259
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	IMD047WB	1	NA	06/28/2313:38	04/27/2313:16	H6F26038	H6F26036	IMD047W	Method Blank
LCS1W	IMD047WL	1	NA	06/28/2313:41	04/27/2313:16	H6F26039	H6F26036	IMD047W	Lab Control Sample (LCS)
LCD1W	IMD047WC	1	NA	06/28/2313:44	04/27/2313:16	H6F26040	H6F26036	IMD047W	LCS Duplicate
TMW39S042023	D259-01G	5	NA	06/28/2313:47	04/27/2313:16	H6F26041	H6F26036	IMD047W	Diluted Sample
TMW01042023	D259-02A	5	NA	06/28/2313:50	04/27/2313:16	H6F26042	H6F26036	IMD047W	Analytical Spike Sample
TMW01042023	D259-02G	5	NA	06/28/2313:53	04/27/2313:16	H6F26043	H6F26036	IMD047W	Diluted Sample
TMW01042023	D259-02J	25	NA	06/28/2313:56	04/27/2313:16	H6F26044	H6F26036	IMD047W	Diluted Sample
TMW01042023MS	D259-02M	5	NA	06/28/2313:58	04/27/2313:16	H6F26045	H6F26036	IMD047W	Matrix Spike Sample (MS)
TMW01042023MSD	D259-02S	5	NA	06/28/2314:01	04/27/2313:16	H6F26046	H6F26036	IMD047W	MS Duplicate (MSD)
MW03042023	D259-03G	5	NA	06/28/2314:04	04/27/2313:16	H6F26047	H6F26036	IMD047W	Diluted Sample
TMW10042023	D259-04I	10	NA	06/28/2314:13	04/27/2313:16	H6F26050	H6F26048	IMD047W	Diluted Sample
TMW10042023D	D259-05I	10	NA	06/28/2314:16	04/27/2313:16	H6F26051	H6F26048	IMD047W	Diluted Sample
QC20042023EB03	D259-06N	1	NA	06/28/2314:19	04/27/2313:16	H6F26052	H6F26048	IMD047W	Field Sample
TMW39S042023	D259-01T	50	NA	06/28/2314:22	04/27/2313:16	H6F26053	H6F26048	IMD047W	Diluted Sample
TMW01042023	D259-02A	50	NA	06/28/2314:25	04/27/2313:16	H6F26054	H6F26048	IMD047W	Analytical Spike Sample
TMW01042023	D259-02T	50	NA	06/28/2314:28	04/27/2313:16	H6F26055	H6F26048	IMD047W	Diluted Sample
TMW01042023	D259-02J	250	NA	06/28/2314:30	04/27/2313:16	H6F26056	H6F26048	IMD047W	Diluted Sample
TMW01042023MS	D259-02M	50	NA	06/28/2314:33	04/27/2313:16	H6F26057	H6F26048	IMD047W	Matrix Spike Sample (MS)
TMW01042023MSD	D259-02S	50	NA	06/28/2314:36	04/27/2313:16	H6F26058	H6F26048	IMD047W	MS Duplicate (MSD)
MW03042023	D259-03T	50	NA	06/28/2314:39	04/27/2313:16	H6F26059	H6F26048	IMD047W	Diluted Sample
TMW10042023	D259-04T	50	NA	06/28/2314:49	04/27/2313:16	H6F26062	H6F26060	IMD047W	Diluted Sample
TMW10042023D	D259-05T	50	NA	06/28/2314:58	04/27/2313:16	H6F26063	H6F26060	IMD047W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW39S042023
Lab Samp ID: D259-01G
Lab File ID: H6F26041
Ext Btch ID: IMD047W
Calib. Ref.: H6F26036

Date Collected: 04/20/23 07:30
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 13:47
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	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	1.5J	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	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	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	3.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW39S042023
Lab Samp ID: D259-01T
Lab File ID: H6F26053
Ext Btch ID: IMD047W
Calib. Ref.: H6F26048

Date Analyzed: 06/28/23 14:22
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	850000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 07:30
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D259	Date Extracted: 04/27/23 13:16
Sample ID: TMW39S042023	Date Analyzed: 06/28/23 13:47
Lab Samp ID: D259-01G	Dilution Factor: 5
Lab File ID: H6F26041	Matrix: WATER
Ext Btch ID: IMD047W	% Moisture: NA
Calib. Ref.: H6F26036	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	72000	1000	250	500
Chromium	1.5J	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	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	10	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW39S042023
Lab Samp ID: D259-01T
Lab File ID: H6F26053
Ext Btch ID: IMD047W
Calib. Ref.: H6F26048

Date Collected: 04/20/23 07:30
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 14:22
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	72000	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	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	850000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW01042023
Lab Samp ID: D259-02G
Lab File ID: H6F26043
Ext Btch ID: IMD047W
Calib. Ref.: H6F26036

Date Collected: 04/20/23 08:20
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 13:53
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	0.90J	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	110000	1000	250	500
Chromium	0.60J	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	20000	500	100	250
Manganese	16	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	300J	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	14	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW01042023
Lab Samp ID: D259-02T
Lab File ID: H6F26055
Ext Btch ID: IMD047W
Calib. Ref.: H6F26048

Date Analyzed: 06/28/23 14:28
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	590000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW01042023
Lab Samp ID: D259-02G
Lab File ID: H6F26043
Ext Btch ID: IMD047W
Calib. Ref.: H6F26036

Date Collected: 04/20/23 08:20
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 13:53
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	0.90J	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	110000	1000	250	500
Chromium	0.60J	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	20000	500	100	250
Manganese	16	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	300J	1000	250	500
Selenium	2.7J	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	14	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 08:20
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW01042023	Date Analyzed:	06/28/23 14:28
Lab Samp ID:	D259-02T	Dilution Factor:	50
Lab File ID:	H6F26055	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F26048	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	20J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: MW03042023
Lab Samp ID: D259-03G
Lab File ID: H6F26047
Ext Btch ID: IMD047W
Calib. Ref.: H6F26036

Date Collected: 04/20/23 09:50
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 14:04
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	94000	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	17000	500	100	250
Manganese	80	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	26	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: MW03042023
Lab Samp ID: D259-03T
Lab File ID: H6F26059
Ext Btch ID: IMD047W
Calib. Ref.: H6F26048

Date Analyzed: 06/28/23 14:39
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: MW03042023
Lab Samp ID: D259-03G
Lab File ID: H6F26047
Ext Btch ID: IMD047W
Calib. Ref.: H6F26036

Date Collected: 04/20/23 09:50
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 14:04
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	94000	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	17000	500	100	250
Manganese	80	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	26	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 09:50
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D259	Date Extracted: 04/27/23 13:16
Sample ID: MW03042023	Date Analyzed: 06/28/23 14:39
Lab Samp ID: D259-03T	Dilution Factor: 50
Lab File ID: H6F26059	Matrix: WATER
Ext Btch ID: IMD047W	% Moisture: NA
Calib. Ref.: H6F26048	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	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	18000	5000	1000	2500
Manganese	85	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW10042023
Lab Samp ID: D259-04I
Lab File ID: H6F26050
Ext Btch ID: IMD047W
Calib. Ref.: H6F26048

Date Collected: 04/20/23 11:05
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 14:13
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	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	53000	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	13000	1000	200	500
Manganese	14	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	3.4J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW10042023
Lab Samp ID: D259-04T
Lab File ID: H6F26062
Ext Btch ID: IMD047W
Calib. Ref.: H6F26060

Date Analyzed: 06/28/23 14:49
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:05
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW10042023	Date Analyzed:	06/28/23 14:13
Lab Samp ID:	D259-04I	Dilution Factor:	10
Lab File ID:	H6F26050	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F26048	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	53000	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	13000	1000	200	500
Manganese	14	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	1600000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	3.4J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:05
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW10042023	Date Analyzed:	06/28/23 14:49
Lab Samp ID:	D259-04T	Dilution Factor:	50
Lab File ID:	H6F26062	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F26060	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	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	14000	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: TMW10042023D
Lab Samp ID: D259-05I
Lab File ID: H6F26051
Ext Btch ID: IMD047W
Calib. Ref.: H6F26048

Date Collected: 04/20/23 11:10
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 14:16
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	55000	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	14000	1000	200	500
Manganese	15	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	3.3J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW10042023D
Lab Samp ID: D259-05T
Lab File ID: H6F26063
Ext Btch ID: IMD047W
Calib. Ref.: H6F26060

Date Analyzed: 06/28/23 14:58
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/20/23 11:10
Project : USACE WINGATE	Date Received: 04/22/23
SDG NO. : 23D259	Date Extracted: 04/27/23 13:16
Sample ID: TMW10042023D	Date Analyzed: 06/28/23 14:16
Lab Samp ID: D259-05I	Dilution Factor: 10
Lab File ID: H6F26051	Matrix: WATER
Ext Btch ID: IMD047W	% Moisture: NA
Calib. Ref.: H6F26048	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	55000	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	14000	1000	200	500
Manganese	15	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	1600000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	3.3J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/20/23 11:10
Project	: USACE WINGATE	Date Received:	04/22/23
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	TMW10042023D	Date Analyzed:	06/28/23 14:58
Lab Samp ID:	D259-05T	Dilution Factor:	50
Lab File ID:	H6F26063	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F26060	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	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	14000	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D259
Sample ID: QC20042023EB03
Lab Samp ID: D259-06N
Lab File ID: H6F26052
Ext Btch ID: IMD047W
Calib. Ref.: H6F26048

Date Collected: 04/20/23 14:00
Date Received: 04/22/23
Date Extracted: 04/27/23 13:16
Date Analyzed: 06/28/23 14:19
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	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	0.68J	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	0.30J	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	82J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D259	Date Extracted:	04/27/23 13:16
Sample ID:	MBLK1W	Date Analyzed:	06/28/23 13:38
Lab Samp ID:	IMD047WB	Dilution Factor:	1
Lab File ID:	H6F26038	Matrix:	WATER
Ext Btch ID:	IMD047W	% Moisture:	NA
Calib. Ref.:	H6F26036	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	0.10J	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of six(6) water samples were received on 04/22/23 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 HGE019WB. 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. HGE019WL/HGE019WC 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 D259-02M/D259-02S. 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. : 23D259
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	HGE019WB	1	NA	05/17/2320:27	05/17/2314:40	M47E018012	M47E018	23HGE019W	Method Blank
LCS1W	HGE019WL	1	NA	05/17/2320:29	05/17/2314:40	M47E018013	M47E018	23HGE019W	Lab Control Sample (LCS)
LCD1W	HGE019WC	1	NA	05/17/2320:31	05/17/2314:40	M47E018014	M47E018	23HGE019W	LCS Duplicate
TMW39S042023	D259-01	1	NA	05/17/2320:33	05/17/2314:40	M47E018015	M47E018	23HGE019W	Field Sample
TMW01042023MS	D259-02M	1	NA	05/17/2320:35	05/17/2314:40	M47E018016	M47E018	23HGE019W	Matrix Spike Sample (MS)
TMW01042023MSD	D259-02S	1	NA	05/17/2320:37	05/17/2314:40	M47E018017	M47E018	23HGE019W	MS Duplicate (MSD)
TMW01042023	D259-02	1	NA	05/17/2320:41	05/17/2314:40	M47E018019	M47E018	23HGE019W	Field Sample
MW03042023	D259-03	1	NA	05/17/2320:45	05/17/2314:40	M47E018021	M47E018	23HGE019W	Field Sample
TMW10042023	D259-04	1	NA	05/17/2320:50	05/17/2314:40	M47E018024	M47E018	23HGE019W	Field Sample
TMW10042023D	D259-05	1	NA	05/17/2320:52	05/17/2314:40	M47E018025	M47E018	23HGE019W	Field Sample
QC20042023EB03	D259-06	1	NA	05/17/2320:54	05/17/2314:40	M47E018026	M47E018	23HGE019W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D259

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	HGE019WB	ND	1	NA	0.50	0.10	0.20	05/17/2320:27	05/17/2314:40	M47E018012	M47E018	23HGE019W	NA	NA
LCS1W	HGE019WL	2.6	1	NA	0.50	0.10	0.20	05/17/2320:29	05/17/2314:40	M47E018013	M47E018	23HGE019W	NA	NA
LCD1W	HGE019WC	2.5	1	NA	0.50	0.10	0.20	05/17/2320:31	05/17/2314:40	M47E018014	M47E018	23HGE019W	NA	NA
TMW39S042023	D259-01	0.73	1	NA	0.50	0.10	0.20	05/17/2320:33	05/17/2314:40	M47E018015	M47E018	23HGE019W	04/20/2307:30	04/22/23
TMW01042023MS	D259-02M	2.7	1	NA	0.50	0.10	0.20	05/17/2320:35	05/17/2314:40	M47E018016	M47E018	23HGE019W	04/20/2308:20	04/22/23
TMW01042023MSD	D259-02S	2.7	1	NA	0.50	0.10	0.20	05/17/2320:37	05/17/2314:40	M47E018017	M47E018	23HGE019W	04/20/2308:20	04/22/23
TMW01042023	D259-02	ND	1	NA	0.50	0.10	0.20	05/17/2320:41	05/17/2314:40	M47E018019	M47E018	23HGE019W	04/20/2308:20	04/22/23
MW03042023	D259-03	ND	1	NA	0.50	0.10	0.20	05/17/2320:45	05/17/2314:40	M47E018021	M47E018	23HGE019W	04/20/2309:50	04/22/23
TMW10042023	D259-04	ND	1	NA	0.50	0.10	0.20	05/17/2320:50	05/17/2314:40	M47E018024	M47E018	23HGE019W	04/20/2311:05	04/22/23
TMW10042023D	D259-05	ND	1	NA	0.50	0.10	0.20	05/17/2320:52	05/17/2314:40	M47E018025	M47E018	23HGE019W	04/20/2311:10	04/22/23
QC20042023EB03	D259-06	0.43J	1	NA	0.50	0.10	0.20	05/17/2320:54	05/17/2314:40	M47E018026	M47E018	23HGE019W	04/20/2314:00	04/22/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of six(6) water samples were received on 04/22/23 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 HGE019WB. 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. HGE019WL/HGE019WC 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 D259-02M/D259-02S. 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. : 23D259
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	HGE019WB	1	NA	05/17/2320:27	05/17/2314:40	M47E018012	M47E018	23HGE019W	Method Blank
LCS1W	HGE019WL	1	NA	05/17/2320:29	05/17/2314:40	M47E018013	M47E018	23HGE019W	Lab Control Sample (LCS)
LCD1W	HGE019WC	1	NA	05/17/2320:31	05/17/2314:40	M47E018014	M47E018	23HGE019W	LCS Duplicate
TMW39S042023	D259-01	1	NA	05/17/2320:56	05/17/2314:40	M47E018027	M47E018	23HGE019W	Field Sample
TMW01042023MS	D259-02M	1	NA	05/17/2320:58	05/17/2314:40	M47E018028	M47E018	23HGE019W	Matrix Spike Sample (MS)
TMW01042023MSD	D259-02S	1	NA	05/17/2321:00	05/17/2314:40	M47E018029	M47E018	23HGE019W	MS Duplicate (MSD)
TMW01042023	D259-02	1	NA	05/17/2321:03	05/17/2314:40	M47E018031	M47E018	23HGE019W	Field Sample
MW03042023	D259-03	1	NA	05/17/2321:07	05/17/2314:40	M47E018033	M47E018	23HGE019W	Field Sample
TMW10042023	D259-04	1	NA	05/17/2321:12	05/17/2314:40	M47E018036	M47E018	23HGE019W	Field Sample
TMW10042023D	D259-05	1	NA	05/17/2321:14	05/17/2314:40	M47E018037	M47E018	23HGE019W	Field Sample
QC20042023EB03	D259-06	1	NA	05/17/2321:16	05/17/2314:40	M47E018038	M47E018	23HGE019W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D259
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	HGE019WB	ND	1	NA	0.50	0.10	0.20	05/17/2320:27	05/17/2314:40	M47E018012	M47E018	23HGE019W	NA	NA
LCS1W	HGE019WL	2.6	1	NA	0.50	0.10	0.20	05/17/2320:29	05/17/2314:40	M47E018013	M47E018	23HGE019W	NA	NA
LCD1W	HGE019WC	2.5	1	NA	0.50	0.10	0.20	05/17/2320:31	05/17/2314:40	M47E018014	M47E018	23HGE019W	NA	NA
TMW39S042023	D259-01	ND	1	NA	0.50	0.10	0.20	05/17/2320:56	05/17/2314:40	M47E018027	M47E018	23HGE019W	04/20/2307:30	04/22/23
TMW01042023MS	D259-02M	2.8	1	NA	0.50	0.10	0.20	05/17/2320:58	05/17/2314:40	M47E018028	M47E018	23HGE019W	04/20/2308:20	04/22/23
TMW01042023MSD	D259-02S	2.7	1	NA	0.50	0.10	0.20	05/17/2321:00	05/17/2314:40	M47E018029	M47E018	23HGE019W	04/20/2308:20	04/22/23
TMW01042023	D259-02	ND	1	NA	0.50	0.10	0.20	05/17/2321:03	05/17/2314:40	M47E018031	M47E018	23HGE019W	04/20/2308:20	04/22/23
MW03042023	D259-03	ND	1	NA	0.50	0.10	0.20	05/17/2321:07	05/17/2314:40	M47E018033	M47E018	23HGE019W	04/20/2309:50	04/22/23
TMW10042023	D259-04	0.55	1	NA	0.50	0.10	0.20	05/17/2321:12	05/17/2314:40	M47E018036	M47E018	23HGE019W	04/20/2311:05	04/22/23
TMW10042023D	D259-05	0.18J	1	NA	0.50	0.10	0.20	05/17/2321:14	05/17/2314:40	M47E018037	M47E018	23HGE019W	04/20/2311:10	04/22/23
QC20042023EB03	D259-06	ND	1	NA	0.50	0.10	0.20	05/17/2321:16	05/17/2314:40	M47E018038	M47E018	23HGE019W	04/20/2314:00	04/22/23

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#: 23D259

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D259

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of six(6) water samples were received on 04/22/23 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.

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. PLE002WL/PLE002WC and PLE004WL/PLE004WC 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 D259-02M/D259-02S. 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 D259-03I, -04I, -05I and -06I 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. : 23D259

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	PLE002WB	ND	1	NA	0.20	0.050	0.10	05/03/2311:50	NA	23ME03007	ME03004	PLE002W	NA	NA
LCS1W	PLE002WL	0.22	1	NA	0.20	0.050	0.10	05/03/2313:01	NA	23ME03008	ME03004	PLE002W	NA	NA
LCD1W	PLE002WC	0.22	1	NA	0.20	0.050	0.10	05/03/2313:16	NA	23ME03009	ME03004	PLE002W	NA	NA
MW03042023	D259-03I	ND	5	NA	1.0	0.25	0.50	05/04/2312:53	NA	23ME03043	ME03039	PLE002W	04/20/2309:50	04/22/23
TMW10042023	D259-04I	ND	5	NA	1.0	0.25	0.50	05/04/2301:08	NA	23ME03044	ME03039	PLE002W	04/20/2311:05	04/22/23
TMW10042023D	D259-05I	ND	5	NA	1.0	0.25	0.50	05/04/2301:23	NA	23ME03045	ME03039	PLE002W	04/20/2311:10	04/22/23
QC20042023EB03	D259-06I	ND	5	NA	1.0	0.25	0.50	05/04/2301:37	NA	23ME03046	ME03039	PLE002W	04/20/2314:00	04/22/23
MBLK2W	PLE004WB	ND	1	NA	0.20	0.050	0.10	05/08/2312:47	NA	23ME08007	ME08004	PLE004W	NA	NA
LCS2W	PLE004WL	0.19J	1	NA	0.20	0.050	0.10	05/08/2313:02	NA	23ME08008	ME08004	PLE004W	NA	NA
LCD2W	PLE004WC	0.19J	1	NA	0.20	0.050	0.10	05/08/2313:19	NA	23ME08009	ME08004	PLE004W	NA	NA
TMW01042023	D259-02Q	280	200	NA	40	10	20	05/08/2316:29	NA	23ME08020	ME08017	PLE004W	04/20/2308:20	04/22/23
TMW01042023MS	D259-02M	320	200	NA	40	10	20	05/08/2316:51	NA	23ME08021	ME08017	PLE004W	04/20/2308:20	04/22/23
TMW01042023MSD	D259-02S	320	200	NA	40	10	20	05/08/2317:16	NA	23ME08022	ME08017	PLE004W	04/20/2308:20	04/22/23
TMW39S042023	D259-01R	750	300	NA	60	15	30	05/08/2317:37	NA	23ME08023	ME08017	PLE004W	04/20/2307:30	04/22/23

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: 06-02-2023
EMAX Batch No.: 23D280

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 04/25/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW33042023	D280-01	04/24/23	WATER	ANIONS BY IC
MW36D042023	D280-02	04/24/23	WATER	ANIONS BY IC
MW34042023	D280-03	04/24/23	WATER	ANIONS BY IC
MW36S042023	D280-04	04/24/23	WATER	ANIONS BY IC
MW26042023	D280-05	04/24/23	WATER	ANIONS BY IC
MW23042023	D280-06	04/24/23	WATER	ANIONS BY IC
TMW57042023	D280-07	04/24/23	WATER	ANIONS BY IC
TMW28042023	D280-08	04/24/23	WATER	ANIONS BY IC
TMW59042023	D280-09	04/24/23	WATER	ANIONS BY IC
TMW61042023	D280-10	04/24/23	WATER	ANIONS BY IC
BGMW07042023	D280-11	04/24/23	WATER	ANIONS BY IC
TMW53042023	D280-12	04/24/23	WATER	ANIONS BY IC
TMW58042023	D280-13	04/24/23	WATER	ANIONS BY IC
TMW24042023	D280-14	04/24/23	WATER	ANIONS BY IC
MW27042023	D280-15	04/24/23	WATER	ANIONS BY IC
TMW03042023	D280-16	04/24/23	WATER	ANIONS BY IC
TMW03042023D	D280-17	04/24/23	WATER	ANIONS BY IC
MW35042023	D280-18	04/24/23	WATER	ANIONS BY IC
QC24042023EB04	D280-19	04/24/23	WATER	ANIONS BY IC
TMW28042023MS	D280-08M	04/24/23	WATER	ANIONS BY IC
TMW28042023MSD	D280-08S	04/24/23	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 CA002912022-24
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 BY IC

SDG#: 23D280

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D280

METHOD 9056A
BROMIDE

A total of nineteen(19) water samples were received on 04/25/23 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 ICD026WB. 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. ICD026WL/ICD026WC 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: D280-08M/D280-08S - 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.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D280

METHOD 9056A
CHLORIDE-CL

A total of nineteen(19) water samples were received on 04/25/23 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. ICD026WB and ICE002WB 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. ICD026WL/ICD026WC and ICE002WL/ICE002WC 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 D280-08JM/D280-08JS. 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 : 23D280

METHOD 9056A
FLUORIDE

A total of nineteen(19) water samples were received on 04/25/23 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 ICD026WB. 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. ICD026WL/ICD026WC 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 D280-08M/D280-08S. 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 D280-11I 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 : 23D280

METHOD SW9056A
NITRATE-N

A total of nineteen(19) water samples were received on 04/25/23 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 ICD026WB. 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. ICD026WL/ICD026WC 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 D280-08M/D280-08S. 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 D280-01I was reported at a 2X due to brown color. Samples D280-04I, -11I, and -14I were reported at a 2X, a 5X, and a 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 : 23D280

METHOD SW9056A
NITRITE-N

A total of nineteen(19) water samples were received on 04/25/23 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 ICD026WB. 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. ICD026WL/ICD026WC 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: D280-08M/D280-08S - Percent recovery for Nitrite(0X) 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.

Sample D280-01I was reported at a 2X due to brown color. Sample D280-03I was reported at a 2X dilution factor due to high conductivity. Samples D280-02I and D280-05I were reported at a 2X dilution factor due to chloride interference. Samples D280-04J, -10J, and -14J were reported at a 5X dilution factor due to chloride interference. Sample D280-11K was reported at a 50X dilution factor due to chloride interference. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D280

METHOD 9056A
ORTHOPHOSPHATE-P

A total of nineteen(19) water samples were received on 04/25/23 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 ICD026WB. 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. ICD026WL/ICD026WC 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 D280-08M/D280-08S. 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 D280-01I was reported at a 2X due to brown color. Sample D280-03I, -04I, -10I, and -14I were reported at a 2X dilution factor due to high conductivity. Samples D280-11I 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 : 23D280

METHOD 9056A
SULFATE

A total of nineteen(19) water samples were received on 04/25/23 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. ICD026WB and ICE002WB 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. ICD026WL/ICD026WC and ICE002WL/ICE002WC 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 D280-08KM/D280-08KS. 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. : 23D280

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	ICD026WB	ND	1	NA	0.5	0.13	0.25	04/25/2309:20	NA	AD24-03	AD24-01	ICD026W	NA	NA
LCS1W	ICD026WL	0.94	1	NA	0.5	0.13	0.25	04/25/2309:41	NA	AD24-04	AD24-01	ICD026W	NA	NA
LCD1W	ICD026WC	0.94	1	NA	0.5	0.13	0.25	04/25/2310:01	NA	AD24-05	AD24-01	ICD026W	NA	NA
MW33042023	D280-01I	1.4	2	NA	1	0.26	0.5	04/25/2310:53	NA	AD24-06	AD24-01	ICD026W	04/24/2307:15	04/25/23
MW36D042023	D280-02	0.89	1	NA	0.5	0.13	0.25	04/25/2311:13	NA	AD24-07	AD24-01	ICD026W	04/24/2307:20	04/25/23
MW34042023	D280-03I	1.8	2	NA	1	0.26	0.5	04/25/2311:34	NA	AD24-08	AD24-01	ICD026W	04/24/2307:25	04/25/23
MW36S042023	D280-04I	2.1	2	NA	1	0.26	0.5	04/25/2311:54	NA	AD24-09	AD24-01	ICD026W	04/24/2307:55	04/25/23
MW26042023	D280-05	1.2	1	NA	0.5	0.13	0.25	04/25/2312:14	NA	AD24-10	AD24-01	ICD026W	04/24/2307:55	04/25/23
MW23042023	D280-06	0.68	1	NA	0.5	0.13	0.25	04/25/2312:35	NA	AD24-11	AD24-01	ICD026W	04/24/2308:30	04/25/23
TMW57042023	D280-07	0.67	1	NA	0.5	0.13	0.25	04/25/2312:55	NA	AD24-12	AD24-01	ICD026W	04/24/2309:20	04/25/23
TMW28042023	D280-08	1.1	1	NA	0.5	0.13	0.25	04/25/2313:56	NA	AD24-15	AD24-13	ICD026W	04/24/2309:20	04/25/23
TMW59042023	D280-09	0.64	1	NA	0.5	0.13	0.25	04/25/2314:16	NA	AD24-16	AD24-13	ICD026W	04/24/2309:40	04/25/23
TMW61042023	D280-10I	1.5	2	NA	1	0.26	0.5	04/25/2314:36	NA	AD24-17	AD24-13	ICD026W	04/24/2310:10	04/25/23
BGMW07042023	D280-11I	7.0	5	NA	2.5	0.65	1.2	04/25/2314:57	NA	AD24-18	AD24-13	ICD026W	04/24/2310:00	04/25/23
TMW53042023	D280-12	0.35J	1	NA	0.5	0.13	0.25	04/25/2315:17	NA	AD24-19	AD24-13	ICD026W	04/24/2310:30	04/25/23
TMW58042023	D280-13	0.37J	1	NA	0.5	0.13	0.25	04/25/2315:37	NA	AD24-20	AD24-13	ICD026W	04/24/2310:45	04/25/23
TMW24042023	D280-14I	1.7	2	NA	1	0.26	0.5	04/25/2315:58	NA	AD24-21	AD24-13	ICD026W	04/24/2310:50	04/25/23
MW27042023	D280-15	0.75	1	NA	0.5	0.13	0.25	04/25/2316:18	NA	AD24-22	AD24-13	ICD026W	04/24/2312:20	04/25/23
TMW03042023	D280-16	0.49J	1	NA	0.5	0.13	0.25	04/25/2316:38	NA	AD24-23	AD24-13	ICD026W	04/24/2313:15	04/25/23
TMW03042023D	D280-17	0.49J	1	NA	0.5	0.13	0.25	04/25/2316:58	NA	AD24-24	AD24-13	ICD026W	04/24/2313:20	04/25/23
QC24042023EB04	D280-19	ND	1	NA	0.5	0.13	0.25	04/25/2317:59	NA	AD24-27	AD24-25	ICD026W	04/24/2314:00	04/25/23
MW35042023	D280-18	0.72	1	NA	0.5	0.13	0.25	04/25/2318:20	NA	AD24-28	AD24-25	ICD026W	04/24/2313:25	04/25/23
TMW28042023DUP	D280-08D	1.1	1	NA	0.5	0.13	0.25	04/25/2318:40	NA	AD24-29	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MS	D280-08M	2.0	1	NA	0.5	0.13	0.25	04/25/2319:00	NA	AD24-30	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MSD	D280-08S	2.0	1	NA	0.5	0.13	0.25	04/25/2319:21	NA	AD24-31	AD24-25	ICD026W	04/24/2309:20	04/25/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D280

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	ICD026WB	ND	1	NA	0.2	0.05	0.1	04/25/2309:20	NA	AD24-03	AD24-01	ICD026W	NA	NA
LCS1W	ICD026WL	1.8	1	NA	0.2	0.05	0.1	04/25/2309:41	NA	AD24-04	AD24-01	ICD026W	NA	NA
LCD1W	ICD026WC	1.8	1	NA	0.2	0.05	0.1	04/25/2310:01	NA	AD24-05	AD24-01	ICD026W	NA	NA
QC24042023EB04	D280-19	0.14J	1	NA	0.2	0.05	0.1	04/25/2317:59	NA	AD24-27	AD24-25	ICD026W	04/24/2314:00	04/25/23
MBLK2W	ICE002WB	ND	1	NA	0.2	0.05	0.1	05/01/2314:29	NA	AE02-03	AE02-01	ICE002W	NA	NA
LCS2W	ICE002WL	1.9	1	NA	0.2	0.05	0.1	05/01/2314:49	NA	AE02-04	AE02-01	ICE002W	NA	NA
LCD2W	ICE002WC	1.9	1	NA	0.2	0.05	0.1	05/01/2315:10	NA	AE02-05	AE02-01	ICE002W	NA	NA
MW33042023	D280-01K	220	100	NA	20	5	10	05/01/2315:50	NA	AE02-07	AE02-01	ICE002W	04/24/2307:15	04/25/23
MW36D042023	D280-02J	96	20	NA	4	1	2	05/01/2316:11	NA	AE02-08	AE02-01	ICE002W	04/24/2307:20	04/25/23
MW34042023	D280-03T	430	50	NA	10	2.5	5	05/01/2316:31	NA	AE02-09	AE02-01	ICE002W	04/24/2307:25	04/25/23
MW36S042023	D280-04T	490	400	NA	80	20	40	05/01/2317:32	NA	AE02-12	AE02-01	ICE002W	04/24/2307:55	04/25/23
MW26042023	D280-05J	340	40	NA	8	2	4	05/01/2318:33	NA	AE02-15	AE02-13	ICE002W	04/24/2307:55	04/25/23
MW23042023	D280-06I	80	20	NA	4	1	2	05/01/2319:13	NA	AE02-17	AE02-13	ICE002W	04/24/2308:30	04/25/23
TMW57042023	D280-07I	62	20	NA	4	1	2	05/01/2319:33	NA	AE02-18	AE02-13	ICE002W	04/24/2309:20	04/25/23
TMW28042023	D280-08J	230	40	NA	8	2	4	05/01/2319:54	NA	AE02-19	AE02-13	ICE002W	04/24/2309:20	04/25/23
TMW28042023DUP	D280-08JD	230	40	NA	8	2	4	05/01/2320:14	NA	AE02-20	AE02-13	ICE002W	04/24/2309:20	04/25/23
TMW28042023MS	D280-08JM	310	40	NA	8	2	4	05/01/2320:34	NA	AE02-21	AE02-13	ICE002W	04/24/2309:20	04/25/23
TMW28042023MSD	D280-08JS	310	40	NA	8	2	4	05/01/2320:55	NA	AE02-22	AE02-13	ICE002W	04/24/2309:20	04/25/23
TMW59042023	D280-09K	88	20	NA	4	1	2	05/01/2323:17	NA	AE02-29	AE02-25	ICE002W	04/24/2309:40	04/25/23
TMW61042023	D280-10T	560	100	NA	20	5	10	05/01/2323:57	NA	AE02-31	AE02-25	ICE002W	04/24/2310:10	04/25/23
BGMW07042023	D280-11G	10000	2000	NA	400	100	200	05/02/2300:58	NA	AE02-34	AE02-25	ICE002W	04/24/2310:00	04/25/23
TMW53042023	D280-12I	83	20	NA	4	1	2	05/02/2301:18	NA	AE02-35	AE02-25	ICE002W	04/24/2310:30	04/25/23
TMW58042023	D280-13I	110	50	NA	10	2.5	5	05/02/2301:39	NA	AE02-36	AE02-25	ICE002W	04/24/2310:45	04/25/23
TMW24042023	D280-14K	440	100	NA	20	5	10	05/02/2303:00	NA	AE02-40	AE02-37	ICE002W	04/24/2310:50	04/25/23
MW27042023	D280-15K	120	25	NA	5	1.2	2.5	05/02/2303:20	NA	AE02-41	AE02-37	ICE002W	04/24/2312:20	04/25/23
TMW03042023	D280-16K	170	40	NA	8	2	4	05/02/2304:01	NA	AE02-43	AE02-37	ICE002W	04/24/2313:15	04/25/23
TMW03042023D	D280-17K	170	40	NA	8	2	4	05/02/2304:41	NA	AE02-45	AE02-37	ICE002W	04/24/2313:20	04/25/23
MW35042023	D280-18I	310	100	NA	20	5	10	05/02/2305:22	NA	AE02-47	AE02-37	ICE002W	04/24/2313:25	04/25/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D280

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	ICD026WB	ND	1	NA	0.1	0.025	0.05	04/25/2309:20	NA	AD24-03	AD24-01	ICD026W	NA	NA
LCS1W	ICD026WL	0.95	1	NA	0.1	0.025	0.05	04/25/2309:41	NA	AD24-04	AD24-01	ICD026W	NA	NA
LCD1W	ICD026WC	0.95	1	NA	0.1	0.025	0.05	04/25/2310:01	NA	AD24-05	AD24-01	ICD026W	NA	NA
MW33042023	D280-01I	1.1	2	NA	0.2	0.05	0.1	04/25/2310:53	NA	AD24-06	AD24-01	ICD026W	04/24/2307:15	04/25/23
MW36D042023	D280-02	0.80	1	NA	0.1	0.025	0.05	04/25/2311:13	NA	AD24-07	AD24-01	ICD026W	04/24/2307:20	04/25/23
MW34042023	D280-03I	0.69	2	NA	0.2	0.05	0.1	04/25/2311:34	NA	AD24-08	AD24-01	ICD026W	04/24/2307:25	04/25/23
MW36S042023	D280-04I	0.41	2	NA	0.2	0.05	0.1	04/25/2311:54	NA	AD24-09	AD24-01	ICD026W	04/24/2307:55	04/25/23
MW26042023	D280-05	0.59	1	NA	0.1	0.025	0.05	04/25/2312:14	NA	AD24-10	AD24-01	ICD026W	04/24/2307:55	04/25/23
MW23042023	D280-06	0.71	1	NA	0.1	0.025	0.05	04/25/2312:35	NA	AD24-11	AD24-01	ICD026W	04/24/2308:30	04/25/23
TMW57042023	D280-07	2.1	1	NA	0.1	0.025	0.05	04/25/2312:55	NA	AD24-12	AD24-01	ICD026W	04/24/2309:20	04/25/23
TMW28042023	D280-08	0.43	1	NA	0.1	0.025	0.05	04/25/2313:56	NA	AD24-15	AD24-13	ICD026W	04/24/2309:20	04/25/23
TMW59042023	D280-09	0.95	1	NA	0.1	0.025	0.05	04/25/2314:16	NA	AD24-16	AD24-13	ICD026W	04/24/2309:40	04/25/23
TMW61042023	D280-10I	0.71	2	NA	0.2	0.05	0.1	04/25/2314:36	NA	AD24-17	AD24-13	ICD026W	04/24/2310:10	04/25/23
BGMW07042023	D280-11I	ND	5	NA	0.5	0.12	0.25	04/25/2314:57	NA	AD24-18	AD24-13	ICD026W	04/24/2310:00	04/25/23
TMW53042023	D280-12	2.9	1	NA	0.1	0.025	0.05	04/25/2315:17	NA	AD24-19	AD24-13	ICD026W	04/24/2310:30	04/25/23
TMW58042023	D280-13	1.3	1	NA	0.1	0.025	0.05	04/25/2315:37	NA	AD24-20	AD24-13	ICD026W	04/24/2310:45	04/25/23
TMW24042023	D280-14I	0.86	2	NA	0.2	0.05	0.1	04/25/2315:58	NA	AD24-21	AD24-13	ICD026W	04/24/2310:50	04/25/23
MW27042023	D280-15	0.55	1	NA	0.1	0.025	0.05	04/25/2316:18	NA	AD24-22	AD24-13	ICD026W	04/24/2312:20	04/25/23
TMW03042023	D280-16	0.98	1	NA	0.1	0.025	0.05	04/25/2316:38	NA	AD24-23	AD24-13	ICD026W	04/24/2313:15	04/25/23
TMW03042023D	D280-17	0.99	1	NA	0.1	0.025	0.05	04/25/2316:58	NA	AD24-24	AD24-13	ICD026W	04/24/2313:20	04/25/23
QC24042023EB04	D280-19	ND	1	NA	0.1	0.025	0.05	04/25/2317:59	NA	AD24-27	AD24-25	ICD026W	04/24/2314:00	04/25/23
MW35042023	D280-18	0.21	1	NA	0.1	0.025	0.05	04/25/2318:20	NA	AD24-28	AD24-25	ICD026W	04/24/2313:25	04/25/23
TMW28042023DUP	D280-08D	0.43	1	NA	0.1	0.025	0.05	04/25/2318:40	NA	AD24-29	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MS	D280-08M	1.4	1	NA	0.1	0.025	0.05	04/25/2319:00	NA	AD24-30	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MSD	D280-08S	1.4	1	NA	0.1	0.025	0.05	04/25/2319:21	NA	AD24-31	AD24-25	ICD026W	04/24/2309:20	04/25/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D280

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	ICD026WB	ND	1	NA	0.1	0.03	0.06	04/25/2309:20	NA	AD24-03	AD24-01	ICD026W	NA	NA
LCS1W	ICD026WL	0.98	1	NA	0.1	0.03	0.06	04/25/2309:41	NA	AD24-04	AD24-01	ICD026W	NA	NA
LCD1W	ICD026WC	0.98	1	NA	0.1	0.03	0.06	04/25/2310:01	NA	AD24-05	AD24-01	ICD026W	NA	NA
MW33042023	D280-01I	ND	2	NA	0.2	0.06	0.12	04/25/2310:53	NA	AD24-06	AD24-01	ICD026W	04/24/2307:15	04/25/23
MW36D042023	D280-02	0.066J	1	NA	0.1	0.03	0.06	04/25/2311:13	NA	AD24-07	AD24-01	ICD026W	04/24/2307:20	04/25/23
MW36S042023	D280-04I	0.18J	2	NA	0.2	0.06	0.12	04/25/2311:54	NA	AD24-09	AD24-01	ICD026W	04/24/2307:55	04/25/23
MW23042023	D280-06	0.076J	1	NA	0.1	0.03	0.06	04/25/2312:35	NA	AD24-11	AD24-01	ICD026W	04/24/2308:30	04/25/23
TMW57042023	D280-07	1.2	1	NA	0.1	0.03	0.06	04/25/2312:55	NA	AD24-12	AD24-01	ICD026W	04/24/2309:20	04/25/23
TMW28042023	D280-08	ND	1	NA	0.1	0.03	0.06	04/25/2313:56	NA	AD24-15	AD24-13	ICD026W	04/24/2309:20	04/25/23
BGMW07042023	D280-11I	0.35J	5	NA	0.5	0.15	0.3	04/25/2314:57	NA	AD24-18	AD24-13	ICD026W	04/24/2310:00	04/25/23
TMW53042023	D280-12	0.11	1	NA	0.1	0.03	0.06	04/25/2315:17	NA	AD24-19	AD24-13	ICD026W	04/24/2310:30	04/25/23
TMW58042023	D280-13	0.082J	1	NA	0.1	0.03	0.06	04/25/2315:37	NA	AD24-20	AD24-13	ICD026W	04/24/2310:45	04/25/23
TMW24042023	D280-14I	ND	2	NA	0.2	0.06	0.12	04/25/2315:58	NA	AD24-21	AD24-13	ICD026W	04/24/2310:50	04/25/23
QC24042023EB04	D280-19	ND	1	NA	0.1	0.03	0.06	04/25/2317:59	NA	AD24-27	AD24-25	ICD026W	04/24/2314:00	04/25/23
MW35042023	D280-18	0.10J	1	NA	0.1	0.03	0.06	04/25/2318:20	NA	AD24-28	AD24-25	ICD026W	04/24/2313:25	04/25/23
TMW28042023DUP	D280-08D	ND	1	NA	0.1	0.03	0.06	04/25/2318:40	NA	AD24-29	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MS	D280-08M	1.0	1	NA	0.1	0.03	0.06	04/25/2319:00	NA	AD24-30	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MSD	D280-08S	1.0	1	NA	0.1	0.03	0.06	04/25/2319:21	NA	AD24-31	AD24-25	ICD026W	04/24/2309:20	04/25/23
MW34042023	D280-03K	10	10	NA	1	0.3	0.6	04/25/2320:21	NA	AD24-34	AD24-25	ICD026W	04/24/2307:25	04/25/23
MW26042023	D280-05I	1.9	2	NA	0.2	0.06	0.12	04/25/2321:02	NA	AD24-36	AD24-25	ICD026W	04/24/2307:55	04/25/23
TMW59042023	D280-09J	42	50	NA	5	1.5	3	04/25/2323:44	NA	AD24-44	AD24-37	ICD026W	04/24/2309:40	04/25/23
TMW61042023	D280-10K	21	20	NA	2	0.6	1.2	04/26/2300:25	NA	AD24-46	AD24-37	ICD026W	04/24/2310:10	04/25/23
MW27042023	D280-15J	36	50	NA	5	1.5	3	04/26/2302:47	NA	AD24-53	AD24-49	ICD026W	04/24/2312:20	04/25/23
TMW03042023	D280-16J	130	100	NA	10	3	6	04/26/2303:27	NA	AD24-55	AD24-49	ICD026W	04/24/2313:15	04/25/23
TMW03042023D	D280-17J	130	100	NA	10	3	6	04/26/2304:08	NA	AD24-57	AD24-49	ICD026W	04/24/2313:20	04/25/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D280

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	ICD026WB	ND	1	NA	0.1	0.03	0.06	04/25/2309:20	NA	AD24-03	AD24-01	ICD026W	NA	NA
LCS1W	ICD026WL	2.0	1	NA	0.1	0.03	0.06	04/25/2309:41	NA	AD24-04	AD24-01	ICD026W	NA	NA
LCD1W	ICD026WC	2.0	1	NA	0.1	0.03	0.06	04/25/2310:01	NA	AD24-05	AD24-01	ICD026W	NA	NA
MW33042023	D280-01I	ND	2	NA	0.2	0.06	0.12	04/25/2310:53	NA	AD24-06	AD24-01	ICD026W	04/24/2307:15	04/25/23
MW34042023	D280-03I	ND	2	NA	0.2	0.06	0.12	04/25/2311:34	NA	AD24-08	AD24-01	ICD026W	04/24/2307:25	04/25/23
MW23042023	D280-06	ND	1	NA	0.1	0.03	0.06	04/25/2312:35	NA	AD24-11	AD24-01	ICD026W	04/24/2308:30	04/25/23
TMW57042023	D280-07	ND	1	NA	0.1	0.03	0.06	04/25/2312:55	NA	AD24-12	AD24-01	ICD026W	04/24/2309:20	04/25/23
TMW28042023	D280-08	ND	1	NA	0.1	0.03	0.06	04/25/2313:56	NA	AD24-15	AD24-13	ICD026W	04/24/2309:20	04/25/23
TMW59042023	D280-09	0.089J	1	NA	0.1	0.03	0.06	04/25/2314:16	NA	AD24-16	AD24-13	ICD026W	04/24/2309:40	04/25/23
TMW53042023	D280-12	ND	1	NA	0.1	0.03	0.06	04/25/2315:17	NA	AD24-19	AD24-13	ICD026W	04/24/2310:30	04/25/23
TMW58042023	D280-13	ND	1	NA	0.1	0.03	0.06	04/25/2315:37	NA	AD24-20	AD24-13	ICD026W	04/24/2310:45	04/25/23
MW27042023	D280-15	ND	1	NA	0.1	0.03	0.06	04/25/2316:18	NA	AD24-22	AD24-13	ICD026W	04/24/2312:20	04/25/23
TMW03042023	D280-16	0.084J	1	NA	0.1	0.03	0.06	04/25/2316:38	NA	AD24-23	AD24-13	ICD026W	04/24/2313:15	04/25/23
TMW03042023D	D280-17	0.084J	1	NA	0.1	0.03	0.06	04/25/2316:58	NA	AD24-24	AD24-13	ICD026W	04/24/2313:20	04/25/23
QC24042023EB04	D280-19	ND	1	NA	0.1	0.03	0.06	04/25/2317:59	NA	AD24-27	AD24-25	ICD026W	04/24/2314:00	04/25/23
MW35042023	D280-18	ND	1	NA	0.1	0.03	0.06	04/25/2318:20	NA	AD24-28	AD24-25	ICD026W	04/24/2313:25	04/25/23
TMW28042023DUP	D280-08D	ND	1	NA	0.1	0.03	0.06	04/25/2318:40	NA	AD24-29	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MS	D280-08M	1.6	1	NA	0.1	0.03	0.06	04/25/2319:00	NA	AD24-30	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MSD	D280-08S	1.6	1	NA	0.1	0.03	0.06	04/25/2319:21	NA	AD24-31	AD24-25	ICD026W	04/24/2309:20	04/25/23
MW36D042023	D280-02I	ND	2	NA	0.2	0.06	0.12	04/25/2319:41	NA	AD24-32	AD24-25	ICD026W	04/24/2307:20	04/25/23
MW36S042023	D280-04J	ND	5	NA	0.5	0.15	0.3	04/25/2320:42	NA	AD24-35	AD24-25	ICD026W	04/24/2307:55	04/25/23
MW26042023	D280-05I	ND	2	NA	0.2	0.06	0.12	04/25/2321:02	NA	AD24-36	AD24-25	ICD026W	04/24/2307:55	04/25/23
TMW61042023	D280-10J	ND	5	NA	0.5	0.15	0.3	04/26/2300:05	NA	AD24-45	AD24-37	ICD026W	04/24/2310:10	04/25/23
BGMW07042023	D280-11K	ND	50	NA	5	1.5	3	04/26/2301:05	NA	AD24-48	AD24-37	ICD026W	04/24/2310:00	04/25/23
TMW24042023	D280-14J	ND	5	NA	0.5	0.15	0.3	04/26/2302:06	NA	AD24-51	AD24-49	ICD026W	04/24/2310:50	04/25/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D280

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	ICD026WB	ND	1	NA	0.5	0.12	0.25	04/25/2309:20	NA	AD24-03	AD24-01	ICD026W	NA	NA
LCS1W	ICD026WL	1.9	1	NA	0.5	0.12	0.25	04/25/2309:41	NA	AD24-04	AD24-01	ICD026W	NA	NA
LCD1W	ICD026WC	1.9	1	NA	0.5	0.12	0.25	04/25/2310:01	NA	AD24-05	AD24-01	ICD026W	NA	NA
MW33042023	D280-01I	ND	2	NA	1	0.25	0.5	04/25/2310:53	NA	AD24-06	AD24-01	ICD026W	04/24/2307:15	04/25/23
MW36D042023	D280-02	0.64	1	NA	0.5	0.12	0.25	04/25/2311:13	NA	AD24-07	AD24-01	ICD026W	04/24/2307:20	04/25/23
MW34042023	D280-03I	ND	2	NA	1	0.25	0.5	04/25/2311:34	NA	AD24-08	AD24-01	ICD026W	04/24/2307:25	04/25/23
MW36S042023	D280-04I	ND	2	NA	1	0.25	0.5	04/25/2311:54	NA	AD24-09	AD24-01	ICD026W	04/24/2307:55	04/25/23
MW26042023	D280-05	ND	1	NA	0.5	0.12	0.25	04/25/2312:14	NA	AD24-10	AD24-01	ICD026W	04/24/2307:55	04/25/23
MW23042023	D280-06	0.17J	1	NA	0.5	0.12	0.25	04/25/2312:35	NA	AD24-11	AD24-01	ICD026W	04/24/2308:30	04/25/23
TMW57042023	D280-07	ND	1	NA	0.5	0.12	0.25	04/25/2312:55	NA	AD24-12	AD24-01	ICD026W	04/24/2309:20	04/25/23
TMW28042023	D280-08	0.14J	1	NA	0.5	0.12	0.25	04/25/2313:56	NA	AD24-15	AD24-13	ICD026W	04/24/2309:20	04/25/23
TMW59042023	D280-09	ND	1	NA	0.5	0.12	0.25	04/25/2314:16	NA	AD24-16	AD24-13	ICD026W	04/24/2309:40	04/25/23
TMW61042023	D280-10I	ND	2	NA	1	0.25	0.5	04/25/2314:36	NA	AD24-17	AD24-13	ICD026W	04/24/2310:10	04/25/23
BGMW07042023	D280-11I	ND	5	NA	2.5	0.62	1.2	04/25/2314:57	NA	AD24-18	AD24-13	ICD026W	04/24/2310:00	04/25/23
TMW53042023	D280-12	ND	1	NA	0.5	0.12	0.25	04/25/2315:17	NA	AD24-19	AD24-13	ICD026W	04/24/2310:30	04/25/23
TMW58042023	D280-13	ND	1	NA	0.5	0.12	0.25	04/25/2315:37	NA	AD24-20	AD24-13	ICD026W	04/24/2310:45	04/25/23
TMW24042023	D280-14I	ND	2	NA	1	0.25	0.5	04/25/2315:58	NA	AD24-21	AD24-13	ICD026W	04/24/2310:50	04/25/23
MW27042023	D280-15	ND	1	NA	0.5	0.12	0.25	04/25/2316:18	NA	AD24-22	AD24-13	ICD026W	04/24/2312:20	04/25/23
TMW03042023	D280-16	ND	1	NA	0.5	0.12	0.25	04/25/2316:38	NA	AD24-23	AD24-13	ICD026W	04/24/2313:15	04/25/23
TMW03042023D	D280-17	ND	1	NA	0.5	0.12	0.25	04/25/2316:58	NA	AD24-24	AD24-13	ICD026W	04/24/2313:20	04/25/23
QC24042023EB04	D280-19	ND	1	NA	0.5	0.12	0.25	04/25/2317:59	NA	AD24-27	AD24-25	ICD026W	04/24/2314:00	04/25/23
MW35042023	D280-18	ND	1	NA	0.5	0.12	0.25	04/25/2318:20	NA	AD24-28	AD24-25	ICD026W	04/24/2313:25	04/25/23
TMW28042023DUP	D280-08D	0.13J	1	NA	0.5	0.12	0.25	04/25/2318:40	NA	AD24-29	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MS	D280-08M	1.9	1	NA	0.5	0.12	0.25	04/25/2319:00	NA	AD24-30	AD24-25	ICD026W	04/24/2309:20	04/25/23
TMW28042023MSD	D280-08S	2.0	1	NA	0.5	0.12	0.25	04/25/2319:21	NA	AD24-31	AD24-25	ICD026W	04/24/2309:20	04/25/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D280

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	ICD026WB	ND	1	NA	0.5	0.13	0.25	04/25/2309:20	NA	AD24-03	AD24-01	ICD026W	NA	NA
LCS1W	ICD026WL	4.7	1	NA	0.5	0.13	0.25	04/25/2309:41	NA	AD24-04	AD24-01	ICD026W	NA	NA
LCD1W	ICD026WC	4.7	1	NA	0.5	0.13	0.25	04/25/2310:01	NA	AD24-05	AD24-01	ICD026W	NA	NA
MW23042023	D280-06	9.8	1	NA	0.5	0.13	0.25	04/25/2312:35	NA	AD24-11	AD24-01	ICD026W	04/24/2308:30	04/25/23
QC24042023EB04	D280-19	0.21J	1	NA	0.5	0.13	0.25	04/25/2317:59	NA	AD24-27	AD24-25	ICD026W	04/24/2314:00	04/25/23
MW36D042023	D280-02I	34	2	NA	1	0.26	0.5	04/25/2319:41	NA	AD24-32	AD24-25	ICD026W	04/24/2307:20	04/25/23
MBLK2W	ICE002WB	ND	1	NA	0.5	0.13	0.25	05/01/2314:29	NA	AE02-03	AE02-01	ICE002W	NA	NA
LCS2W	ICE002WL	4.7	1	NA	0.5	0.13	0.25	05/01/2314:49	NA	AE02-04	AE02-01	ICE002W	NA	NA
LCD2W	ICE002WC	4.7	1	NA	0.5	0.13	0.25	05/01/2315:10	NA	AE02-05	AE02-01	ICE002W	NA	NA
MW33042023	D280-01K	650	100	NA	50	13	25	05/01/2315:50	NA	AE02-07	AE02-01	ICE002W	04/24/2307:15	04/25/23
MW34042023	D280-03G	2000	200	NA	100	26	50	05/01/2316:51	NA	AE02-10	AE02-01	ICE002W	04/24/2307:25	04/25/23
MW36S042023	D280-04T	4000	400	NA	200	52	100	05/01/2317:32	NA	AE02-12	AE02-01	ICE002W	04/24/2307:55	04/25/23
MW26042023	D280-05K	1100	200	NA	100	26	50	05/01/2318:53	NA	AE02-16	AE02-13	ICE002W	04/24/2307:55	04/25/23
TMW57042023	D280-07I	230	20	NA	10	2.6	5	05/01/2319:33	NA	AE02-18	AE02-13	ICE002W	04/24/2309:20	04/25/23
TMW28042023	D280-08K	1100	200	NA	100	26	50	05/01/2321:15	NA	AE02-23	AE02-13	ICE002W	04/24/2309:20	04/25/23
TMW28042023DUP	D280-08KD	1100	200	NA	100	26	50	05/01/2321:35	NA	AE02-24	AE02-13	ICE002W	04/24/2309:20	04/25/23
TMW28042023MS	D280-08KM	2100	200	NA	100	26	50	05/01/2322:36	NA	AE02-27	AE02-25	ICE002W	04/24/2309:20	04/25/23
TMW28042023MSD	D280-08KS	2100	200	NA	100	26	50	05/01/2322:56	NA	AE02-28	AE02-25	ICE002W	04/24/2309:20	04/25/23
TMW59042023	D280-09T	750	100	NA	50	13	25	05/01/2323:37	NA	AE02-30	AE02-25	ICE002W	04/24/2309:40	04/25/23
TMW61042023	D280-10G	1700	200	NA	100	26	50	05/02/2300:18	NA	AE02-32	AE02-25	ICE002W	04/24/2310:10	04/25/23
BGMW07042023	D280-11T	2500	200	NA	100	26	50	05/02/2300:38	NA	AE02-33	AE02-25	ICE002W	04/24/2310:00	04/25/23
TMW53042023	D280-12I	230	20	NA	10	2.6	5	05/02/2301:18	NA	AE02-35	AE02-25	ICE002W	04/24/2310:30	04/25/23
TMW58042023	D280-13J	860	100	NA	50	13	25	05/02/2302:40	NA	AE02-39	AE02-37	ICE002W	04/24/2310:45	04/25/23
TMW24042023	D280-14K	570	100	NA	50	13	25	05/02/2303:00	NA	AE02-40	AE02-37	ICE002W	04/24/2310:50	04/25/23
MW27042023	D280-15T	950	200	NA	100	26	50	05/02/2303:41	NA	AE02-42	AE02-37	ICE002W	04/24/2312:20	04/25/23
TMW03042023	D280-16T	980	200	NA	100	26	50	05/02/2304:21	NA	AE02-44	AE02-37	ICE002W	04/24/2313:15	04/25/23
TMW03042023D	D280-17T	1000	200	NA	100	26	50	05/02/2305:02	NA	AE02-46	AE02-37	ICE002W	04/24/2313:20	04/25/23
MW35042023	D280-18I	1100	100	NA	50	13	25	05/02/2305:22	NA	AE02-47	AE02-37	ICE002W	04/24/2313:25	04/25/23

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

Date: 07-11-2023
EMAX Batch No.: 23D286

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 04/26/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TMW52042023	D286-01	04/25/23	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
TMW43042023	D286-02	04/25/23	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
TMW43042023D	D286-03	04/25/23	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
MW37042023	D286-04	04/25/23	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
TMW45042023	D286-05	04/25/23	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
TMW39D042023	D286-06	04/25/23	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
BGMW13S042023	D286-07	04/25/23	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
TMW40D042023	D286-08	04/25/23	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
TMW48042023	D286-09	04/25/23	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
TMW48042023D	D286-10	04/25/23	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
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Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
BGMW13D042023	D286-11	04/25/23	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
TMW31D042023	D286-12	04/25/23	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
QC25042023TB07	D286-13	04/25/23	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 CA002912022-24
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#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of thirteen(13) water samples were received on 04/26/23 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, three(3) method blanks were analyzed. VO67E05B, VO67E06Q and VO67E07B 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. VO67E05L/VO67E05C, VO67E06L/VO67E06C and VO67E07L/VO67E07C 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
VOLATILE ORGANICS BY GC/MS

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

SDG NO. : 23D286
Instrument ID : 67

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V067E05L	1	NA	05/03/2309:21	05/03/2309:21	REC064	RDC593	V067E05	Lab Control Sample (LCS)
LCD1W	V067E05C	1	NA	05/03/2309:46	05/03/2309:46	REC065	RDC593	V067E05	LCS Duplicate
MBLK1W	V067E05B	1	NA	05/03/2310:38	05/03/2310:38	REC067	RDC593	V067E05	Method Blank
TMW52042023	23D286-01	1	NA	05/03/2317:02	05/03/2317:02	REC082	RDC593	V067E05	Field Sample
TMW43042023	23D286-02	1	NA	05/03/2317:28	05/03/2317:28	REC083	RDC593	V067E05	Field Sample
TMW43042023D	23D286-03	1	NA	05/03/2317:54	05/03/2317:54	REC084	RDC593	V067E05	Field Sample
MW37042023	23D286-04	1	NA	05/03/2318:19	05/03/2318:19	REC085	RDC593	V067E05	Field Sample
TMW45042023	23D286-05	1	NA	05/03/2318:45	05/03/2318:45	REC086	RDC593	V067E05	Field Sample
TMW39D042023	23D286-06	1	NA	05/03/2319:10	05/03/2319:10	REC087	RDC593	V067E05	Field Sample
LCS2W	V067E06L	1	NA	05/04/2307:41	05/04/2307:41	REC094	RDC593	V067E06	Lab Control Sample (LCS)
LCD2W	V067E06C	1	NA	05/04/2308:06	05/04/2308:06	REC095	RDC593	V067E06	LCS Duplicate
MBLK2W	V067E06Q	1	NA	05/04/2309:43	05/04/2309:43	REC099	RDC593	V067E06	Method Blank
BGMW13S042023	23D286-07	1	NA	05/04/2311:52	05/04/2311:52	REC104	RDC593	V067E06	Field Sample
TMW40D042023	23D286-08	1	NA	05/04/2312:17	05/04/2312:17	REC105	RDC593	V067E06	Field Sample
TMW48042023	23D286-09	1	NA	05/04/2312:43	05/04/2312:43	REC106	RDC593	V067E06	Field Sample
TMW48042023D	23D286-10	1	NA	05/04/2313:08	05/04/2313:08	REC107	RDC593	V067E06	Field Sample
BGMW13D042023	23D286-11	1	NA	05/04/2313:34	05/04/2313:34	REC108	RDC593	V067E06	Field Sample
TMW31D042023	23D286-12	1	NA	05/04/2314:00	05/04/2314:00	REC109	RDC593	V067E06	Field Sample
LCS3W	V067E07L	1	NA	05/04/2317:44	05/04/2317:44	REC116	RDC593	V067E07	Lab Control Sample (LCS)
LCD3W	V067E07C	1	NA	05/04/2318:09	05/04/2318:09	REC117	RDC593	V067E07	LCS Duplicate
MBLK3W	V067E07B	1	NA	05/04/2319:01	05/04/2319:01	REC119	RDC593	V067E07	Method Blank
QC25042023TB07	23D286-13N	1	NA	05/04/2319:52	05/04/2319:52	REC121	RDC593	V067E07	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/03/23 17:02
Sample ID	: TMW52042023	Date Analyzed:	05/03/23 17:02
Lab Samp ID:	23D286-01	Dilution Factor:	1
Lab File ID:	REC082	Matrix:	WATER
Ext Btch ID:	VO67E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	11.0	10.0	110	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 07:55
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/03/23 17:28
Sample ID : TMW43042023	Date Analyzed: 05/03/23 17:28
Lab Samp ID: 23D286-02	Dilution Factor: 1
Lab File ID: REC083	Matrix: WATER
Ext Btch ID: V067E05	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.8	10.0	108	89-112
Dibromofluoromethane	11.0	10.0	110	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 08:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/03/23 17:54
Sample ID	: TMW43042023D	Date Analyzed:	05/03/23 17:54
Lab Samp ID:	23D286-03	Dilution Factor:	1
Lab File ID:	REC084	Matrix:	WATER
Ext Btch ID:	VO67E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.7	10.0	107	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : MW37042023
Lab Samp ID: 23D286-04
Lab File ID: REC085
Ext Btch ID: VO67E05
Calib. Ref.: RDC593

Date Collected: 04/25/23 08:30
Date Received: 04/26/23
Date Extracted: 05/03/23 18:19
Date Analyzed: 05/03/23 18:19
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 09:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/03/23 18:45
Sample ID	: TMW45042023	Date Analyzed:	05/03/23 18:45
Lab Samp ID:	23D286-05	Dilution Factor:	1
Lab File ID:	REC086	Matrix:	WATER
Ext Btch ID:	V067E05	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 09:40
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/03/23 19:10
Sample ID : TMW39D042023	Date Analyzed: 05/03/23 19:10
Lab Samp ID: 23D286-06	Dilution Factor: 1
Lab File ID: REC087	Matrix: WATER
Ext Btch ID: V067E05	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.8	10.0	108	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 10:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/04/23 11:52
Sample ID	: BGMW13S042023	Date Analyzed:	05/04/23 11:52
Lab Samp ID:	23D286-07	Dilution Factor:	1
Lab File ID:	REC104	Matrix:	WATER
Ext Btch ID:	V067E06	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	11.0	10.0	110	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 10:50
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/04/23 12:17
Sample ID	: TMW40D042023	Date Analyzed:	05/04/23 12:17
Lab Samp ID:	23D286-08	Dilution Factor:	1
Lab File ID:	REC105	Matrix:	WATER
Ext Btch ID:	VO67E06	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.8	10.0	108	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/04/23 12:43
Sample ID	: TMW48042023	Date Analyzed:	05/04/23 12:43
Lab Samp ID:	23D286-09	Dilution Factor:	1
Lab File ID:	REC106	Matrix:	WATER
Ext Btch ID:	VO67E06	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 11:30
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/04/23 13:08
Sample ID : TMW48042023D	Date Analyzed: 05/04/23 13:08
Lab Samp ID: 23D286-10	Dilution Factor: 1
Lab File ID: REC107	Matrix: WATER
Ext Btch ID: V067E06	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.9	10.0	109	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 11:35
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/04/23 13:34
Sample ID : BGMW13D042023	Date Analyzed: 05/04/23 13:34
Lab Samp ID: 23D286-11	Dilution Factor: 1
Lab File ID: REC108	Matrix: WATER
Ext Btch ID: V067E06	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.7	10.0	107	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 13:45
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/04/23 14:00
Sample ID	: TMW31D042023	Date Analyzed:	05/04/23 14:00
Lab Samp ID:	23D286-12	Dilution Factor:	1
Lab File ID:	REC109	Matrix:	WATER
Ext Btch ID:	V067E06	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 08:00
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/04/23 19:52
Sample ID : QC25042023TB07	Date Analyzed: 05/04/23 19:52
Lab Samp ID: 23D286-13N	Dilution Factor: 1
Lab File ID: REC121	Matrix: WATER
Ext Btch ID: V067E07	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.0	10.0	100	81-118
4-Bromofluorobenzene	11.1	10.0	111	85-114
Toluene-d8	11.1	10.0	111	89-112
Dibromofluoromethane	10.6	10.0	106	80-119

Notes:
Sample Amount : 25ml
Final Volume : 25ml
Prepared by : VLu
Analyzed by : VLu
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#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

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

A total of twelve(12) water samples were received on 04/26/23 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: REJ019, REJ020, REJ051, REJ052, REJ055, REJ056, REJ071 and REJ072) 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. SVE002WB - 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. SVE002WL/SVE002WC 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.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

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

A total of twelve(12) water samples were received on 04/26/23 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: REJ021, REJ050, REJ057 and REJ070) 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. SVE002WB - 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: CLE002WL/CLE002WC - RPD for 1,2,4,5-Tetrachlorobenzene(RPD=24*) 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 : 23D286

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

A total of twelve(12) water samples were received on 04/26/23 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: REJ020, REJ051, REJ056 and REJ071) 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. SVE002WB - 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: CLE002WL/CLE002WC - RPD for Benzaldehyde(RPD=21*) 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.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

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

SDG NO. : 23D286
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	SVE002WB	1	NA	05/04/2309:51	05/01/2312:30	REJ022	RCJ011	23SVE002W	Method Blank
LCS1W	SVE002WL	1	NA	05/04/2310:09	05/01/2312:30	REJ023	RCJ011	23SVE002W	Lab Control Sample (LCS)
LCD1W	SVE002WC	1	NA	05/04/2310:28	05/01/2312:30	REJ024	RCJ011	23SVE002W	LCS Duplicate
TMW52042023	23D286-01	1	NA	05/05/2309:37	05/01/2312:30	REJ058	RCJ011	23SVE002W	Field Sample
TMW43042023	23D286-02	1	NA	05/05/2309:56	05/01/2312:30	REJ059	RCJ011	23SVE002W	Field Sample
TMW43042023D	23D286-03	1	NA	05/05/2310:14	05/01/2312:30	REJ060	RCJ011	23SVE002W	Field Sample
MW37042023	23D286-04	1	NA	05/05/2310:33	05/01/2312:30	REJ061	RCJ011	23SVE002W	Field Sample
TMW45042023	23D286-05	1	NA	05/05/2310:52	05/01/2312:30	REJ062	RCJ011	23SVE002W	Field Sample
TMW39D042023	23D286-06	1	NA	05/05/2311:10	05/01/2312:30	REJ063	RCJ011	23SVE002W	Field Sample
BGMW13S042023	23D286-07	1	NA	05/05/2311:29	05/01/2312:30	REJ064	RCJ011	23SVE002W	Field Sample
TMW40D042023	23D286-08	1	NA	05/05/2311:47	05/01/2312:30	REJ065	RCJ011	23SVE002W	Field Sample
TMW48042023	23D286-09	1	NA	05/05/2312:06	05/01/2312:30	REJ066	RCJ011	23SVE002W	Field Sample
TMW48042023D	23D286-10	1	NA	05/05/2312:24	05/01/2312:30	REJ067	RCJ011	23SVE002W	Field Sample
BGMW13D042023	23D286-11	1	NA	05/05/2312:43	05/01/2312:30	REJ068	RCJ011	23SVE002W	Field Sample
TMW31D042023	23D286-12	1	NA	05/05/2313:02	05/01/2312:30	REJ069	RCJ011	23SVE002W	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. : 23D286
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	SVE002WB	1	NA	05/04/2309:51	05/01/2312:30	REJ022	RCJ498	23SVE002W	Method Blank
LCS1W	CLE002WL	1	NA	05/04/2310:47	05/01/2312:30	REJ025	RCJ498	23SVE002W	Lab Control Sample (LCS)
LCD1W	CLE002WC	1	NA	05/04/2311:05	05/01/2312:30	REJ026	RCJ498	23SVE002W	LCS Duplicate
TMW52042023	23D286-01	1	NA	05/05/2309:37	05/01/2312:30	REJ058	RCJ498	23SVE002W	Field Sample
TMW43042023	23D286-02	1	NA	05/05/2309:56	05/01/2312:30	REJ059	RCJ498	23SVE002W	Field Sample
TMW43042023D	23D286-03	1	NA	05/05/2310:14	05/01/2312:30	REJ060	RCJ498	23SVE002W	Field Sample
MW37042023	23D286-04	1	NA	05/05/2310:33	05/01/2312:30	REJ061	RCJ498	23SVE002W	Field Sample
TMW45042023	23D286-05	1	NA	05/05/2310:52	05/01/2312:30	REJ062	RCJ498	23SVE002W	Field Sample
TMW39D042023	23D286-06	1	NA	05/05/2311:10	05/01/2312:30	REJ063	RCJ498	23SVE002W	Field Sample
BGMW13S042023	23D286-07	1	NA	05/05/2311:29	05/01/2312:30	REJ064	RCJ498	23SVE002W	Field Sample
TMW40D042023	23D286-08	1	NA	05/05/2311:47	05/01/2312:30	REJ065	RCJ498	23SVE002W	Field Sample
TMW48042023	23D286-09	1	NA	05/05/2312:06	05/01/2312:30	REJ066	RCJ498	23SVE002W	Field Sample
TMW48042023D	23D286-10	1	NA	05/05/2312:24	05/01/2312:30	REJ067	RCJ498	23SVE002W	Field Sample
BGMW13D042023	23D286-11	1	NA	05/05/2312:43	05/01/2312:30	REJ068	RCJ498	23SVE002W	Field Sample
TMW31D042023	23D286-12	1	NA	05/05/2313:02	05/01/2312:30	REJ069	RCJ498	23SVE002W	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. : 23D286
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	SVE002WB	1	NA	05/04/2309:51	05/01/2312:30	REJ022	RCJ025	23SVE002W	Method Blank
LCS1W	CLE002WL	1	NA	05/04/2310:47	05/01/2312:30	REJ025	RCJ025	23SVE002W	Lab Control Sample (LCS)
LCD1W	CLE002WC	1	NA	05/04/2311:05	05/01/2312:30	REJ026	RCJ025	23SVE002W	LCS Duplicate
TMW52042023	23D286-01	1	NA	05/05/2309:37	05/01/2312:30	REJ058	RCJ025	23SVE002W	Field Sample
TMW43042023	23D286-02	1	NA	05/05/2309:56	05/01/2312:30	REJ059	RCJ025	23SVE002W	Field Sample
TMW43042023D	23D286-03	1	NA	05/05/2310:14	05/01/2312:30	REJ060	RCJ025	23SVE002W	Field Sample
MW37042023	23D286-04	1	NA	05/05/2310:33	05/01/2312:30	REJ061	RCJ025	23SVE002W	Field Sample
TMW45042023	23D286-05	1	NA	05/05/2310:52	05/01/2312:30	REJ062	RCJ025	23SVE002W	Field Sample
TMW39D042023	23D286-06	1	NA	05/05/2311:10	05/01/2312:30	REJ063	RCJ025	23SVE002W	Field Sample
BGMW13S042023	23D286-07	1	NA	05/05/2311:29	05/01/2312:30	REJ064	RCJ025	23SVE002W	Field Sample
TMW40D042023	23D286-08	1	NA	05/05/2311:47	05/01/2312:30	REJ065	RCJ025	23SVE002W	Field Sample
TMW48042023	23D286-09	1	NA	05/05/2312:06	05/01/2312:30	REJ066	RCJ025	23SVE002W	Field Sample
TMW48042023D	23D286-10	1	NA	05/05/2312:24	05/01/2312:30	REJ067	RCJ025	23SVE002W	Field Sample
BGMW13D042023	23D286-11	1	NA	05/05/2312:43	05/01/2312:30	REJ068	RCJ025	23SVE002W	Field Sample
TMW31D042023	23D286-12	1	NA	05/05/2313:02	05/01/2312:30	REJ069	RCJ025	23SVE002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : TMW52042023
Lab Samp ID: 23D286-01
Lab File ID: REJ058
Ext Btch ID: 23SVE002W
Calib. Ref.: RCJ011

Date Collected: 04/25/23 07:40
Date Received: 04/26/23
Date Extracted: 05/01/23 12:30
Date Analyzed: 05/05/23 09:37
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	42.8	64.8	66	43-140
2-Fluorobiphenyl	15.1	21.6	70	44-119
2-Fluorophenol	26.2	64.8	40	19-119
Nitrobenzene-d5	13.9	21.6	65	44-120
Phenol-d5	36.4	64.8	56	40-130
Terphenyl-d14	19.6	21.6	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: RCJ025 DCC Ref: REJ056

Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW52042023	Date Analyzed:	05/05/23 09:37
Lab Samp ID:	23D286-01	Dilution Factor:	1
Lab File ID:	REJ058	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW52042023	Date Analyzed:	05/05/23 09:37
Lab Samp ID:	23D286-01	Dilution Factor:	1
Lab File ID:	REJ058	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : TMW43042023
Lab Samp ID: 23D286-02
Lab File ID: REJ059
Ext Btch ID: 23SVE002W
Calib. Ref.: RCJ011

Date Collected: 04/25/23 07:55
Date Received: 04/26/23
Date Extracted: 05/01/23 12:30
Date Analyzed: 05/05/23 09:56
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	45.3	68.4	66	43-140
2-Fluorobiphenyl	16.1	22.8	70	44-119
2-Fluorophenol	28.4	68.4	42	19-119
Nitrobenzene-d5	14.0	22.8	62	44-120
Phenol-d5	39.4	68.4	58	40-130
Terphenyl-d14	20.3	22.8	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: RCJ025 DCC Ref: REJ056

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW43042023	Date Analyzed:	05/05/23 09:56
Lab Samp ID:	23D286-02	Dilution Factor:	1
Lab File ID:	REJ059	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/25/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW43042023	Date Analyzed:	05/05/23 09:56
Lab Samp ID:	23D286-02	Dilution Factor:	1
Lab File ID:	REJ059	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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: 04/25/23 08:00
Project : USACE WINGATE	Date Received: 04/26/23
8atch No. : 23D286	Date Extracted: 05/01/23 12:30
Sample ID : TMW43042023D	Date Analyzed: 05/05/23 10:14
Lab Samp ID: 23D286-03	Dilution Factor: 1
Lab File ID: REJ060	Matrix: WATER
Ext Btch ID: 23SVE002W	% Moisture: NA
Calib. Ref.: RCJ011	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	42.1	72.0	58	43-140
2-Fluorobiphenyl	12.5	24.0	52	44-119
2-Fluorophenol	29.0	72.0	40	19-119
Nitrobenzene-d5	12.3	24.0	51	44-120
Phenol-d5	37.0	72.0	51	40-130
Terphenyl-d14	20.8	24.0	87	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: RCJ025 DCC Ref: REJ056

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:	04/25/23 08:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW43042023D	Date Analyzed:	05/05/23 10:14
Lab Samp ID:	23D286-03	Dilution Factor:	1
Lab File ID:	REJ060	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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 : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 08:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW43042023D	Date Analyzed:	05/05/23 10:14
Lab Samp ID:	23D286-03	Dilution Factor:	1
Lab File ID:	REJ060	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : MW37042023
Lab Samp ID: 23D286-04
Lab File ID: REJ061
Ext Btch ID: 23SVE002W
Calib. Ref.: RCJ011

Date Collected: 04/25/23 08:30
Date Received: 04/26/23
Date Extracted: 05/01/23 12:30
Date Analyzed: 05/05/23 10:33
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	29.7	67.2	44	43-140
2-Fluorobiphenyl	15.3	22.4	68	44-119
2-Fluorophenol	28.2	67.2	42	19-119
Nitrobenzene-d5	14.8	22.4	66	44-120
Phenol-d5	37.9	67.2	56	40-130
Terphenyl-d14	18.3	22.4	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: RCJ025 DCC Ref: REJ056

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: MW37042023	Date Analyzed:	05/05/23 10:33
Lab Samp ID:	23D286-04	Dilution Factor:	1
Lab File ID:	REJ061	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/25/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: MW37042023	Date Analyzed:	05/05/23 10:33
Lab Samp ID:	23D286-04	Dilution Factor:	1
Lab File ID:	REJ061	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : TMW45042023
Lab Samp ID: 23D286-05
Lab File ID: REJ062
Ext Btch ID: 23SVE002W
Calib. Ref.: RCJ011

Date Collected: 04/25/23 09:25
Date Received: 04/26/23
Date Extracted: 05/01/23 12:30
Date Analyzed: 05/05/23 10:52
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	33.3	61.2	54	43-140
2-Fluorobiphenyl	15.4	20.4	75	44-119
2-Fluorophenol	21.8	61.2	36	19-119
Nitrobenzene-d5	13.5	20.4	66	44-120
Phenol-d5	31.4	61.2	51	40-130
Terphenyl-d14	16.7	20.4	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: RCJ025 DCC Ref: REJ056

Detection limits are reported relative to sample result significant figures.
Sample Amount : 980ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 09:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW45042023	Date Analyzed:	05/05/23 10:52
Lab Samp ID:	23D286-05	Dilution Factor:	1
Lab File ID:	REJ062	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 09:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW45042023	Date Analyzed:	05/05/23 10:52
Lab Samp ID:	23D286-05	Dilution Factor:	1
Lab File ID:	REJ062	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW39D042023	Date Analyzed:	05/05/23 11:10
Lab Samp ID:	23D286-06	Dilution Factor:	1
Lab File ID:	REJ063	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ011	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.1	12
1,2-Dichlorobenzene	ND	12	3.1	6.1
1,2-Diphenylhydrazine	ND	12	3.1	6.1
1,3-Dichlorobenzene	ND	12	3.1	6.1
1,4-Dichlorobenzene	ND	12	3.1	6.1
2,4,5-Trichlorophenol	ND	12	3.1	6.1
2,4,6-Trichlorophenol	ND	12	3.1	6.1
2,4-Dichlorophenol	ND	12	3.1	6.1
2,4-Dimethylphenol	ND	12	3.1	6.1
2,4-Dinitrophenol	ND	24	3.1	6.1
2,4-Dinitrotoluene	ND	12	3.1	6.1
2,6-Dinitrotoluene	ND	12	3.1	6.1
2-Chloronaphthalene	ND	12	3.1	6.1
2-Chlorophenol	ND	12	3.1	6.1
2-Methylnaphthalene	ND	12	3.1	6.1
2-Methylphenol	ND	12	3.1	6.1
2-Nitroaniline	ND	12	3.1	6.1
2-Nitrophenol	ND	12	3.1	6.1
3,3'-Dichlorobenzidine	ND	12	3.1	6.1
3/4-Methylphenol	ND	12	3.1	6.1
3-Nitroaniline	ND	12	3.1	6.1
4,6-Dinitro-2-methylphenol	ND	24	3.1	6.1
4-Bromophenyl phenyl ether	ND	12	3.1	6.1
4-Chloro-3-methylphenol	ND	12	3.1	6.1
4-Chloroaniline	ND	24	6.1	12
4-Chlorophenyl-phenyl ether	ND	12	3.1	6.1
4-Nitroaniline	ND	12	3.1	6.1
4-Nitrophenol	ND	24	3.1	6.1
Acenaphthene	ND	12	3.1	6.1
Acenaphthylene	ND	12	3.1	6.1
Anthracene	ND	12	3.1	6.1
Benzo(a)anthracene	ND	12	3.1	6.1
Benzo(a)pyrene	ND	12	3.1	6.1
Benzo(b)fluoranthene	ND	12	3.1	6.1
Benzo(g,h,i)perylene	ND	12	3.1	6.1
Benzo(k)fluoranthene	ND	12	3.1	6.1
Benzoic Acid	ND	120	24	49
Benzyl Alcohol	ND	12	3.1	6.1
bis(2-Chloroisopropyl) ether	ND	12	3.1	6.1
bis(2-Chloroethoxy)methane	ND	12	3.1	6.1
bis(2-Chloroethyl) ether	ND	12	3.1	6.1
bis(2-Ethylhexyl) phthalate	ND	24	6.1	12
Butylbenzylphthalate	ND	12	3.1	6.1
Carbazole	ND	12	3.1	6.1
Chrysene	ND	12	3.1	6.1
Dibenzo(a,h)anthracene	ND	12	3.1	6.1
Dibenzofuran	ND	12	3.1	6.1
Diethylphthalate	ND	12	3.1	6.1
Dimethylphthalate	ND	12	3.1	6.1
Di-n-butyl phthalate	ND	12	3.1	6.1
Di-n-octyl phthalate	ND	12	3.1	6.1
Fluoranthene	ND	12	3.1	6.1
Fluorene	ND	12	3.1	6.1
Hexachlorobenzene	ND	12	3.1	6.1
Hexachlorobutadiene	ND	12	3.1	6.1
Hexachloroethane	ND	12	3.1	6.1
Indeno(1,2,3-cd)pyrene	ND	12	3.1	6.1
Isophorone	ND	12	3.1	6.1
Naphthalene	ND	12	3.1	6.1
Nitrobenzene	ND	12	3.1	6.1
N-Nitrosodimethylamine	ND	12	3.1	6.1
n-Nitroso-di-n-propylamine	ND	12	3.1	6.1
n-Nitrosodiphenylamine	ND	12	3.1	6.1
Pentachlorophenol	ND	24	3.1	6.1
Phenanthrene	ND	12	3.1	6.1
Phenol	ND	12	3.1	6.1
Pyrene	ND	12	3.1	6.1
Hexachlorocyclopentadiene	ND	12	3.1	6.1
Benzidine	ND	49	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.1	6.1
2,6-Dichlorophenol	ND	12	3.1	6.1

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	48.8	73.2	67	43-140
2-Fluorobiphenyl	15.4	24.4	63	44-119
2-Fluorophenol	28.8	73.2	39	19-119
Nitrobenzene-d5	14.9	24.4	61	44-120
Phenol-d5	40.7	73.2	56	40-130
Terphenyl-d14	21.9	24.4	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: RCJ025 DCC Ref: REJ056

Detection limits are reported relative to sample result significant figures.
Sample Amount : 820ml 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:	04/25/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW39D042023	Date Analyzed:	05/05/23 11:10
Lab Samp ID:	23D286-06	Dilution Factor:	1
Lab File ID:	REJ063	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	6.1

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	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:	04/25/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW39D042023	Date Analyzed:	05/05/23 11:10
Lab Samp ID:	23D286-06	Dilution Factor:	1
Lab File ID:	REJ063	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.1	12
Benzaldehyde	ND	24	6.1	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	Final Volume	: 2ml
Prepared by	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 10:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: BGMW13S042023	Date Analyzed:	05/05/23 11:29
Lab Samp ID:	23D286-07	Dilution Factor:	1
Lab File ID:	REJ064	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	36.4	63.6	57	43-140
2-Fluorobiphenyl	14.0	21.2	66	44-119
2-Fluorophenol	22.0	63.6	35	19-119
Nitrobenzene-d5	11.9	21.2	56	44-120
Phenol-d5	30.4	63.6	48	40-130
Terphenyl-d14	18.2	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: RCJ025 DCC Ref: REJ056

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 940ml	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:	04/25/23 10:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: BGMW13S042023	Date Analyzed:	05/05/23 11:29
Lab Samp ID:	23D286-07	Dilution Factor:	1
Lab File ID:	REJ064	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 10:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: BGMW13S042023	Date Analyzed:	05/05/23 11:29
Lab Samp ID:	23D286-07	Dilution Factor:	1
Lab File ID:	REJ064	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : TMW40D042023
Lab Samp ID: 23D286-08
Lab File ID: REJ065
Ext Btch ID: 23SVE002W
Calib. Ref.: RCJ011

Date Collected: 04/25/23 10:50
Date Received: 04/26/23
Date Extracted: 05/01/23 12:30
Date Analyzed: 05/05/23 11:47
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	39.7	65.4	61	43-140
2-Fluorobiphenyl	12.8	21.8	59	44-119
2-Fluorophenol	25.1	65.4	38	19-119
Nitrobenzene-d5	12.1	21.8	55	44-120
Phenol-d5	33.0	65.4	50	40-130
Terphenyl-d14	20.1	21.8	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: RCJ025 DCC Ref: REJ056

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml
Prepared by : JMuert
Final Volume : 2ml
Analyzed by : KVu

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

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 10:50
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 12:30
Sample ID : TMW40D042023	Date Analyzed: 05/05/23 11:47
Lab Samp ID: 23D286-08	Dilution Factor: 1
Lab File ID: REJ065	Matrix: WATER
Ext Btch ID: 23SVE002W	% Moisture: NA
Calib. Ref.: RCJ498	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
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:	04/25/23 10:50
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW40D042023	Date Analyzed:	05/05/23 11:47
Lab Samp ID:	23D286-08	Dilution Factor:	1
Lab File ID:	REJ065	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW48042023	Date Analyzed:	05/05/23 12:06
Lab Samp ID:	23D286-09	Dilution Factor:	1
Lab File ID:	REJ066	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	44.1	62.4	71	43-140
2-Fluorobiphenyl	17.0	20.8	82	44-119
2-Fluorophenol	27.7	62.4	44	19-119
Nitrobenzene-d5	14.2	20.8	68	44-120
Phenol-d5	38.3	62.4	61	40-130
Terphenyl-d14	19.2	20.8	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: RCJ025 DCC Ref: REJ056

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 960ml	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:	04/25/23 11:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW48042023	Date Analyzed:	05/05/23 12:06
Lab Samp ID:	23D286-09	Dilution Factor:	1
Lab File ID:	REJ066	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW48042023	Date Analyzed:	05/05/23 12:06
Lab Samp ID:	23D286-09	Dilution Factor:	1
Lab File ID:	REJ066	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW48042023D	Date Analyzed:	05/05/23 12:24
Lab Samp ID:	23D286-10	Dilution Factor:	1
Lab File ID:	REJ067	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	42.3	63.6	67	43-140
2-Fluorobiphenyl	14.8	21.2	70	44-119
2-Fluorophenol	36.5	63.6	57	19-119
Nitrobenzene-d5	16.0	21.2	76	44-120
Phenol-d5	43.7	63.6	69	40-130
Terphenyl-d14	18.5	21.2	87	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: RCJ025 DCC Ref: REJ056

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml 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:	04/25/23 11:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW48042023D	Date Analyzed:	05/05/23 12:24
Lab Samp ID:	23D286-10	Dilution Factor:	1
Lab File ID:	REJ067	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW48042023D	Date Analyzed:	05/05/23 12:24
Lab Samp ID:	23D286-10	Dilution Factor:	1
Lab File ID:	REJ067	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: JMuert	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:35
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: BGMW13D042023	Date Analyzed:	05/05/23 12:43
Lab Samp ID:	23D286-11	Dilution Factor:	1
Lab File ID:	REJ068	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	40.3	69.0	58	43-140
2-Fluorobiphenyl	14.1	23.0	61	44-119
2-Fluorophenol	30.1	69.0	44	19-119
Nitrobenzene-d5	13.5	23.0	59	44-120
Phenol-d5	38.2	69.0	55	40-130
Terphenyl-d14	15.4	23.0	67	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: RCJ025 DCC Ref: REJ056

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 870ml	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:	04/25/23 11:35
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: BGMW13D042023	Date Analyzed:	05/05/23 12:43
Lab Samp ID:	23D286-11	Dilution Factor:	1
Lab File ID:	REJ068	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:35
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: BGMW13D042023	Date Analyzed:	05/05/23 12:43
Lab Samp ID:	23D286-11	Dilution Factor:	1
Lab File ID:	REJ068	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : TMW31D042023
Lab Samp ID: 23D286-12
Lab File ID: REJ069
Ext Btch ID: 23SVE002W
Calib. Ref.: RCJ011

Date Collected: 04/25/23 13:45
Date Received: 04/26/23
Date Extracted: 05/01/23 12:30
Date Analyzed: 05/05/23 13:02
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	17.9	23.0	78	44-119
2-Fluorophenol	37.9	69.0	55	19-119
Nitrobenzene-d5	16.8	23.0	73	44-120
Phenol-d5	47.6	69.0	69	40-130
Terphenyl-d14	20.6	23.0	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: RCJ025 DCC Ref: REJ056

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 13:45
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW31D042023	Date Analyzed:	05/05/23 13:02
Lab Samp ID:	23D286-12	Dilution Factor:	1
Lab File ID:	REJ069	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 13:45
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 12:30
Sample ID	: TMW31D042023	Date Analyzed:	05/05/23 13:02
Lab Samp ID:	23D286-12	Dilution Factor:	1
Lab File ID:	REJ069	Matrix:	WATER
Ext Btch ID:	23SVE002W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: KVu

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

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

SDG#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

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

A total of five(5) water samples were received on 04/26/23 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. VG39D15B - 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. VG39D15L/VG39D15C 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
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D286
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	VG39D15B	1	NA	04/28/2311:36	04/28/2311:36	ED28004A	ED28003A	23VG39D15	Method Blank
LCS1W	VG39D15L	1	NA	04/28/2312:13	04/28/2312:13	ED28005A	ED28003A	23VG39D15	Lab Control Sample (LCS)
LCD1W	VG39D15C	1	NA	04/28/2312:49	04/28/2312:49	ED28006A	ED28003A	23VG39D15	LCS Duplicate
QC25042023TB07	D286-13	1	NA	04/28/2315:51	04/28/2315:51	ED28011A	ED28003A	23VG39D15	Field Sample
TMW52042023	D286-01	1	NA	04/28/2317:03	04/28/2317:03	ED28013A	ED28012A	23VG39D15	Field Sample
MW37042023	D286-04	1	NA	04/28/2317:39	04/28/2317:39	ED28014A	ED28012A	23VG39D15	Field Sample
BGMW13S042023	D286-07	1	NA	04/28/2318:15	04/28/2318:15	ED28015A	ED28012A	23VG39D15	Field Sample
BGMW13D042023	D286-11	1	NA	04/28/2318:51	04/28/2318:51	ED28016A	ED28012A	23VG39D15	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:	04/25/23 07:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	04/28/23 17:03
Sample ID	: TMW52042023	Date Analyzed:	04/28/23 17:03
Lab Samp ID:	D286-01	Dilution Factor:	1
Lab File ID:	ED28013A	Matrix:	WATER
Ext Btch ID:	23VG39D15	% Moisture:	NA
Calib. Ref.:	ED28012A	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	35.6	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:	04/25/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	04/28/23 17:39
Sample ID	: MW37042023	Date Analyzed:	04/28/23 17:39
Lab Samp ID:	D286-04	Dilution Factor:	1
Lab File ID:	ED28014A	Matrix:	WATER
Ext Btch ID:	23VG39D15	% Moisture:	NA
Calib. Ref.:	ED28012A	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	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:	04/25/23 10:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	04/28/23 18:15
Sample ID	: BGMW13S042023	Date Analyzed:	04/28/23 18:15
Lab Samp ID:	D286-07	Dilution Factor:	1
Lab File ID:	ED28015A	Matrix:	WATER
Ext Btch ID:	23VG39D15	% Moisture:	NA
Calib. Ref.:	ED28012A	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	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:	04/25/23 11:35
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	04/28/23 18:51
Sample ID	: BGMW13D042023	Date Analyzed:	04/28/23 18:51
Lab Samp ID:	D286-11	Dilution Factor:	1
Lab File ID:	ED28016A	Matrix:	WATER
Ext Btch ID:	23VG39D15	% Moisture:	NA
Calib. Ref.:	ED28012A	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	35.0	40.0	88	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:	04/25/23 08:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	04/28/23 15:51
Sample ID	: QC25042023TB07	Date Analyzed:	04/28/23 15:51
Lab Samp ID:	D286-13	Dilution Factor:	1
Lab File ID:	ED28011A	Matrix:	WATER
Ext Btch ID:	23VG39D15	% Moisture:	NA
Calib. Ref.:	ED28003A	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	34.8	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 04/26/23 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. DSE003WB - 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. DSE003WL/DSE003WC 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. : 23D286
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	DSE003WB	1	NA	05/02/2313:30	05/01/2310:45	LE02006A	LE02004A	23DSE003W	Method Blank
LCS1W	DSE003WL	1	NA	05/02/2313:48	05/01/2310:45	LE02007A	LE02004A	23DSE003W	Lab Control Sample (LCS)
LCD1W	DSE003WC	1	NA	05/02/2314:07	05/01/2310:45	LE02008A	LE02004A	23DSE003W	LCS Duplicate
TMW52042023	D286-01	1	NA	05/02/2314:26	05/01/2310:45	LE02009A	LE02004A	23DSE003W	Field Sample
MW37042023	D286-04	1	NA	05/02/2314:44	05/01/2310:45	LE02010A	LE02004A	23DSE003W	Field Sample
BGMW13S042023	D286-07	1	NA	05/02/2315:03	05/01/2310:45	LE02011A	LE02004A	23DSE003W	Field Sample
BGMW13D042023	D286-11	1	NA	05/02/2315:22	05/01/2310:45	LE02012A	LE02004A	23DSE003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 10:45
Sample ID	: TMW52042023	Date Analyzed:	05/02/23 14:26
Lab Samp ID:	23D286-01	Dilution Factor:	1
Lab File ID:	LE02009A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02004A	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	0.882	1.03	86	60-130
Hexacosane	0.271	0.257	105	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: 04/25/23 08:30
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:45
Sample ID : MW37042023	Date Analyzed: 05/02/23 14:44
Lab Samp ID: 23D286-04	Dilution Factor: 1
Lab File ID: LE02010A	Matrix: WATER
Ext Btch ID: 23DSE003W	% Moisture: NA
Calib. Ref.: LE02004A	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	0.855	1.02	84	60-130
Hexacosane	0.253	0.255	99	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:	04/25/23 10:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/01/23 10:45
Sample ID	: BGMW13S042023	Date Analyzed:	05/02/23 15:03
Lab Samp ID:	23D286-07	Dilution Factor:	1
Lab File ID:	LE02011A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02004A	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	0.818	1.00	82	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

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 11:35
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:45
Sample ID : BGMW13D042023	Date Analyzed: 05/02/23 15:22
Lab Samp ID: 23D286-11	Dilution Factor: 1
Lab File ID: LE02012A	Matrix: WATER
Ext Btch ID: 23DSE003W	% Moisture: NA
Calib. Ref.: LE02004A	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	0.886	1.04	85	60-130
Hexacosane	0.253	0.260	97	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#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW3520C/8081B
PESTICIDES

A total of twelve(12) water samples were received on 04/26/23 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. CPE002WB - 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. CPE002WL/CPE002WC 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. : 23D286
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	CPE002WB	1	NA	05/04/2316:25	05/02/2313:15	RE04005	RE04003	23CPE002W	Method Blank
LCS1W	CPE002WL	1	NA	05/04/2316:45	05/02/2313:15	RE04006	RE04003	23CPE002W	Lab Control Sample (LCS)
LCD1W	CPE002WC	1	NA	05/04/2317:06	05/02/2313:15	RE04007	RE04003	23CPE002W	LCS Duplicate
TMW52042023	D286-01	1	NA	05/04/2318:07	05/02/2313:15	RE04010	RE04003	23CPE002W	Field Sample
TMW43042023	D286-02	1	NA	05/04/2318:27	05/02/2313:15	RE04011	RE04003	23CPE002W	Field Sample
TMW43042023D	D286-03	1	NA	05/04/2318:48	05/02/2313:15	RE04012	RE04003	23CPE002W	Field Sample
MW37042023	D286-04	1	NA	05/04/2319:08	05/02/2313:15	RE04013	RE04003	23CPE002W	Field Sample
TMW45042023	D286-05	1	NA	05/04/2319:28	05/02/2313:15	RE04014	RE04003	23CPE002W	Field Sample
TMW39D042023	D286-06	1	NA	05/04/2320:50	05/02/2313:15	RE04018	RE04016	23CPE002W	Field Sample
BGMW13S042023	D286-07	1	NA	05/04/2321:11	05/02/2313:15	RE04019	RE04016	23CPE002W	Field Sample
TMW40D042023	D286-08	1	NA	05/04/2321:31	05/02/2313:15	RE04020	RE04016	23CPE002W	Field Sample
TMW48042023	D286-09	1	NA	05/04/2321:52	05/02/2313:15	RE04021	RE04016	23CPE002W	Field Sample
TMW48042023D	D286-10	1	NA	05/04/2322:12	05/02/2313:15	RE04022	RE04016	23CPE002W	Field Sample
BGMW13D042023	D286-11	1	NA	05/04/2322:33	05/02/2313:15	RE04023	RE04016	23CPE002W	Field Sample
TMW31D042023	D286-12	1	NA	05/04/2322:53	05/02/2313:15	RE04024	RE04016	23CPE002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 07:40
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : TMW52042023	Date Analyzed: 05/04/23 18:07
Lab Samp ID: D286-01	Dilution Factor: 1
Lab File ID: RE04010	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04003	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	0.321 | (0.326)	0.449	73	44-124
Decachlorobiphenyl	(0.314) | 0.313	0.449	70	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 10ml
Prepared by : POreto Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE04004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : TMW43042023
Lab Samp ID: D286-02
Lab File ID: RE04011
Ext Btch ID: 23CPE002W
Calib. Ref.: RE04003

Date Collected: 04/25/23 07:55
Date Received: 04/26/23
Date Extracted: 05/02/23 13:15
Date Analyzed: 05/04/23 18:27
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	0.55
Endrin Ketone	(ND) | ND	0.11	0.022	0.044

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.278 | (0.306)	0.440	70	44-124
Decachlorobiphenyl	0.311 | (0.311)	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 : POreto
Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE04004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 08:00
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : TMW43042023D	Date Analyzed: 05/04/23 18:48
Lab Samp ID: D286-03	Dilution Factor: 1
Lab File ID: RE04012	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04003	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	0.270 | (0.285)	0.421	68	44-124
Decachlorobiphenyl	(0.296) | 0.293	0.421	70	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.: RE04004	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D286	Date Extracted:	05/02/23 13:15
Sample ID	: MW37042023	Date Analyzed:	05/04/23 19:08
Lab Samp ID:	D286-04	Dilution Factor:	1
Lab File ID:	RE04013	Matrix:	WATER
Ext Btch ID:	23CPE002W	% Moisture:	NA
Calib. Ref.:	RE04003	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	0.291 | (0.306)	0.430	71	44-124
Decachlorobiphenyl	(0.311) | 0.309	0.430	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 930ml Final Volume : 10ml
Prepared by : POreto Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE04004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 09:25
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : TMW45042023	Date Analyzed: 05/04/23 19:28
Lab Samp ID: D286-05	Dilution Factor: 1
Lab File ID: RE04014	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04003	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	0.293 | (0.311)	0.430	72	44-124
Decachlorobiphenyl	(0.297) | 0.296	0.430	69	30-135

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

Sample Amount : 930ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04004	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 09:40
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : TMW39D042023	Date Analyzed: 05/04/23 20:50
Lab Samp ID: D286-06	Dilution Factor: 1
Lab File ID: RE04018	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04016	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.025	0.050
gamma-BHC (Lindane)	(ND) | ND	0.12	0.025	0.050
beta-BHC	(ND) | ND	0.12	0.025	0.050
Heptachlor	(ND) | ND	0.12	0.025	0.050
delta-BHC	(ND) | ND	0.12	0.025	0.050
Aldrin	(ND) | ND	0.12	0.025	0.050
Heptachlor Epoxide	(ND) | ND	0.12	0.025	0.050
gamma-Chlordane	(ND) | ND	0.12	0.025	0.050
alpha-Chlordane	(ND) | ND	0.12	0.025	0.050
Endosulfan I	(ND) | ND	0.12	0.025	0.050
4,4'-DDE	(ND) | ND	0.12	0.025	0.050
Dieldrin	(ND) | ND	0.12	0.025	0.050
Endrin	(ND) | ND	0.12	0.025	0.050
4,4'-DDD	(ND) | ND	0.12	0.025	0.050
Endosulfan II	(ND) | ND	0.12	0.025	0.050
4,4'-DDT	(ND) | ND	0.12	0.025	0.050
Endrin Aldehyde	(ND) | ND	0.12	0.025	0.050
Endosulfan Sulfate	(ND) | ND	0.12	0.025	0.050
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	0.050

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.334 | (0.365)	0.500	73	44-124
Decachlorobiphenyl	(0.364) | 0.357	0.500	73	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 800ml Final Volume : 10ml
Prepared by : POreto Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE04017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 10:15
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : BGMW13S042023	Date Analyzed: 05/04/23 21:11
Lab Samp ID: D286-07	Dilution Factor: 1
Lab File ID: RE04019	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04016	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.049
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.049
beta-BHC	(ND) | ND	0.12	0.024	0.049
Heptachlor	(ND) | ND	0.12	0.024	0.049
delta-BHC	(ND) | ND	0.12	0.024	0.049
Aldrin	(ND) | ND	0.12	0.024	0.049
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.049
gamma-Chlordane	(ND) | ND	0.12	0.024	0.049
alpha-Chlordane	(ND) | ND	0.12	0.024	0.049
Endosulfan I	(ND) | ND	0.12	0.024	0.049
4,4'-DDE	(ND) | ND	0.12	0.024	0.049
Dieldrin	(ND) | ND	0.12	0.024	0.049
Endrin	(ND) | ND	0.12	0.024	0.049
4,4'-DDD	(ND) | ND	0.12	0.024	0.049
Endosulfan II	(ND) | ND	0.12	0.024	0.049
4,4'-DDT	(ND) | ND	0.12	0.024	0.049
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.049
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.049
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.30	0.61
Endrin Ketone	(ND) | ND	0.12	0.024	0.049

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.350 | (0.362)	0.488	74	44-124
Decachlorobiphenyl	(0.363) | 0.362	0.488	74	30-135

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

Sample Amount : 820ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286
Sample ID : TMW40D042023
Lab Samp ID: D286-08
Lab File ID: RE04020
Ext Btch ID: 23CPE002W
Calib. Ref.: RE04016

Date Collected: 04/25/23 10:50
Date Received: 04/26/23
Date Extracted: 05/02/23 13:15
Date Analyzed: 05/04/23 21:31
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	0.264 | (0.272)	0.421	65	44-124
Decachlorobipheny1	(0.315) | 0.313	0.421	75	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.: RE04017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 11:10
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : TMW48042023	Date Analyzed: 05/04/23 21:52
Lab Samp ID: D286-09	Dilution Factor: 1
Lab File ID: RE04021	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04016	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	(0.285) | 0.281	0.430	66	44-124
Decachlorobiphenyl	0.305 | (0.308)	0.430	72	30-135

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

Sample Amount : 930ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column | Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 11:30
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : TMW48042023D	Date Analyzed: 05/04/23 22:12
Lab Samp ID: D286-10	Dilution Factor: 1
Lab File ID: RE04022	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04016	Instrument ID: F9

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	(0.343) | 0.335	0.460	74	44-124
Decachlorobiphenyl	0.329 | (0.332)	0.460	72	30-135

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

Sample Amount : 870ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 11:35
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : BGMW13D042023	Date Analyzed: 05/04/23 22:33
Lab Samp ID: D286-11	Dilution Factor: 1
Lab File ID: RE04023	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04016	Instrument ID: F9

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	0.343 | (0.353)	0.460	77	44-124
Decachlorobiphenyl	0.327 | (0.330)	0.460	72	30-135

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

Sample Amount : 870ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 13:45
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID : TMW31D042023	Date Analyzed: 05/04/23 22:53
Lab Samp ID: D286-12	Dilution Factor: 1
Lab File ID: RE04024	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04016	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	(0.277) | 0.275	0.404	69	44-124
Decachlorobiphenyl	0.291 | (0.293)	0.404	73	30-135

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

Sample Amount : 990ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04017	

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW3520C/8082A
PCBS

A total of four(4) water samples were received on 04/26/23 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. CPE002WB - 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. 60E002WL/60E002WC 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. : 23D286
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	CPE002WB	1	NA	05/03/2318:13	05/02/2313:15	KE03004A	KE03002A	CPE002W	Method Blank
LCS1W	60E002WL	1	NA	05/03/2318:33	05/02/2313:15	KE03005A	KE03002A	CPE002W	Lab Control Sample (LCS)
LCD1W	60E002WC	1	NA	05/03/2318:53	05/02/2313:15	KE03006A	KE03002A	CPE002W	LCS Duplicate
TMW52042023	D286-01	1.12	NA	05/03/2319:13	05/02/2313:15	KE03007A	KE03002A	CPE002W	Field Sample
MW37042023	D286-04	1.08	NA	05/03/2319:33	05/02/2313:15	KE03008A	KE03002A	CPE002W	Field Sample
BGMW13S042023	D286-07	1.22	NA	05/03/2319:53	05/02/2313:15	KE03009A	KE03002A	CPE002W	Field Sample
BGMW13D042023	D286-11	1.15	NA	05/03/2320:13	05/02/2313:15	KE03010A	KE03002A	CPE002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID: TMW52042023	Date Analyzed: 05/03/23 19:13
Lab Samp ID: D286-01	Dilution Factor: 1.12
Lab File ID: KE03007A	Matrix : WATER
Ext Btch ID: CPE002W	% Moisture : NA
Calib. Ref.: KE03002A	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	(0.5695)|0.5198	0.4480	(127)|116	40-135

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Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID: MW37042023	Date Analyzed: 05/03/23 19:33
Lab Samp ID: D286-04	Dilution Factor: 1.08
Lab File ID: KE03008A	Matrix : WATER
Ext Btch ID: CPE002W	% Moisture : NA
Calib. Ref.: KE03002A	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	(0.5288)|0.5105	0.4320	(122)|118	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID: BGMW13S042023	Date Analyzed: 05/03/23 19:53
Lab Samp ID: D286-07	Dilution Factor: 1.22
Lab File ID: KE03009A	Matrix : WATER
Ext Btch ID: CPE002W	% Moisture : NA
Calib. Ref.: KE03002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.2	0.30	0.61
PCB-1221	(ND)|ND	1.2	0.30	0.61
PCB-1232	(ND)|ND	1.2	0.30	0.61
PCB-1242	(ND)|ND	1.2	0.30	0.61
PCB-1248	(ND)|ND	1.2	0.30	0.61
PCB-1254	(ND)|ND	1.2	0.30	0.61
PCB-1260	(ND)|ND	1.2	0.30	0.61

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.6370)|0.5700	0.4880	(131)|117	40-135

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Final result indicated by ( )
 * Out side of QC Limit

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/02/23 13:15
Sample ID: BGMW13D042023	Date Analyzed: 05/03/23 20:13
Lab Samp ID: D286-11	Dilution Factor: 1.15
Lab File ID: KE03010A	Matrix : WATER
Ext Btch ID: CPE002W	% Moisture : NA
Calib. Ref.: KE03002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.29	0.58
PCB-1221	(ND)|ND	1.1	0.29	0.58
PCB-1232	(ND)|ND	1.1	0.29	0.58
PCB-1242	(ND)|ND	1.1	0.29	0.58
PCB-1248	(ND)|ND	1.1	0.29	0.58
PCB-1254	(ND)|ND	1.1	0.29	0.58
PCB-1260	(ND)|ND	1.1	0.29	0.58

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.5773)|0.5534	0.4600	(126)|120	40-135

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Final result indicated by ( )
* Out side of QC Limit

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD 8151A
HERBICIDES

SDG#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD 8151A
HERBICIDES

A total of four(4) water samples were received on 04/26/23 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. HED009WB - 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. HED009WL/HED009WC 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.

Dalapon results were reported from channel A due to contamination observed in channel B.

LAB CHRONICLE
HERBICIDES

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

SDG NO. : 23D286
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	HED009WB	1	NA	05/04/2318:28	04/28/2311:00	WE04003A	WE04002A	HED009W	Method Blank
LCS1W	HED009WL	1	NA	05/04/2318:56	04/28/2311:00	WE04004A	WE04002A	HED009W	Lab Control Sample (LCS)
LCD1W	HED009WC	1	NA	05/04/2319:24	04/28/2311:00	WE04005A	WE04002A	HED009W	LCS Duplicate
TMW52042023	D286-01	1	NA	05/04/2320:21	04/28/2311:00	WE04007A	WE04002A	HED009W	Field Sample
MW37042023	D286-04	1	NA	05/04/2320:50	04/28/2311:00	WE04008A	WE04002A	HED009W	Field Sample
BGMW13S042023	D286-07	1	NA	05/04/2321:18	04/28/2311:00	WE04009A	WE04002A	HED009W	Field Sample
BGMW13D042023	D286-11	1	NA	05/04/2321:46	04/28/2311:00	WE04010A	WE04002A	HED009W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 04/28/23 11:00
Sample ID: TMW52042023	Date Analyzed: 05/04/23 20:21
Lab Samp ID: D286-01	Dilution Factor: 1
Lab File ID: WE04007A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04002A	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	0.10J|(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	(ND)|ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(9.687)|9.376	10.00	(96.9)|93.8	32-138

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Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 04/28/23 11:00
Sample ID: MW37042023	Date Analyzed: 05/04/23 20:50
Lab Samp ID: D286-04	Dilution Factor: 1
Lab File ID: WE04008A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04002A	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	0.17J | (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	(ND) | ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(10.37) | 10.10	10.00	(104) | 101	32-138

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Final result indicated by ( )

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 04/28/23 11:00
Sample ID: BGMW13S042023	Date Analyzed: 05/04/23 21:18
Lab Samp ID: D286-07	Dilution Factor: 1
Lab File ID: WE04009A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04002A	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 | (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	(ND) | ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(9.657) | 9.540	10.00	(96.6) | 95.4	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 04/28/23 11:00
Sample ID: BGMW13D042023	Date Analyzed: 05/04/23 21:46
Lab Samp ID: D286-11	Dilution Factor: 1
Lab File ID: WE04010A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	1.0 | (ND)	1.0	0.10	0.20
2,4-DB	(ND) | 0.80J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	(ND) | 0.67J	1.0	0.10	0.20
DALAPON	(ND) | ND	1.0	0.10	0.20
DICAMBA	(ND) | 0.15J	1.0	0.10	0.20
DICHLOROPROP	(ND) | 0.34J	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	10.31 | (10.53)	10.00	103 | (105)	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#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW8330B
EXPLOSIVES

A total of twelve(12) water samples were received on 04/26/23 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. EXE002WB - 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. EXE002WL/EXE002WC 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. : 23D286
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	EXE002WB	1	NA	05/17/2321:54	05/01/2310:19	XE15068A	XE15063A	EXE002W	Method Blank
LCS1W	EXE002WL	1	NA	05/17/2322:51	05/01/2310:19	XE15069A	XE15063A	EXE002W	Lab Control Sample (LCS)
LCD1W	EXE002WC	1	NA	05/17/2323:39	05/01/2310:19	XE15070A	XE15063A	EXE002W	LCS Duplicate
TMW52042023	D286-01	1	NA	05/18/2302:20	05/01/2310:19	XE15073A	XE15063A	EXE002W	Field Sample
TMW43042023	D286-02	1	NA	05/18/2303:09	05/01/2310:19	XE15074A	XE15063A	EXE002W	Field Sample
TMW43042023D	D286-03	1	NA	05/18/2306:38	05/01/2310:19	XE15078A	XE15076A	EXE002W	Field Sample
MW37042023	D286-04	1	NA	05/18/2307:35	05/01/2310:19	XE15079A	XE15076A	EXE002W	Field Sample
TMW45042023	D286-05	1	NA	05/18/2308:23	05/01/2310:19	XE15080A	XE15076A	EXE002W	Field Sample
TMW39D042023	D286-06	1	NA	05/18/2309:20	05/01/2310:19	XE15081A	XE15076A	EXE002W	Field Sample
BGMW13S042023	D286-07	1	NA	05/18/2310:08	05/01/2310:19	XE15082A	XE15076A	EXE002W	Field Sample
TMW40D042023	D286-08	1	NA	05/18/2311:04	05/01/2310:19	XE15083A	XE15076A	EXE002W	Field Sample
TMW48042023	D286-09	1	NA	05/18/2311:53	05/01/2310:19	XE15084A	XE15076A	EXE002W	Field Sample
TMW48042023D	D286-10	1	NA	05/18/2312:49	05/01/2310:19	XE15085A	XE15076A	EXE002W	Field Sample
BGMW13D042023	D286-11	1	NA	05/18/2313:38	05/01/2310:19	XE15086A	XE15076A	EXE002W	Field Sample
TMW31D042023	D286-12	1	NA	05/18/2314:34	05/01/2310:19	XE15087A	XE15076A	EXE002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW52042023	Date Analyzed: 05/18/23 02:20
Lab Samp ID: D286-01	Dilution Factor: 1
Lab File ID: XE15073A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15063A	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	2.65	4.000	66.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW43042023	Date Analyzed: 05/18/23 03:09
Lab Samp ID: D286-02	Dilution Factor: 1
Lab File ID: XE15074A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15063A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	0.30J	1.0	0.10	0.20
RDX	1.9	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	3.87	4.000	96.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW43042023D	Date Analyzed: 05/18/23 06:38
Lab Samp ID: D286-03	Dilution Factor: 1
Lab File ID: XE15078A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	0.28J	1.0	0.10	0.20
RDX	2.0	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: MW37042023	Date Analyzed: 05/18/23 07:35
Lab Samp ID: D286-04	Dilution Factor: 1
Lab File ID: XE15079A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	2.62	4.000	65.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW45042023	Date Analyzed: 05/18/23 08:23
Lab Samp ID: D286-05	Dilution Factor: 1
Lab File ID: XE15080A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	2.94	4.000	73.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW39D042023	Date Analyzed: 05/18/23 09:20
Lab Samp ID: D286-06	Dilution Factor: 1
Lab File ID: XE15081A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	3.52	4.000	88.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: BGMW13S042023	Date Analyzed: 05/18/23 10:08
Lab Samp ID: D286-07	Dilution Factor: 1
Lab File ID: XE15082A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	3.34	4.000	83.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW40D042023	Date Analyzed: 05/18/23 11:04
Lab Samp ID: D286-08	Dilution Factor: 1
Lab File ID: XE15083A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	91.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW48042023	Date Analyzed: 05/18/23 11:53
Lab Samp ID: D286-09	Dilution Factor: 1
Lab File ID: XE15084A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	88.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW48042023D	Date Analyzed: 05/18/23 12:49
Lab Samp ID: D286-10	Dilution Factor: 1
Lab File ID: XE15085A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	3.48	4.000	87.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: BGMW13D042023	Date Analyzed: 05/18/23 13:38
Lab Samp ID: D286-11	Dilution Factor: 1
Lab File ID: XE15086A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	3.33	4.000	83.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:19
Sample ID: TMW31D042023	Date Analyzed: 05/18/23 14:34
Lab Samp ID: D286-12	Dilution Factor: 1
Lab File ID: XE15087A	Matrix : WATER
Ext Btch ID: EXE002W	% Moisture : NA
Calib. Ref.: XE15076A	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	3.36	4.000	84.1	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#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW8332
NITROGLYCERIN AND PETN

A total of twelve(12) water samples were received on 04/26/23 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. EXE001WB - 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. EXE001WL/EXE001WC 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. : 23D286
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	EXE001WB	1	NA	05/16/2303:20	05/01/2310:15	NE15096A	NE15091A	EXE001W	Method Blank
LCS1W	EXE001WL	1	NA	05/16/2303:29	05/01/2310:15	NE15097A	NE15091A	EXE001W	Lab Control Sample (LCS)
LCD1W	EXE001WC	1	NA	05/16/2303:38	05/01/2310:15	NE15098A	NE15091A	EXE001W	LCS Duplicate
TMW52042023	D286-01	1	NA	05/16/2303:47	05/01/2310:15	NE15099A	NE15091A	EXE001W	Field Sample
TMW43042023	D286-02	1	NA	05/16/2303:56	05/01/2310:15	NE15100A	NE15091A	EXE001W	Field Sample
TMW43042023D	D286-03	1	NA	05/16/2304:06	05/01/2310:15	NE15101A	NE15091A	EXE001W	Field Sample
MW37042023	D286-04	1	NA	05/16/2304:15	05/01/2310:15	NE15102A	NE15091A	EXE001W	Field Sample
TMW45042023	D286-05	1	NA	05/16/2304:24	05/01/2310:15	NE15103A	NE15091A	EXE001W	Field Sample
TMW39D042023	D286-06	1	NA	05/16/2304:33	05/01/2310:15	NE15104A	NE15091A	EXE001W	Field Sample
BGMW13S042023	D286-07	1	NA	05/16/2305:00	05/01/2310:15	NE15107A	NE15106A	EXE001W	Field Sample
TMW40D042023	D286-08	1	NA	05/16/2305:09	05/01/2310:15	NE15108A	NE15106A	EXE001W	Field Sample
TMW48042023	D286-09	1	NA	05/16/2305:18	05/01/2310:15	NE15109A	NE15106A	EXE001W	Field Sample
TMW48042023D	D286-10	1	NA	05/16/2305:27	05/01/2310:15	NE15110A	NE15106A	EXE001W	Field Sample
BGMW13D042023	D286-11	1	NA	05/16/2305:36	05/01/2310:15	NE15111A	NE15106A	EXE001W	Field Sample
TMW31D042023	D286-12	1	NA	05/16/2305:45	05/01/2310:15	NE15112A	NE15106A	EXE001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW52042023	Date Analyzed: 05/16/23 03:47
Lab Samp ID: D286-01	Dilution Factor: 1
Lab File ID: NE15099A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15091A	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW43042023	Date Analyzed: 05/16/23 03:56
Lab Samp ID: D286-02	Dilution Factor: 1
Lab File ID: NE15100A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15091A	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	515	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW43042023D	Date Analyzed: 05/16/23 04:06
Lab Samp ID: D286-03	Dilution Factor: 1
Lab File ID: NE15101A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15091A	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	509	500.0	102	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: MW37042023	Date Analyzed: 05/16/23 04:15
Lab Samp ID: D286-04	Dilution Factor: 1
Lab File ID: NE15102A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15091A	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	516	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW45042023	Date Analyzed: 05/16/23 04:24
Lab Samp ID: D286-05	Dilution Factor: 1
Lab File ID: NE15103A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15091A	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	521	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW39D042023	Date Analyzed: 05/16/23 04:33
Lab Samp ID: D286-06	Dilution Factor: 1
Lab File ID: NE15104A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15091A	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: BGMW13S042023	Date Analyzed: 05/16/23 05:00
Lab Samp ID: D286-07	Dilution Factor: 1
Lab File ID: NE15107A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW40D042023	Date Analyzed: 05/16/23 05:09
Lab Samp ID: D286-08	Dilution Factor: 1
Lab File ID: NE15108A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW48042023	Date Analyzed: 05/16/23 05:18
Lab Samp ID: D286-09	Dilution Factor: 1
Lab File ID: NE15109A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW48042023D	Date Analyzed: 05/16/23 05:27
Lab Samp ID: D286-10	Dilution Factor: 1
Lab File ID: NE15110A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: BGMW13D042023	Date Analyzed: 05/16/23 05:36
Lab Samp ID: D286-11	Dilution Factor: 1
Lab File ID: NE15111A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/25/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D286	Date Extracted: 05/01/23 10:15
Sample ID: TMW31D042023	Date Analyzed: 05/16/23 05:45
Lab Samp ID: D286-12	Dilution Factor: 1
Lab File ID: NE15112A	Matrix : WATER
Ext Btch ID: EXE001W	% Moisture : NA
Calib. Ref.: NE15106A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW6020A
METALS BY ICP-MS

A total of twelve(12) water samples were received on 04/26/23 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. Barium(0.27J <1/2 LOQ) was detected at trace level in IME004WB. 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. IME004WL/IME004WC 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: D286-01M/D286-01S - Percent recoveries for Barium, Manganese(20X) and Sodium(153X) were not within MS/MSD QC limits. Percent recoveries for Aluminum and Iron 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. : 23D286
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	IME004WB	1	NA	07/07/2315:56	05/02/2312:04	H6G04050	H6G04048	IME004W	Method Blank
LCS1W	IME004WL	1	NA	07/07/2315:59	05/02/2312:04	H6G04051	H6G04048	IME004W	Lab Control Sample (LCS)
LCD1W	IME004WC	1	NA	07/07/2316:02	05/02/2312:04	H6G04052	H6G04048	IME004W	LCS Duplicate
TMW52042023	D286-01A	5	NA	07/07/2316:05	05/02/2312:04	H6G04053	H6G04048	IME004W	Analytical Spike Sample
TMW52042023	D286-01G	5	NA	07/07/2316:08	05/02/2312:04	H6G04054	H6G04048	IME004W	Diluted Sample
TMW52042023	D286-01J	25	NA	07/07/2316:11	05/02/2312:04	H6G04055	H6G04048	IME004W	Diluted Sample
TMW52042023MS	D286-01M	5	NA	07/07/2316:14	05/02/2312:04	H6G04056	H6G04048	IME004W	Matrix Spike Sample (MS)
TMW52042023MSD	D286-01S	5	NA	07/07/2316:17	05/02/2312:04	H6G04057	H6G04048	IME004W	MS Duplicate (MSD)
TMW43042023	D286-02G	5	NA	07/07/2316:20	05/02/2312:04	H6G04058	H6G04048	IME004W	Diluted Sample
TMW43042023D	D286-03G	5	NA	07/07/2316:23	05/02/2312:04	H6G04059	H6G04048	IME004W	Diluted Sample
MW37042023	D286-04G	5	NA	07/07/2316:32	05/02/2312:04	H6G04062	H6G04060	IME004W	Diluted Sample
TMW45042023	D286-05G	5	NA	07/07/2316:34	05/02/2312:04	H6G04063	H6G04060	IME004W	Diluted Sample
TMW39D042023	D286-06G	5	NA	07/07/2316:37	05/02/2312:04	H6G04064	H6G04060	IME004W	Diluted Sample
BGMW13S042023	D286-07G	5	NA	07/07/2316:40	05/02/2312:04	H6G04065	H6G04060	IME004W	Diluted Sample
TMW40D042023	D286-08G	5	NA	07/07/2316:43	05/02/2312:04	H6G04066	H6G04060	IME004W	Diluted Sample
TMW48042023	D286-09G	5	NA	07/07/2316:46	05/02/2312:04	H6G04067	H6G04060	IME004W	Diluted Sample
TMW48042023D	D286-10G	5	NA	07/07/2316:49	05/02/2312:04	H6G04068	H6G04060	IME004W	Diluted Sample
BGMW13D042023	D286-11G	5	NA	07/07/2316:52	05/02/2312:04	H6G04069	H6G04060	IME004W	Diluted Sample
TMW31D042023	D286-12G	5	NA	07/07/2316:55	05/02/2312:04	H6G04070	H6G04060	IME004W	Diluted Sample
TMW52042023	D286-01A	50	NA	07/07/2317:04	05/02/2312:04	H6G04073	H6G04071	IME004W	Analytical Spike Sample
TMW52042023	D286-01T	50	NA	07/07/2317:07	05/02/2312:04	H6G04074	H6G04071	IME004W	Diluted Sample
TMW52042023	D286-01J	250	NA	07/07/2317:10	05/02/2312:04	H6G04075	H6G04071	IME004W	Diluted Sample
TMW52042023MS	D286-01M	50	NA	07/07/2317:12	05/02/2312:04	H6G04076	H6G04071	IME004W	Matrix Spike Sample (MS)
TMW52042023MSD	D286-01S	50	NA	07/07/2317:15	05/02/2312:04	H6G04077	H6G04071	IME004W	MS Duplicate (MSD)
TMW43042023	D286-02T	50	NA	07/07/2317:18	05/02/2312:04	H6G04078	H6G04071	IME004W	Diluted Sample
TMW43042023D	D286-03T	50	NA	07/07/2317:21	05/02/2312:04	H6G04079	H6G04071	IME004W	Diluted Sample
MW37042023	D286-04T	50	NA	07/07/2317:24	05/02/2312:04	H6G04080	H6G04071	IME004W	Diluted Sample
TMW45042023	D286-05T	50	NA	07/07/2317:27	05/02/2312:04	H6G04081	H6G04071	IME004W	Diluted Sample
TMW39D042023	D286-06T	50	NA	07/07/2317:30	05/02/2312:04	H6G04082	H6G04071	IME004W	Diluted Sample
BGMW13S042023	D286-07T	50	NA	07/07/2317:39	05/02/2312:04	H6G04085	H6G04083	IME004W	Diluted Sample
TMW40D042023	D286-08T	50	NA	07/07/2317:42	05/02/2312:04	H6G04086	H6G04083	IME004W	Diluted Sample
TMW48042023	D286-09T	50	NA	07/07/2317:45	05/02/2312:04	H6G04087	H6G04083	IME004W	Diluted Sample
TMW48042023D	D286-10T	50	NA	07/07/2317:47	05/02/2312:04	H6G04088	H6G04083	IME004W	Diluted Sample
BGMW13D042023	D286-11T	50	NA	07/07/2317:50	05/02/2312:04	H6G04089	H6G04083	IME004W	Diluted Sample
TMW31D042023	D286-12T	50	NA	07/07/2317:53	05/02/2312:04	H6G04090	H6G04083	IME004W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW52042023
Lab Samp ID: D286-01G
Lab File ID: H6G04054
Ext Btch ID: IME004W
Calib. Ref.: H6G04048

Date Collected: 04/25/23 07:40
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:08
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3700	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.2	5.0	0.62	1.2
Barium	120	5.0	1.2	2.5
Beryllium	1.2J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	5.4	5.0	0.50	1.0
Cobalt	3.9	3.7	0.50	1.0
Copper	9.5J	10	2.5	5.0
Iron	1800	1000	120	250
Lead	4.4J	5.0	0.25	0.50
Magnesium	2000	500	100	250
Manganese	620	5.0	1.2	2.5
Nickel	9.1	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	0.81J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	23	5.0	1.2	2.5
Zinc	49J	100	25	50

Sample ID: TMW52042023
Lab Samp ID: D286-01T
Lab File ID: H6G04074
Ext Btch ID: IME004W
Calib. Ref.: H6G04071

Date Analyzed: 07/07/23 17:07
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	460000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:40
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW52042023	Date Analyzed:	07/07/23 16:08
Lab Samp ID:	D286-01G	Dilution Factor:	5
Lab File ID:	H6G04054	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04048	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3700	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.2	5.0	0.62	1.2
Barium	120	5.0	1.2	2.5
Beryllium	1.2J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	5.4	5.0	0.50	1.0
Cobalt	3.9	3.7	0.50	1.0
Copper	9.5J	10	2.5	5.0
Iron	1800	1000	120	250
Lead	4.4J	5.0	0.25	0.50
Magnesium	2000	500	100	250
Manganese	620	5.0	1.2	2.5
Nickel	9.1	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	0.81J	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	23	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:40
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW52042023	Date Analyzed:	07/07/23 17:07
Lab Samp ID:	D286-01T	Dilution Factor:	50
Lab File ID:	H6G04074	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04071	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3900J	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	2000J	10000	1200	2500
Lead	4.4J	50	2.5	5.0
Magnesium	2100J	5000	1000	2500
Manganese	660	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	16J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW43042023
Lab Samp ID: D286-02G
Lab File ID: H6G04058
Ext Btch ID: IME004W
Calib. Ref.: H6G04048

Date Collected: 04/25/23 07:55
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:20
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	ND	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	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	56	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	590J	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	1.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW43042023
Lab Samp ID: D286-02T
Lab File ID: H6G04078
Ext Btch ID: IME004W
Calib. Ref.: H6G04071

Date Analyzed: 07/07/23 17:18
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW43042023	Date Analyzed:	07/07/23 16:20
Lab Samp ID:	D286-02G	Dilution Factor:	5
Lab File ID:	H6G04058	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04048	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	19	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	56	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	590J	1000	250	500
Selenium	5.7	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW43042023	Date Analyzed:	07/07/23 17:18
Lab Samp ID:	D286-02T	Dilution Factor:	50
Lab File ID:	H6G04078	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04071	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	21J	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	6400	5000	1000	2500
Manganese	65	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW43042023D
Lab Samp ID: D286-03G
Lab File ID: H6G04059
Ext Btch ID: IME004W
Calib. Ref.: H6G04048

Date Collected: 04/25/23 08:00
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:23
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	ND	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	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	6400	500	100	250
Manganese	54	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	620J	1000	250	500
Selenium	6.1	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: TMW43042023D
Lab Samp ID: D286-03T
Lab File ID: H6G04079
Ext Btch ID: IME004W
Calib. Ref.: H6G04071

Date Analyzed: 07/07/23 17:21
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 08:00
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW43042023D	Date Analyzed:	07/07/23 16:23
Lab Samp ID:	D286-03G	Dilution Factor:	5
Lab File ID:	H6G04059	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04048	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	19	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	6400	500	100	250
Manganese	54	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	620J	1000	250	500
Selenium	6.1	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 08:00
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: TMW43042023D	Date Analyzed: 07/07/23 17:21
Lab Samp ID: D286-03T	Dilution Factor: 50
Lab File ID: H6G04079	Matrix: WATER
Ext Btch ID: IME004W	% Moisture: NA
Calib. Ref.: H6G04071	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	21J	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	6600	5000	1000	2500
Manganese	58	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 08:30
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: MW37042023	Date Analyzed: 07/07/23 16:32
Lab Samp ID: D286-04G	Dilution Factor: 5
Lab File ID: H6G04062	Matrix: WATER
Ext Btch ID: IME004W	% Moisture: NA
Calib. Ref.: H6G04060	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	950	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	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	30000	1000	250	500
Chromium	0.80J	5.0	0.50	1.0
Cobalt	1.6J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	330J	1000	120	250
Lead	0.56J	5.0	0.25	0.50
Magnesium	5300	500	100	250
Manganese	750	5.0	1.2	2.5
Nickel	2.7J	5.0	1.2	2.5
Potassium	300J	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	4.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW37042023	Date Analyzed: 07/07/23 17:24
Lab Samp ID: D286-04T	Dilution Factor: 50
Lab File ID: H6G04080	Matrix: WATER
Ext Btch ID: IME004W	% Moisture: NA
Calib. Ref.: H6G04071	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 08:30
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: MW37042023	Date Analyzed: 07/07/23 16:32
Lab Samp ID: D286-04G	Dilution Factor: 5
Lab File ID: H6G04062	Matrix: WATER
Ext Btch ID: IME004W	% Moisture: NA
Calib. Ref.: H6G04060	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	950	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.3J	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	30000	1000	250	500
Chromium	0.80J	5.0	0.50	1.0
Cobalt	1.6J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	330J	1000	120	250
Lead	0.56J	5.0	0.25	0.50
Magnesium	5300	500	100	250
Manganese	750	5.0	1.2	2.5
Nickel	2.7J	5.0	1.2	2.5
Potassium	300J	1000	250	500
Selenium	ND	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	4.7J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	MW37042023	Date Analyzed:	07/07/23 17:24
Lab Samp ID:	D286-04T	Dilution Factor:	50
Lab File ID:	H6G04080	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04071	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	58	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	ND	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	5400	5000	1000	2500
Manganese	780	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW45042023
Lab Samp ID: D286-05G
Lab File ID: H6G04063
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 09:25
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:34
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	0.73J	5.0	0.62	1.2
Barium	66	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	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	7500	500	100	250
Manganese	180	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	0.99J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	3.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW45042023
Lab Samp ID: D286-05T
Lab File ID: H6G04081
Ext Btch ID: IME004W
Calib. Ref.: H6G04071

Date Analyzed: 07/07/23 17:27
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	940000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW45042023
Lab Samp ID: D286-05G
Lab File ID: H6G04063
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 09:25
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:34
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	0.73J	5.0	0.62	1.2
Barium	66	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	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	7500	500	100	250
Manganese	180	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	440J	1000	250	500
Selenium	0.99J	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	3.7J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 09:25
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW45042023	Date Analyzed:	07/07/23 17:27
Lab Samp ID:	D286-05T	Dilution Factor:	50
Lab File ID:	H6G04081	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04071	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	64	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	29000	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	7500	5000	1000	2500
Manganese	180	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	940000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW39D042023
Lab Samp ID: D286-06G
Lab File ID: H6G04064
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 09:40
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:37
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	150J	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	20000	1000	250	500
Chromium	0.67J	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	2200	500	100	250
Manganese	62	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	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW39D042023
Lab Samp ID: D286-06T
Lab File ID: H6G04082
Ext Btch ID: IME004W
Calib. Ref.: H6G04071

Date Analyzed: 07/07/23 17:30
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW39D042023	Date Analyzed:	07/07/23 16:37
Lab Samp ID:	D286-06G	Dilution Factor:	5
Lab File ID:	H6G04064	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04060	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	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	20000	1000	250	500
Chromium	0.67J	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	2200	500	100	250
Manganese	62	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW39D042023	Date Analyzed:	07/07/23 17:30
Lab Samp ID:	D286-06T	Dilution Factor:	50
Lab File ID:	H6G04082	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04071	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	2200J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: BGMW13S042023
Lab Samp ID: D286-07G
Lab File ID: H6G04065
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 10:15
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:40
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	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	0.56J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	750J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8500	500	100	250
Manganese	390	5.0	1.2	2.5
Nickel	ND	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	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW13S042023
Lab Samp ID: D286-07T
Lab File ID: H6G04085
Ext Btch ID: IME004W
Calib. Ref.: H6G04083

Date Analyzed: 07/07/23 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	290000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: BGMW13S042023
Lab Samp ID: D286-07G
Lab File ID: H6G04065
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 10:15
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:40
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	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	0.56J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	750J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8500	500	100	250
Manganese	390	5.0	1.2	2.5
Nickel	ND	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 10:15
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	BGMW13S042023	Date Analyzed:	07/07/23 17:39
Lab Samp ID:	D286-07T	Dilution Factor:	50
Lab File ID:	H6G04085	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04083	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	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	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW40D042023
Lab Samp ID: D286-08G
Lab File ID: H6G04066
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 10:50
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:43
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	8.5	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	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	980J	1000	250	500
Selenium	2.2J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW40D042023
Lab Samp ID: D286-08T
Lab File ID: H6G04086
Ext Btch ID: IME004W
Calib. Ref.: H6G04083

Date Analyzed: 07/07/23 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	730000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 10:50
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW40D042023	Date Analyzed:	07/07/23 16:43
Lab Samp ID:	D286-08G	Dilution Factor:	5
Lab File ID:	H6G04066	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04060	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	8.5	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	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	980J	1000	250	500
Selenium	2.2J	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	2.9J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW40D042023
Lab Samp ID: D286-08T
Lab File ID: H6G04086
Ext Btch ID: IME004W
Calib. Ref.: H6G04083

Date Collected: 04/25/23 10:50
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 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)
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	2000J	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW48042023
Lab Samp ID: D286-09G
Lab File ID: H6G04067
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 11:10
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:46
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	9.8	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	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	52	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	5.2	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	ND	100	25	50

Sample ID: TMW48042023
Lab Samp ID: D286-09T
Lab File ID: H6G04087
Ext Btch ID: IME004W
Calib. Ref.: H6G04083

Date Analyzed: 07/07/23 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	660000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:10
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW48042023	Date Analyzed:	07/07/23 16:46
Lab Samp ID:	D286-09G	Dilution Factor:	5
Lab File ID:	H6G04067	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04060	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	9.8	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	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	52	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1200	1000	250	500
Selenium	5.2	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	640000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.3J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:10
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW48042023	Date Analyzed:	07/07/23 17:45
Lab Samp ID:	D286-09T	Dilution Factor:	50
Lab File ID:	H6G04087	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04083	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	28J	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	13000	5000	1000	2500
Manganese	58	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	660000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW48042023D
Lab Samp ID: D286-10G
Lab File ID: H6G04068
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 11:30
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:49
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	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	70000	1000	250	500
Chromium	0.58J	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	57	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1500	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	3.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW48042023D
Lab Samp ID: D286-10T
Lab File ID: H6G04088
Ext Btch ID: IME004W
Calib. Ref.: H6G04083

Date Analyzed: 07/07/23 17:47
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	670000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:30
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW48042023D	Date Analyzed:	07/07/23 16:49
Lab Samp ID:	D286-10G	Dilution Factor:	5
Lab File ID:	H6G04068	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04060	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	70000	1000	250	500
Chromium	0.58J	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	57	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1500	1000	250	500
Selenium	5.3	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	640000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	3.2J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:30
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW48042023D	Date Analyzed:	07/07/23 17:47
Lab Samp ID:	D286-10T	Dilution Factor:	50
Lab File ID:	H6G04088	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04083	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	72000	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	62	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: BGMW13D042023
Lab Samp ID: D286-11G
Lab File ID: H6G04069
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 11:35
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:52
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1700	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	550	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	22	5.0	0.50	1.0
Cobalt	1.7J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	4300	1000	120	250
Lead	2.8J	5.0	0.25	0.50
Magnesium	6500	500	100	250
Manganese	740	5.0	1.2	2.5
Nickel	26	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	14	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW13D042023
Lab Samp ID: D286-11T
Lab File ID: H6G04089
Ext Btch ID: IME004W
Calib. Ref.: H6G04083

Date Analyzed: 07/07/23 17:50
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:35
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	BGMW13D042023	Date Analyzed:	07/07/23 16:52
Lab Samp ID:	D286-11G	Dilution Factor:	5
Lab File ID:	H6G04069	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04060	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1700	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.4J	5.0	0.62	1.2
Barium	550	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	22	5.0	0.50	1.0
Cobalt	1.7J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	4300	1000	120	250
Lead	2.8J	5.0	0.25	0.50
Magnesium	6500	500	100	250
Manganese	740	5.0	1.2	2.5
Nickel	26	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	280000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	14	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:35
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	BGMW13D042023	Date Analyzed:	07/07/23 17:50
Lab Samp ID:	D286-11T	Dilution Factor:	50
Lab File ID:	H6G04089	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04083	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1800J	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	ND	50	6.2	12
Barium	550	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	78000	10000	2500	5000
Chromium	20J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	4500J	10000	1200	2500
Lead	2.8J	50	2.5	5.0
Magnesium	6700	5000	1000	2500
Manganese	780	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW31D042023
Lab Samp ID: D286-12G
Lab File ID: H6G04070
Ext Btch ID: IME004W
Calib. Ref.: H6G04060

Date Collected: 04/25/23 13:45
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 16:55
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	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	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5600	500	100	250
Manganese	180	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	1.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW31D042023
Lab Samp ID: D286-12T
Lab File ID: H6G04090
Ext Btch ID: IME004W
Calib. Ref.: H6G04083

Date Analyzed: 07/07/23 17:53
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 13:45
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW31D042023	Date Analyzed:	07/07/23 16:55
Lab Samp ID:	D286-12G	Dilution Factor:	5
Lab File ID:	H6G04070	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04060	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	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	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5600	500	100	250
Manganese	180	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	1000000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 13:45
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW31D042023	Date Analyzed:	07/07/23 17:53
Lab Samp ID:	D286-12T	Dilution Factor:	50
Lab File ID:	H6G04090	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04083	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	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	5700	5000	1000	2500
Manganese	180	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	MBLK1W	Date Analyzed:	07/07/23 15:56
Lab Samp ID:	IME004WB	Dilution Factor:	1
Lab File ID:	H6G04050	Matrix:	WATER
Ext Btch ID:	IME004W	% Moisture:	NA
Calib. Ref.:	H6G04048	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	0.27J	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of twelve(12) water samples were received on 04/26/23 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. Chromium(0.35J <1/2 LOQ) was detected at trace level in IME005WB. 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. IME005WL/IME005WC 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: D286-01M/D286-01S - Percent recoveries for Chromium, Iron, Manganese and Sodium(149X) 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. : 23D286
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	IME005WB	1	NA	07/07/2318:02	05/02/2312:04	H6G04093	H6G04091	IME005W	Method Blank
LCS1W	IME005WL	1	NA	07/07/2318:05	05/02/2312:04	H6G04094	H6G04091	IME005W	Lab Control Sample (LCS)
LCD1W	IME005WC	1	NA	07/07/2318:08	05/02/2312:04	H6G04095	H6G04091	IME005W	LCS Duplicate
TMW52042023	D286-01A	5	NA	07/07/2318:11	05/02/2312:04	H6G04096	H6G04091	IME005W	Analytical Spike Sample
TMW52042023	D286-01G	5	NA	07/07/2318:14	05/02/2312:04	H6G04097	H6G04091	IME005W	Diluted Sample
TMW52042023	D286-01J	25	NA	07/07/2318:17	05/02/2312:04	H6G04098	H6G04091	IME005W	Diluted Sample
TMW52042023MS	D286-01M	5	NA	07/07/2318:20	05/02/2312:04	H6G04099	H6G04091	IME005W	Matrix Spike Sample (MS)
TMW52042023MSD	D286-01S	5	NA	07/07/2318:23	05/02/2312:04	H6G04100	H6G04091	IME005W	MS Duplicate (MSD)
TMW43042023	D286-02G	5	NA	07/07/2318:26	05/02/2312:04	H6G04101	H6G04091	IME005W	Diluted Sample
TMW43042023D	D286-03G	5	NA	07/07/2318:28	05/02/2312:04	H6G04102	H6G04091	IME005W	Diluted Sample
MW37042023	D286-04G	5	NA	07/07/2318:37	05/02/2312:04	H6G04105	H6G04103	IME005W	Diluted Sample
TMW45042023	D286-05G	5	NA	07/07/2318:40	05/02/2312:04	H6G04106	H6G04103	IME005W	Diluted Sample
TMW39D042023	D286-06G	5	NA	07/07/2318:43	05/02/2312:04	H6G04107	H6G04103	IME005W	Diluted Sample
BGMW13S042023	D286-07G	5	NA	07/07/2318:46	05/02/2312:04	H6G04108	H6G04103	IME005W	Diluted Sample
TMW40D042023	D286-08G	5	NA	07/07/2318:49	05/02/2312:04	H6G04109	H6G04103	IME005W	Diluted Sample
TMW48042023	D286-09G	5	NA	07/07/2318:52	05/02/2312:04	H6G04110	H6G04103	IME005W	Diluted Sample
TMW48042023D	D286-10G	5	NA	07/07/2318:55	05/02/2312:04	H6G04111	H6G04103	IME005W	Diluted Sample
BGMW13D042023	D286-11G	5	NA	07/07/2318:58	05/02/2312:04	H6G04112	H6G04103	IME005W	Diluted Sample
TMW31D042023	D286-12G	5	NA	07/07/2319:01	05/02/2312:04	H6G04113	H6G04103	IME005W	Diluted Sample
TMW52042023	D286-01A	50	NA	07/07/2319:10	05/02/2312:04	H6G04116	H6G04114	IME005W	Analytical Spike Sample
TMW52042023	D286-01T	50	NA	07/07/2319:13	05/02/2312:04	H6G04117	H6G04114	IME005W	Diluted Sample
TMW52042023	D286-01J	250	NA	07/07/2319:15	05/02/2312:04	H6G04118	H6G04114	IME005W	Diluted Sample
TMW52042023MS	D286-01M	50	NA	07/07/2319:18	05/02/2312:04	H6G04119	H6G04114	IME005W	Matrix Spike Sample (MS)
TMW52042023MSD	D286-01S	50	NA	07/07/2319:21	05/02/2312:04	H6G04120	H6G04114	IME005W	MS Duplicate (MSD)
TMW43042023	D286-02T	50	NA	07/07/2319:24	05/02/2312:04	H6G04121	H6G04114	IME005W	Diluted Sample
TMW43042023D	D286-03T	50	NA	07/07/2319:27	05/02/2312:04	H6G04122	H6G04114	IME005W	Diluted Sample
MW37042023	D286-04T	50	NA	07/07/2319:30	05/02/2312:04	H6G04123	H6G04114	IME005W	Diluted Sample
TMW45042023	D286-05T	50	NA	07/07/2319:33	05/02/2312:04	H6G04124	H6G04114	IME005W	Diluted Sample
TMW39D042023	D286-06T	50	NA	07/07/2319:36	05/02/2312:04	H6G04125	H6G04114	IME005W	Diluted Sample
BGMW13S042023	D286-07T	50	NA	07/07/2319:45	05/02/2312:04	H6G04128	H6G04126	IME005W	Diluted Sample
TMW40D042023	D286-08T	50	NA	07/07/2319:48	05/02/2312:04	H6G04129	H6G04126	IME005W	Diluted Sample
TMW48042023	D286-09T	50	NA	07/07/2319:51	05/02/2312:04	H6G04130	H6G04126	IME005W	Diluted Sample
TMW48042023D	D286-10T	50	NA	07/07/2319:54	05/02/2312:04	H6G04131	H6G04126	IME005W	Diluted Sample
BGMW13D042023	D286-11T	50	NA	07/07/2319:57	05/02/2312:04	H6G04132	H6G04126	IME005W	Diluted Sample
TMW31D042023	D286-12T	50	NA	07/07/2319:59	05/02/2312:04	H6G04133	H6G04126	IME005W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW52042023
Lab Samp ID: D286-01G
Lab File ID: H6G04097
Ext Btch ID: IME005W
Calib. Ref.: H6G04091

Date Collected: 04/25/23 07:40
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 18:14
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	5.1	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	3800	1000	250	500
Chromium	25	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	1200	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	430J	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	540J	1000	250	500
Selenium	0.94J	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: TMW52042023
Lab Samp ID: D286-01T
Lab File ID: H6G04117
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Analyzed: 07/07/23 19:13
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	450000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 07:40
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW52042023	Date Analyzed:	07/07/23 18:14
Lab Samp ID:	D286-01G	Dilution Factor:	5
Lab File ID:	H6G04097	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04091	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	5.1	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	3800	1000	250	500
Chromium	25	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	1200	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	430J	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	540J	1000	250	500
Selenium	0.94J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 07:40
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: TMW52042023	Date Analyzed: 07/07/23 19:13
Lab Samp ID: D286-01T	Dilution Factor: 50
Lab File ID: H6G04117	Matrix: WATER
Ext Btch ID: IME005W	% Moisture: NA
Calib. Ref.: H6G04114	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	6800J	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	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW43042023
Lab Samp ID: D286-02G
Lab File ID: H6G04101
Ext Btch ID: IME005W
Calib. Ref.: H6G04091

Date Collected: 04/25/23 07:55
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 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	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	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	6600	500	100	250
Manganese	57	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	610J	1000	250	500
Selenium	6.5	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: TMW43042023
Lab Samp ID: D286-02T
Lab File ID: H6G04121
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Analyzed: 07/07/23 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	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW43042023
Lab Samp ID: D286-02G
Lab File ID: H6G04101
Ext Btch ID: IME005W
Calib. Ref.: H6G04091

Date Collected: 04/25/23 07:55
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 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	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	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	6600	500	100	250
Manganese	57	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	610J	1000	250	500
Selenium	6.5	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW43042023
Lab Samp ID: D286-02T
Lab File ID: H6G04121
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Collected: 04/25/23 07:55
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 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)
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	34000	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	6400	5000	1000	2500
Manganese	57	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.		Date Collected:	04/25/23 08:00
Project : USACE WINGATE		Date Received:	04/26/23
SDG NO. : 23D286		Date Extracted:	05/02/23 12:04
Sample ID: TMW43042023D		Date Analyzed:	07/07/23 18:28
Lab Samp ID: D286-03G		Dilution Factor:	5
Lab File ID: H6G04102		Matrix:	WATER
Ext Btch ID: IME005W		% Moisture:	NA
Calib. Ref.: H6G04091		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	19	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	6100	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	590J	1000	250	500
Selenium	6.6	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: TMW43042023D		Date Analyzed:	07/07/23 19:27
Lab Samp ID: D286-03T		Dilution Factor:	50
Lab File ID: H6G04122		Matrix:	WATER
Ext Btch ID: IME005W		% Moisture:	NA
Calib. Ref.: H6G04114		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 : CKaing		Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 08:00
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW43042023D	Date Analyzed:	07/07/23 18:28
Lab Samp ID:	D286-03G	Dilution Factor:	5
Lab File ID:	H6G04102	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04091	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	19	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	6100	500	100	250
Manganese	51	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	590J	1000	250	500
Selenium	6.6	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW43042023D
Lab Samp ID: D286-03T
Lab File ID: H6G04122
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Collected: 04/25/23 08:00
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:27
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	19J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	34000	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	6400	5000	1000	2500
Manganese	55	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	8.1J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: MW37042023
Lab Samp ID: D286-04G
Lab File ID: H6G04105
Ext Btch ID: IME005W
Calib. Ref.: H6G04103

Date Collected: 04/25/23 08:30
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 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	0.92J	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	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	4400	500	100	250
Manganese	17	5.0	1.2	2.5
Nickel	ND	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	2.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW37042023
Lab Samp ID: D286-04T
Lab File ID: H6G04123
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Analyzed: 07/07/23 19:30
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	620000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 08:30
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: MW37042023	Date Analyzed: 07/07/23 18:37
Lab Samp ID: D286-04G	Dilution Factor: 5
Lab File ID: H6G04105	Matrix: WATER
Ext Btch ID: IME005W	% Moisture: NA
Calib. Ref.: H6G04103	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	0.92J	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	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	4400	500	100	250
Manganese	17	5.0	1.2	2.5
Nickel	ND	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	590000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.3J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: MW37042023
Lab Samp ID: D286-04T
Lab File ID: H6G04123
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Collected: 04/25/23 08:30
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:30
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	32J	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	4500J	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW45042023
Lab Samp ID: D286-05G
Lab File ID: H6G04106
Ext Btch ID: IME005W
Calib. Ref.: H6G04103

Date Collected: 04/25/23 09:25
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 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	0.74J	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	28000	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	7300	500	100	250
Manganese	15	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	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	3.4J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW45042023
Lab Samp ID: D286-05T
Lab File ID: H6G04124
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Analyzed: 07/07/23 19:33
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	940000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 09:25
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: TMW45042023	Date Analyzed: 07/07/23 18:40
Lab Samp ID: D286-05G	Dilution Factor: 5
Lab File ID: H6G04106	Matrix: WATER
Ext Btch ID: IME005W	% Moisture: NA
Calib. Ref.: H6G04103	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	64	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	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	7300	500	100	250
Manganese	15	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	1.0J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	910000E	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW45042023
Lab Samp ID: D286-05T
Lab File ID: H6G04124
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Collected: 04/25/23 09:25
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:33
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	63	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	7400	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	940000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW39D042023
Lab Samp ID: D286-06G
Lab File ID: H6G04107
Ext Btch ID: IME005W
Calib. Ref.: H6G04103

Date Collected: 04/25/23 09:40
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 18:43
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	7.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	22000	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	54	5.0	1.2	2.5
Nickel	ND	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: TMW39D042023
Lab Samp ID: D286-06T
Lab File ID: H6G04125
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Analyzed: 07/07/23 19:36
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	770000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 09:40
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: TMW39D042023	Date Analyzed: 07/07/23 18:43
Lab Samp ID: D286-06G	Dilution Factor: 5
Lab File ID: H6G04107	Matrix: WATER
Ext Btch ID: IME005W	% Moisture: NA
Calib. Ref.: H6G04103	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	7.7	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	22000	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	54	5.0	1.2	2.5
Nickel	ND	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	750000E	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW39D042023
Lab Samp ID: D286-06T
Lab File ID: H6G04125
Ext Btch ID: IME005W
Calib. Ref.: H6G04114

Date Collected: 04/25/23 09:40
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:36
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	22000	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	2700J	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: BGMW13S042023
Lab Samp ID: D286-07G
Lab File ID: H6G04108
Ext Btch ID: IME005W
Calib. Ref.: H6G04103

Date Collected: 04/25/23 10:15
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 18:46
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	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	26000	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	660J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8200	500	100	250
Manganese	390	5.0	1.2	2.5
Nickel	ND	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	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: BGMW13S042023
Lab Samp ID: D286-07T
Lab File ID: H6G04128
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Analyzed: 07/07/23 19:45
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	290000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 10:15
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: BGMW13S042023	Date Analyzed: 07/07/23 18:46
Lab Samp ID: D286-07G	Dilution Factor: 5
Lab File ID: H6G04108	Matrix: WATER
Ext Btch ID: IME005W	% Moisture: NA
Calib. Ref.: H6G04103	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	230	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	26000	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	660J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	8200	500	100	250
Manganese	390	5.0	1.2	2.5
Nickel	ND	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	280000E	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: BGMW13S042023
Lab Samp ID: D286-07T
Lab File ID: H6G04128
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Collected: 04/25/23 10:15
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:45
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	230	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	8300	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW40D042023
Lab Samp ID: D286-08G
Lab File ID: H6G04109
Ext Btch ID: IME005W
Calib. Ref.: H6G04103

Date Collected: 04/25/23 10:50
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 18:49
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	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	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	1900	500	100	250
Manganese	52	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	980J	1000	250	500
Selenium	2.3J	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: TMW40D042023
Lab Samp ID: D286-08T
Lab File ID: H6G04129
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Analyzed: 07/07/23 19:48
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	730000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 10:50
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW40D042023	Date Analyzed:	07/07/23 18:49
Lab Samp ID:	D286-08G	Dilution Factor:	5
Lab File ID:	H6G04109	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04103	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	9.0	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	1900	500	100	250
Manganese	52	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	980J	1000	250	500
Selenium	2.3J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW40D042023
Lab Samp ID: D286-08T
Lab File ID: H6G04129
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Collected: 04/25/23 10:50
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:48
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	15000	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	2000J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW602CA (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW48042023
Lab Samp ID: D286-09G
Lab File ID: H6G04110
Ext Btch ID: IME005W
Calib. Ref.: H6G04103

Date Collected: 04/25/23 11:10
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 18:52
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	0.64J	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	52000	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	8800	500	100	250
Manganese	55	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	3.9J	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	1.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW48042023
Lab Samp ID: D286-09T
Lab File ID: H6G04130
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Analyzed: 07/07/23 19:51
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	700000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:10
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW48042023	Date Analyzed:	07/07/23 18:52
Lab Samp ID:	D286-09G	Dilution Factor:	5
Lab File ID:	H6G04110	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04103	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	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	52000	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	8800	500	100	250
Manganese	55	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	3.9J	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	1.6J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW48042023
Lab Samp ID: D286-09T
Lab File ID: H6G04130
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Collected: 04/25/23 11:10
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:51
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	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	9100	5000	1000	2500
Manganese	58	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW48042023D
Lab Samp ID: D286-10G
Lab File ID: H6G04111
Ext Btch ID: IME005W
Calib. Ref.: H6G04103

Date Collected: 04/25/23 11:30
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 18:55
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	55000	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	9500	500	100	250
Manganese	56	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	4.5J	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: TMW48042023D
Lab Samp ID: D286-10T
Lab File ID: H6G04131
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Analyzed: 07/07/23 19:54
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	710000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:30
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW48042023D	Date Analyzed:	07/07/23 18:55
Lab Samp ID:	D286-10G	Dilution Factor:	5
Lab File ID:	H6G04111	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04103	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	55000	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	9500	500	100	250
Manganese	56	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	4.5J	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	1.5J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/25/23 11:30
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D286	Date Extracted: 05/02/23 12:04
Sample ID: TMW48042023D	Date Analyzed: 07/07/23 19:54
Lab Samp ID: D286-10T	Dilution Factor: 50
Lab File ID: H6G04131	Matrix: WATER
Ext Btch ID: IME005W	% Moisture: NA
Calib. Ref.: H6G04126	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	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	9800	5000	1000	2500
Manganese	62	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:35
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	BGMW13D042023	Date Analyzed:	07/07/23 18:58
Lab Samp ID:	D286-11G	Dilution Factor:	5
Lab File ID:	H6G04112	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04103	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	260	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	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	210J	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	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:	BGMW13D042023	Date Analyzed:	07/07/23 19:57
Lab Samp ID:	D286-11T	Dilution Factor:	50
Lab File ID:	H6G04132	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04126	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	290000	10000	2500	5000

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 11:35
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	BGMW13D042023	Date Analyzed:	07/07/23 18:58
Lab Samp ID:	D286-11G	Dilution Factor:	5
Lab File ID:	H6G04112	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04103	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	260	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	1.4J	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	210J	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	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	280000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: BGMW13D042023
Lab Samp ID: D286-11T
Lab File ID: H6G04132
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Collected: 04/25/23 11:35
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:57
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	250	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	15000	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	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW31D042023
Lab Samp ID: D286-12G
Lab File ID: H6G04113
Ext Btch ID: IME005W
Calib. Ref.: H6G04103

Date Collected: 04/25/23 13:45
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:01
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	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	38000	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	5600	500	100	250
Manganese	180	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	0.78J	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: TMW31D042023
Lab Samp ID: D286-12T
Lab File ID: H6G04133
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Analyzed: 07/07/23 19:59
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/25/23 13:45
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	TMW31D042023	Date Analyzed:	07/07/23 19:01
Lab Samp ID:	D286-12G	Dilution Factor:	5
Lab File ID:	H6G04113	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04103	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	38000	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	5600	500	100	250
Manganese	180	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1400	1000	250	500
Selenium	0.78J	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	1.5J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D286
Sample ID: TMW31D042023
Lab Samp ID: D286-12T
Lab File ID: H6G04133
Ext Btch ID: IME005W
Calib. Ref.: H6G04126

Date Collected: 04/25/23 13:45
Date Received: 04/26/23
Date Extracted: 05/02/23 12:04
Date Analyzed: 07/07/23 19:59
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	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	5900	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D286	Date Extracted:	05/02/23 12:04
Sample ID:	MBLK1W	Date Analyzed:	07/07/23 18:02
Lab Samp ID:	IME005WB	Dilution Factor:	1
Lab File ID:	H6G04093	Matrix:	WATER
Ext Btch ID:	IME005W	% Moisture:	NA
Calib. Ref.:	H6G04091	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	0.35J	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	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of twelve(12) water samples were received on 04/26/23 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 HGE025WB. 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. HGE025WL/HGE025WC 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 D286-07M/D286-07S. 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. : 23D286
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	HGE025WB	1	NA	05/20/2318:02	05/20/2313:53	M47E021012	M47E021	23HGE025W	Method Blank
LCS1W	HGE025WL	1	NA	05/20/2318:04	05/20/2313:53	M47E021013	M47E021	23HGE025W	Lab Control Sample (LCS)
LCD1W	HGE025WC	1	NA	05/20/2318:06	05/20/2313:53	M47E021014	M47E021	23HGE025W	LCS Duplicate
TMW52042023	D286-01	1	NA	05/20/2318:08	05/20/2313:53	M47E021015	M47E021	23HGE025W	Field Sample
TMW43042023	D286-02	1	NA	05/20/2318:10	05/20/2313:53	M47E021016	M47E021	23HGE025W	Field Sample
TMW43042023D	D286-03	1	NA	05/20/2318:11	05/20/2313:53	M47E021017	M47E021	23HGE025W	Field Sample
MW37042023	D286-04	1	NA	05/20/2318:13	05/20/2313:53	M47E021018	M47E021	23HGE025W	Field Sample
TMW45042023	D286-05	1	NA	05/20/2318:15	05/20/2313:53	M47E021019	M47E021	23HGE025W	Field Sample
TMW39D042023	D286-06	1	NA	05/20/2318:17	05/20/2313:53	M47E021020	M47E021	23HGE025W	Field Sample
BGMW13S042023MS	D286-07M	1	NA	05/20/2318:19	05/20/2313:53	M47E021021	M47E021	23HGE025W	Matrix Spike Sample (MS)
BGMW13S042023MSD	D286-07S	1	NA	05/20/2318:26	05/20/2313:53	M47E021024	M47E021	23HGE025W	MS Duplicate (MSD)
BGMW13S042023	D286-07	1	NA	05/20/2318:30	05/20/2313:53	M47E021026	M47E021	23HGE025W	Field Sample
TMW40D042023	D286-08	1	NA	05/20/2318:34	05/20/2313:53	M47E021028	M47E021	23HGE025W	Field Sample
TMW48042023	D286-09	1	NA	05/20/2318:35	05/20/2313:53	M47E021029	M47E021	23HGE025W	Field Sample
TMW48042023D	D286-10	1	NA	05/20/2318:37	05/20/2313:53	M47E021030	M47E021	23HGE025W	Field Sample
BGMW13D042023	D286-11	1	NA	05/20/2318:39	05/20/2313:53	M47E021031	M47E021	23HGE025W	Field Sample
TMW31D042023	D286-12	1	NA	05/20/2318:41	05/20/2313:53	M47E021032	M47E021	23HGE025W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286

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	HGE025WB	ND	1	NA	0.50	0.10	0.20	05/20/2318:02	05/20/2313:53	M47E021012	M47E021	23HGE025W	NA	NA
LCS1W	HGE025WL	2.6	1	NA	0.50	0.10	0.20	05/20/2318:04	05/20/2313:53	M47E021013	M47E021	23HGE025W	NA	NA
LCD1W	HGE025WC	2.7	1	NA	0.50	0.10	0.20	05/20/2318:06	05/20/2313:53	M47E021014	M47E021	23HGE025W	NA	NA
TMW52042023	D286-01	ND	1	NA	0.50	0.10	0.20	05/20/2318:08	05/20/2313:53	M47E021015	M47E021	23HGE025W	04/25/2307:40	04/26/23
TMW43042023	D286-02	ND	1	NA	0.50	0.10	0.20	05/20/2318:10	05/20/2313:53	M47E021016	M47E021	23HGE025W	04/25/2307:55	04/26/23
TMW43042023D	D286-03	ND	1	NA	0.50	0.10	0.20	05/20/2318:11	05/20/2313:53	M47E021017	M47E021	23HGE025W	04/25/2308:00	04/26/23
MW37042023	D286-04	ND	1	NA	0.50	0.10	0.20	05/20/2318:13	05/20/2313:53	M47E021018	M47E021	23HGE025W	04/25/2308:30	04/26/23
TMW45042023	D286-05	ND	1	NA	0.50	0.10	0.20	05/20/2318:15	05/20/2313:53	M47E021019	M47E021	23HGE025W	04/25/2309:25	04/26/23
TMW39D042023	D286-06	ND	1	NA	0.50	0.10	0.20	05/20/2318:17	05/20/2313:53	M47E021020	M47E021	23HGE025W	04/25/2309:40	04/26/23
BGMW13S042023MS	D286-07M	2.8	1	NA	0.50	0.10	0.20	05/20/2318:19	05/20/2313:53	M47E021021	M47E021	23HGE025W	04/25/2310:15	04/26/23
BGMW13S042023MSD	D286-07S	2.6	1	NA	0.50	0.10	0.20	05/20/2318:26	05/20/2313:53	M47E021024	M47E021	23HGE025W	04/25/2310:15	04/26/23
BGMW13S042023	D286-07	ND	1	NA	0.50	0.10	0.20	05/20/2318:30	05/20/2313:53	M47E021026	M47E021	23HGE025W	04/25/2310:15	04/26/23
TMW40D042023	D286-08	ND	1	NA	0.50	0.10	0.20	05/20/2318:34	05/20/2313:53	M47E021028	M47E021	23HGE025W	04/25/2310:50	04/26/23
TMW48042023	D286-09	ND	1	NA	0.50	0.10	0.20	05/20/2318:35	05/20/2313:53	M47E021029	M47E021	23HGE025W	04/25/2311:10	04/26/23
TMW48042023D	D286-10	ND	1	NA	0.50	0.10	0.20	05/20/2318:37	05/20/2313:53	M47E021030	M47E021	23HGE025W	04/25/2311:30	04/26/23
BGMW13D042023	D286-11	ND	1	NA	0.50	0.10	0.20	05/20/2318:39	05/20/2313:53	M47E021031	M47E021	23HGE025W	04/25/2311:35	04/26/23
TMW31D042023	D286-12	ND	1	NA	0.50	0.10	0.20	05/20/2318:41	05/20/2313:53	M47E021032	M47E021	23HGE025W	04/25/2313:45	04/26/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of twelve(12) water samples were received on 04/26/23 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 HGE026WB. 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. HGE026WL/HGE026WC 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 D286-07M/D286-07S. 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. : 23D286
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	HGE026WB	1	NA	05/20/2319:00	05/20/2314:30	M47E021042	M47E021	23HGE026W	Method Blank
LCS1W	HGE026WL	1	NA	05/20/2319:01	05/20/2314:30	M47E021043	M47E021	23HGE026W	Lab Control Sample (LCS)
LCD1W	HGE026WC	1	NA	05/20/2319:03	05/20/2314:30	M47E021044	M47E021	23HGE026W	LCS Duplicate
TMW52042023	D286-01	1	NA	05/20/2319:05	05/20/2314:30	M47E021045	M47E021	23HGE026W	Field Sample
TMW43042023	D286-02	1	NA	05/20/2319:10	05/20/2314:30	M47E021048	M47E021	23HGE026W	Field Sample
TMW43042023D	D286-03	1	NA	05/20/2319:12	05/20/2314:30	M47E021049	M47E021	23HGE026W	Field Sample
MW37042023	D286-04	1	NA	05/20/2319:14	05/20/2314:30	M47E021050	M47E021	23HGE026W	Field Sample
TMW45042023	D286-05	1	NA	05/20/2319:16	05/20/2314:30	M47E021051	M47E021	23HGE026W	Field Sample
TMW39D042023	D286-06	1	NA	05/20/2319:18	05/20/2314:30	M47E021052	M47E021	23HGE026W	Field Sample
BGMW13S042023MS	D286-07M	1	NA	05/20/2319:19	05/20/2314:30	M47E021053	M47E021	23HGE026W	Matrix Spike Sample (MS)
BGMW13S042023MSD	D286-07S	1	NA	05/20/2319:21	05/20/2314:30	M47E021054	M47E021	23HGE026W	MS Duplicate (MSD)
BGMW13S042023	D286-07	1	NA	05/20/2319:25	05/20/2314:30	M47E021056	M47E021	23HGE026W	Field Sample
TMW40D042023	D286-08	1	NA	05/20/2319:32	05/20/2314:30	M47E021060	M47E021	23HGE026W	Field Sample
TMW48042023	D286-09	1	NA	05/20/2319:34	05/20/2314:30	M47E021061	M47E021	23HGE026W	Field Sample
TMW48042023D	D286-10	1	NA	05/20/2319:36	05/20/2314:30	M47E021062	M47E021	23HGE026W	Field Sample
BGMW13D042023	D286-11	1	NA	05/20/2319:38	05/20/2314:30	M47E021063	M47E021	23HGE026W	Field Sample
TMW31D042023	D286-12	1	NA	05/20/2319:40	05/20/2314:30	M47E021064	M47E021	23HGE026W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286

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	HGE026WB	ND	1	NA	0.50	0.10	0.20	05/20/2319:00	05/20/2314:30	M47E021042	M47E021	23HGE026W	NA	NA
LCS1W	HGE026WL	2.6	1	NA	0.50	0.10	0.20	05/20/2319:01	05/20/2314:30	M47E021043	M47E021	23HGE026W	NA	NA
LCD1W	HGE026WC	2.7	1	NA	0.50	0.10	0.20	05/20/2319:03	05/20/2314:30	M47E021044	M47E021	23HGE026W	NA	NA
TMW52042023	D286-01	ND	1	NA	0.50	0.10	0.20	05/20/2319:05	05/20/2314:30	M47E021045	M47E021	23HGE026W	04/25/2307:40	04/26/23
TMW43042023	D286-02	ND	1	NA	0.50	0.10	0.20	05/20/2319:10	05/20/2314:30	M47E021048	M47E021	23HGE026W	04/25/2307:55	04/26/23
TMW43042023D	D286-03	ND	1	NA	0.50	0.10	0.20	05/20/2319:12	05/20/2314:30	M47E021049	M47E021	23HGE026W	04/25/2308:00	04/26/23
MW37042023	D286-04	ND	1	NA	0.50	0.10	0.20	05/20/2319:14	05/20/2314:30	M47E021050	M47E021	23HGE026W	04/25/2308:30	04/26/23
TMW45042023	D286-05	ND	1	NA	0.50	0.10	0.20	05/20/2319:16	05/20/2314:30	M47E021051	M47E021	23HGE026W	04/25/2309:25	04/26/23
TMW39D042023	D286-06	ND	1	NA	0.50	0.10	0.20	05/20/2319:18	05/20/2314:30	M47E021052	M47E021	23HGE026W	04/25/2309:40	04/26/23
BGMW13S042023MS	D286-07M	2.6	1	NA	0.50	0.10	0.20	05/20/2319:19	05/20/2314:30	M47E021053	M47E021	23HGE026W	04/25/2310:15	04/26/23
BGMW13S042023MSD	D286-07S	2.7	1	NA	0.50	0.10	0.20	05/20/2319:21	05/20/2314:30	M47E021054	M47E021	23HGE026W	04/25/2310:15	04/26/23
BGMW13S042023	D286-07	ND	1	NA	0.50	0.10	0.20	05/20/2319:25	05/20/2314:30	M47E021056	M47E021	23HGE026W	04/25/2310:15	04/26/23
TMW40D042023	D286-08	ND	1	NA	0.50	0.10	0.20	05/20/2319:32	05/20/2314:30	M47E021060	M47E021	23HGE026W	04/25/2310:50	04/26/23
TMW48042023	D286-09	ND	1	NA	0.50	0.10	0.20	05/20/2319:34	05/20/2314:30	M47E021061	M47E021	23HGE026W	04/25/2311:10	04/26/23
TMW48042023D	D286-10	ND	1	NA	0.50	0.10	0.20	05/20/2319:36	05/20/2314:30	M47E021062	M47E021	23HGE026W	04/25/2311:30	04/26/23
BGMW13D042023	D286-11	ND	1	NA	0.50	0.10	0.20	05/20/2319:38	05/20/2314:30	M47E021063	M47E021	23HGE026W	04/25/2311:35	04/26/23
TMW31D042023	D286-12	ND	1	NA	0.50	0.10	0.20	05/20/2319:40	05/20/2314:30	M47E021064	M47E021	23HGE026W	04/25/2313:45	04/26/23

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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23D286

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of twelve(12) water samples were received on 04/26/23 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.

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. PLE004WL/PLE004WC and PLE005WL/PLE005WC 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 D286-01I, -02I, -03J, -04J, -05J, -07I 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. : 23D286
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	PLE004WB	ND	1	NA	0.20	0.050	0.10	05/08/2312:47	NA	23ME08007	ME08004	PLE004W	NA	NA
LCS1W	PLE004WL	0.19J	1	NA	0.20	0.050	0.10	05/08/2313:02	NA	23ME08008	ME08004	PLE004W	NA	NA
LCD1W	PLE004WC	0.19J	1	NA	0.20	0.050	0.10	05/08/2313:19	NA	23ME08009	ME08004	PLE004W	NA	NA
TMW31D042023	D286-12	4.2	1	NA	0.20	0.050	0.10	05/08/2322:44	NA	23ME08040	ME08039	PLE004W	04/25/2313:45	04/26/23
TMW52042023	D286-01I	ND	5	NA	1.0	0.25	0.50	05/08/2322:59	NA	23ME08041	ME08039	PLE004W	04/25/2307:40	04/26/23
TMW43042023	D286-02I	ND	5	NA	1.0	0.25	0.50	05/08/2323:13	NA	23ME08042	ME08039	PLE004W	04/25/2307:55	04/26/23
TMW39D042023	D286-06I	3.5	5	NA	1.0	0.25	0.50	05/09/2312:12	NA	23ME08046	ME08039	PLE004W	04/25/2309:40	04/26/23
BGMW13S042023	D286-07I	ND	5	NA	1.0	0.25	0.50	05/09/2312:27	NA	23ME08047	ME08039	PLE004W	04/25/2310:15	04/26/23
BGMW13D042023	D286-11I	ND	5	NA	1.0	0.25	0.50	05/09/2302:09	NA	23ME08052	ME08050	PLE004W	04/25/2311:35	04/26/23
TMW43042023D	D286-03J	ND	10	NA	2.0	0.50	1.0	05/09/2303:08	NA	23ME08056	ME08050	PLE004W	04/25/2308:00	04/26/23
MW37042023	D286-04J	ND	10	NA	2.0	0.50	1.0	05/09/2303:22	NA	23ME08057	ME08050	PLE004W	04/25/2308:30	04/26/23
TMW45042023	D286-05J	ND	10	NA	2.0	0.50	1.0	05/09/2303:37	NA	23ME08058	ME08050	PLE004W	04/25/2309:25	04/26/23
MBLK2W	PLE005WB	ND	1	NA	0.20	0.050	0.10	05/09/2315:15	NA	23ME09007	ME09004	PLE005W	NA	NA
LCS2W	PLE005WL	0.20J	1	NA	0.20	0.050	0.10	05/09/2315:50	NA	23ME09008	ME09004	PLE005W	NA	NA
LCD2W	PLE005WC	0.20J	1	NA	0.20	0.050	0.10	05/09/2316:38	NA	23ME09009	ME09004	PLE005W	NA	NA
TMW40D042023	D286-08P	180	200	NA	40	10	20	05/09/2320:52	NA	23ME09023	ME09017	PLE005W	04/25/2310:50	04/26/23
TMW48042023	D286-09P	740	200	NA	40	10	20	05/09/2321:06	NA	23ME09024	ME09017	PLE005W	04/25/2311:10	04/26/23
TMW48042023D	D286-10Q	730	300	NA	60	15	30	05/09/2322:49	NA	23ME09029	ME09028	PLE005W	04/25/2311:30	04/26/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD 9056A
BROMIDE

A total of twelve(12) water samples were received on 04/26/23 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 ICD028WB. 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. ICD028WL/ICD028WC 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 D286-12I 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 : 23D286

METHOD 9056A
CHLORIDE-CL

A total of twelve(12) water samples were received on 04/26/23 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 ICD028WB. 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. ICD028WL/ICD028WC 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 : 23D286

METHOD 9056A
FLUORIDE

A total of twelve(12) water samples were received on 04/26/23 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 ICD028WB. 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. ICD028WL/ICD028WC 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 D286-12I 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 : 23D286

METHOD SW9056A
NITRATE-N

A total of twelve(12) water samples were received on 04/26/23 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 ICD028WB. 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. ICD028WL/ICD028WC 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 D286-12I 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 : 23D286

METHOD SW9056A
NITRITE-N

A total of twelve(12) water samples were received on 04/26/23 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 ICD028WB. 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. ICD028WL/ICD028WC 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 D286-04I, 05I, 06I, and 07I were reported at a 2X dilution factor due to chloride interference. Sample D286-12J was reported at a 5X dilution factor due to chloride interference. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D286

METHOD 9056A
ORTHOPHOSPHATE-P

A total of twelve(12) water samples were received on 04/26/23 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 ICD028WB. 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. ICD028WL/ICD028WC 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 D286-12I 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 : 23D286

METHOD 9056A
SULFATE

A total of twelve(12) water samples were received on 04/26/23 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 ICD028WB. 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. ICD028WL/ICD028WC 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. : 23D286

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	ICD028WB	ND	1	NA	0.5	0.13	0.25	04/26/2309:06	NA	AD26-03	AD26-01	ICD028W	NA	NA
LCS1W	ICD028WL	1.0	1	NA	0.5	0.13	0.25	04/26/2309:26	NA	AD26-04	AD26-01	ICD028W	NA	NA
LCD1W	ICD028WC	1.0	1	NA	0.5	0.13	0.25	04/26/2309:46	NA	AD26-05	AD26-01	ICD028W	NA	NA
TMW52042023	D286-01	0.36J	1	NA	0.5	0.13	0.25	04/26/2311:06	NA	AD26-06	AD26-01	ICD028W	04/25/2307:40	04/26/23
TMW43042023	D286-02	0.67	1	NA	0.5	0.13	0.25	04/26/2311:26	NA	AD26-07	AD26-01	ICD028W	04/25/2307:55	04/26/23
TMW43042023D	D286-03	0.68	1	NA	0.5	0.13	0.25	04/26/2311:46	NA	AD26-08	AD26-01	ICD028W	04/25/2308:00	04/26/23
MW37042023	D286-04	0.65	1	NA	0.5	0.13	0.25	04/26/2312:07	NA	AD26-09	AD26-01	ICD028W	04/25/2308:30	04/26/23
TMW45042023	D286-05	0.60	1	NA	0.5	0.13	0.25	04/26/2312:27	NA	AD26-10	AD26-01	ICD028W	04/25/2309:25	04/26/23
TMW39D042023	D286-06	0.75	1	NA	0.5	0.13	0.25	04/26/2312:47	NA	AD26-11	AD26-01	ICD028W	04/25/2309:40	04/26/23
BGMW13S042023	D286-07	0.51	1	NA	0.5	0.13	0.25	04/26/2313:08	NA	AD26-12	AD26-01	ICD028W	04/25/2310:15	04/26/23
TMW40D042023	D286-08	0.91	1	NA	0.5	0.13	0.25	04/26/2314:08	NA	AD26-15	AD26-13	ICD028W	04/25/2310:50	04/26/23
TMW48042023	D286-09	1.2	1	NA	0.5	0.13	0.25	04/26/2314:29	NA	AD26-16	AD26-13	ICD028W	04/25/2311:10	04/26/23
TMW48042023D	D286-10	1.2	1	NA	0.5	0.13	0.25	04/26/2314:49	NA	AD26-17	AD26-13	ICD028W	04/25/2311:30	04/26/23
BGMW13D042023	D286-11	0.42J	1	NA	0.5	0.13	0.25	04/26/2315:09	NA	AD26-18	AD26-13	ICD028W	04/25/2311:35	04/26/23
TMW31D042023	D286-12I	1.1	2	NA	1	0.26	0.5	04/26/2315:30	NA	AD26-19	AD26-13	ICD028W	04/25/2313:45	04/26/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286

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	ICD028WB	ND	1	NA	0.2	0.05	0.1	04/26/2309:06	NA	AD26-03	AD26-01	ICD028W	NA	NA
LCS1W	ICD028WL	1.9	1	NA	0.2	0.05	0.1	04/26/2309:26	NA	AD26-04	AD26-01	ICD028W	NA	NA
LCD1W	ICD028WC	1.9	1	NA	0.2	0.05	0.1	04/26/2309:46	NA	AD26-05	AD26-01	ICD028W	NA	NA
TMW52042023	D286-01I	65	40	NA	8	2	4	04/26/2321:59	NA	AD26-34	AD26-32	ICD028W	04/25/2307:40	04/26/23
TMW43042023	D286-02J	65	40	NA	8	2	4	04/26/2322:19	NA	AD26-35	AD26-32	ICD028W	04/25/2307:55	04/26/23
TMW43042023D	D286-03J	63	40	NA	8	2	4	04/26/2322:40	NA	AD26-36	AD26-32	ICD028W	04/25/2308:00	04/26/23
MW37042023	D286-04J	180	40	NA	8	2	4	04/26/2323:00	NA	AD26-37	AD26-32	ICD028W	04/25/2308:30	04/26/23
TMW45042023	D286-05J	180	50	NA	10	2.5	5	04/26/2323:20	NA	AD26-38	AD26-32	ICD028W	04/25/2309:25	04/26/23
TMW39D042023	D286-06J	340	100	NA	20	5	10	04/26/2323:41	NA	AD26-39	AD26-32	ICD028W	04/25/2309:40	04/26/23
BGMW13S042023	D286-07J	120	20	NA	4	1	2	04/27/2300:01	NA	AD26-40	AD26-32	ICD028W	04/25/2310:15	04/26/23
TMW40D042023	D286-08I	140	100	NA	20	5	10	04/27/2300:21	NA	AD26-41	AD26-32	ICD028W	04/25/2310:50	04/26/23
TMW48042023	D286-09J	150	100	NA	20	5	10	04/27/2300:42	NA	AD26-42	AD26-32	ICD028W	04/25/2311:10	04/26/23
TMW48042023D	D286-10J	140	100	NA	20	5	10	04/27/2301:02	NA	AD26-43	AD26-32	ICD028W	04/25/2311:30	04/26/23
BGMW13D042023	D286-11I	88	20	NA	4	1	2	04/27/2302:03	NA	AD26-46	AD26-44	ICD028W	04/25/2311:35	04/26/23
TMW31D042023	D286-12K	650	100	NA	20	5	10	04/27/2302:23	NA	AD26-47	AD26-44	ICD028W	04/25/2313:45	04/26/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286

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	ICD028WB	ND	1	NA	0.1	0.025	0.05	04/26/2309:06	NA	AD26-03	AD26-01	ICD028W	NA	NA
LCS1W	ICD028WL	0.98	1	NA	0.1	0.025	0.05	04/26/2309:26	NA	AD26-04	AD26-01	ICD028W	NA	NA
LCD1W	ICD028WC	0.99	1	NA	0.1	0.025	0.05	04/26/2309:46	NA	AD26-05	AD26-01	ICD028W	NA	NA
TMW52042023	D286-01	2.2	1	NA	0.1	0.025	0.05	04/26/2311:06	NA	AD26-06	AD26-01	ICD028W	04/25/2307:40	04/26/23
TMW43042023	D286-02	1.3	1	NA	0.1	0.025	0.05	04/26/2311:26	NA	AD26-07	AD26-01	ICD028W	04/25/2307:55	04/26/23
TMW43042023D	D286-03	1.3	1	NA	0.1	0.025	0.05	04/26/2311:46	NA	AD26-08	AD26-01	ICD028W	04/25/2308:00	04/26/23
MW37042023	D286-04	1.4	1	NA	0.1	0.025	0.05	04/26/2312:07	NA	AD26-09	AD26-01	ICD028W	04/25/2308:30	04/26/23
TMW45042023	D286-05	0.73	1	NA	0.1	0.025	0.05	04/26/2312:27	NA	AD26-10	AD26-01	ICD028W	04/25/2309:25	04/26/23
TMW39D042023	D286-06	0.78	1	NA	0.1	0.025	0.05	04/26/2312:47	NA	AD26-11	AD26-01	ICD028W	04/25/2309:40	04/26/23
BGMW13S042023	D286-07	1.1	1	NA	0.1	0.025	0.05	04/26/2313:08	NA	AD26-12	AD26-01	ICD028W	04/25/2310:15	04/26/23
TMW40D042023	D286-08	0.45	1	NA	0.1	0.025	0.05	04/26/2314:08	NA	AD26-15	AD26-13	ICD028W	04/25/2310:50	04/26/23
TMW48042023	D286-09	0.34	1	NA	0.1	0.025	0.05	04/26/2314:29	NA	AD26-16	AD26-13	ICD028W	04/25/2311:10	04/26/23
TMW48042023D	D286-10	0.34	1	NA	0.1	0.025	0.05	04/26/2314:49	NA	AD26-17	AD26-13	ICD028W	04/25/2311:30	04/26/23
BGMW13D042023	D286-11	1.1	1	NA	0.1	0.025	0.05	04/26/2315:09	NA	AD26-18	AD26-13	ICD028W	04/25/2311:35	04/26/23
TMW31D042023	D286-12I	0.68	2	NA	0.2	0.05	0.1	04/26/2315:30	NA	AD26-19	AD26-13	ICD028W	04/25/2313:45	04/26/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286

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	ICD028WB	ND	1	NA	0.1	0.03	0.06	04/26/2309:06	NA	AD26-03	AD26-01	ICD028W	NA	NA
LCS1W	ICD028WL	1.0	1	NA	0.1	0.03	0.06	04/26/2309:26	NA	AD26-04	AD26-01	ICD028W	NA	NA
LCD1W	ICD028WC	1.0	1	NA	0.1	0.03	0.06	04/26/2309:46	NA	AD26-05	AD26-01	ICD028W	NA	NA
TMW52042023	D286-01	0.14	1	NA	0.1	0.03	0.06	04/26/2311:06	NA	AD26-06	AD26-01	ICD028W	04/25/2307:40	04/26/23
MW37042023	D286-04	0.063J	1	NA	0.1	0.03	0.06	04/26/2312:07	NA	AD26-09	AD26-01	ICD028W	04/25/2308:30	04/26/23
TMW45042023	D286-05	1.9	1	NA	0.1	0.03	0.06	04/26/2312:27	NA	AD26-10	AD26-01	ICD028W	04/25/2309:25	04/26/23
TMW39D042023	D286-06	0.099J	1	NA	0.1	0.03	0.06	04/26/2312:47	NA	AD26-11	AD26-01	ICD028W	04/25/2309:40	04/26/23
BGMW13S042023	D286-07	ND	1	NA	0.1	0.03	0.06	04/26/2313:08	NA	AD26-12	AD26-01	ICD028W	04/25/2310:15	04/26/23
TMW40D042023	D286-08	1.5	1	NA	0.1	0.03	0.06	04/26/2314:08	NA	AD26-15	AD26-13	ICD028W	04/25/2310:50	04/26/23
BGMW13D042023	D286-11	0.072J	1	NA	0.1	0.03	0.06	04/26/2315:09	NA	AD26-18	AD26-13	ICD028W	04/25/2311:35	04/26/23
TMW31D042023	D286-12I	0.51	2	NA	0.2	0.06	0.12	04/26/2315:30	NA	AD26-19	AD26-13	ICD028W	04/25/2313:45	04/26/23
TMW43042023	D286-02I	7.2	5	NA	0.5	0.15	0.3	04/26/2315:50	NA	AD26-20	AD26-13	ICD028W	04/25/2307:55	04/26/23
TMW43042023D	D286-03I	7.2	5	NA	0.5	0.15	0.3	04/26/2316:10	NA	AD26-21	AD26-13	ICD028W	04/25/2308:00	04/26/23
TMW48042023	D286-09I	10	10	NA	1	0.3	0.6	04/26/2318:53	NA	AD26-29	AD26-25	ICD028W	04/25/2311:10	04/26/23
TMW48042023D	D286-10I	10	10	NA	1	0.3	0.6	04/26/2319:13	NA	AD26-30	AD26-25	ICD028W	04/25/2311:30	04/26/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286

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	ICD028WB	ND	1	NA	0.1	0.03	0.06	04/26/2309:06	NA	AD26-03	AD26-01	ICD028W	NA	NA
LCS1W	ICD028WL	2.1	1	NA	0.1	0.03	0.06	04/26/2309:26	NA	AD26-04	AD26-01	ICD028W	NA	NA
LCD1W	ICD028WC	2.1	1	NA	0.1	0.03	0.06	04/26/2309:46	NA	AD26-05	AD26-01	ICD028W	NA	NA
TMW52042023	D286-01	ND	1	NA	0.1	0.03	0.06	04/26/2311:06	NA	AD26-06	AD26-01	ICD028W	04/25/2307:40	04/26/23
TMW43042023	D286-02	ND	1	NA	0.1	0.03	0.06	04/26/2311:26	NA	AD26-07	AD26-01	ICD028W	04/25/2307:55	04/26/23
TMW43042023D	D286-03	ND	1	NA	0.1	0.03	0.06	04/26/2311:46	NA	AD26-08	AD26-01	ICD028W	04/25/2308:00	04/26/23
TMW40D042023	D286-08	0.13	1	NA	0.1	0.03	0.06	04/26/2314:08	NA	AD26-15	AD26-13	ICD028W	04/25/2310:50	04/26/23
TMW48042023	D286-09	0.084J	1	NA	0.1	0.03	0.06	04/26/2314:29	NA	AD26-16	AD26-13	ICD028W	04/25/2311:10	04/26/23
TMW48042023D	D286-10	0.089J	1	NA	0.1	0.03	0.06	04/26/2314:49	NA	AD26-17	AD26-13	ICD028W	04/25/2311:30	04/26/23
BGMW13D042023	D286-11	ND	1	NA	0.1	0.03	0.06	04/26/2315:09	NA	AD26-18	AD26-13	ICD028W	04/25/2311:35	04/26/23
MW37042023	D286-04I	ND	2	NA	0.2	0.06	0.12	04/26/2316:31	NA	AD26-22	AD26-13	ICD028W	04/25/2308:30	04/26/23
TMW45042023	D286-05I	ND	2	NA	0.2	0.06	0.12	04/26/2316:51	NA	AD26-23	AD26-13	ICD028W	04/25/2309:25	04/26/23
TMW39D042023	D286-06I	ND	2	NA	0.2	0.06	0.12	04/26/2318:12	NA	AD26-27	AD26-25	ICD028W	04/25/2309:40	04/26/23
BGMW13S042023	D286-07I	ND	2	NA	0.2	0.06	0.12	04/26/2318:32	NA	AD26-28	AD26-25	ICD028W	04/25/2310:15	04/26/23
TMW31D042023	D286-12J	ND	5	NA	0.5	0.15	0.3	04/26/2319:33	NA	AD26-31	AD26-25	ICD028W	04/25/2313:45	04/26/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286

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	ICD028WB	ND	1	NA	0.5	0.12	0.25	04/26/2309:06	NA	AD26-03	AD26-01	ICD028W	NA	NA
LCS1W	ICD028WL	2.0	1	NA	0.5	0.12	0.25	04/26/2309:26	NA	AD26-04	AD26-01	ICD028W	NA	NA
LCD1W	ICD028WC	2.0	1	NA	0.5	0.12	0.25	04/26/2309:46	NA	AD26-05	AD26-01	ICD028W	NA	NA
TMW52042023	D286-01	ND	1	NA	0.5	0.12	0.25	04/26/2311:06	NA	AD26-06	AD26-01	ICD028W	04/25/2307:40	04/26/23
TMW43042023	D286-02	ND	1	NA	0.5	0.12	0.25	04/26/2311:26	NA	AD26-07	AD26-01	ICD028W	04/25/2307:55	04/26/23
TMW43042023D	D286-03	ND	1	NA	0.5	0.12	0.25	04/26/2311:46	NA	AD26-08	AD26-01	ICD028W	04/25/2308:00	04/26/23
MW37042023	D286-04	ND	1	NA	0.5	0.12	0.25	04/26/2312:07	NA	AD26-09	AD26-01	ICD028W	04/25/2308:30	04/26/23
TMW45042023	D286-05	ND	1	NA	0.5	0.12	0.25	04/26/2312:27	NA	AD26-10	AD26-01	ICD028W	04/25/2309:25	04/26/23
TMW39D042023	D286-06	ND	1	NA	0.5	0.12	0.25	04/26/2312:47	NA	AD26-11	AD26-01	ICD028W	04/25/2309:40	04/26/23
BGMW13S042023	D286-07	0.58	1	NA	0.5	0.12	0.25	04/26/2313:08	NA	AD26-12	AD26-01	ICD028W	04/25/2310:15	04/26/23
TMW40D042023	D286-08	ND	1	NA	0.5	0.12	0.25	04/26/2314:08	NA	AD26-15	AD26-13	ICD028W	04/25/2310:50	04/26/23
TMW48042023	D286-09	ND	1	NA	0.5	0.12	0.25	04/26/2314:29	NA	AD26-16	AD26-13	ICD028W	04/25/2311:10	04/26/23
TMW48042023D	D286-10	ND	1	NA	0.5	0.12	0.25	04/26/2314:49	NA	AD26-17	AD26-13	ICD028W	04/25/2311:30	04/26/23
BGMW13D042023	D286-11	0.29J	1	NA	0.5	0.12	0.25	04/26/2315:09	NA	AD26-18	AD26-13	ICD028W	04/25/2311:35	04/26/23
TMW31D042023	D286-12I	ND	2	NA	1	0.25	0.5	04/26/2315:30	NA	AD26-19	AD26-13	ICD028W	04/25/2313:45	04/26/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D286

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	ICD028WB	ND	1	NA	0.5	0.13	0.25	04/26/2309:06	NA	AD26-03	AD26-01	ICD028W	NA	NA
LCS1W	ICD028WL	4.9	1	NA	0.5	0.13	0.25	04/26/2309:26	NA	AD26-04	AD26-01	ICD028W	NA	NA
LCD1W	ICD028WC	4.9	1	NA	0.5	0.13	0.25	04/26/2309:46	NA	AD26-05	AD26-01	ICD028W	NA	NA
BGMW13S042023	D286-07I	32	2	NA	1	0.26	0.5	04/26/2318:32	NA	AD26-28	AD26-25	ICD028W	04/25/2310:15	04/26/23
TMW52042023	D286-01I	450	40	NA	20	5.2	10	04/26/2321:59	NA	AD26-34	AD26-32	ICD028W	04/25/2307:40	04/26/23
TMW43042023	D286-02J	420	40	NA	20	5.2	10	04/26/2322:19	NA	AD26-35	AD26-32	ICD028W	04/25/2307:55	04/26/23
TMW43042023D	D286-03J	420	40	NA	20	5.2	10	04/26/2322:40	NA	AD26-36	AD26-32	ICD028W	04/25/2308:00	04/26/23
MW37042023	D286-04J	440	40	NA	20	5.2	10	04/26/2323:00	NA	AD26-37	AD26-32	ICD028W	04/25/2308:30	04/26/23
TMW45042023	D286-05J	540	50	NA	25	6.5	12	04/26/2323:20	NA	AD26-38	AD26-32	ICD028W	04/25/2309:25	04/26/23
TMW39D042023	D286-06J	1000	100	NA	50	13	25	04/26/2323:41	NA	AD26-39	AD26-32	ICD028W	04/25/2309:40	04/26/23
TMW40D042023	D286-08I	1000	100	NA	50	13	25	04/27/2300:21	NA	AD26-41	AD26-32	ICD028W	04/25/2310:50	04/26/23
TMW48042023	D286-09J	990	100	NA	50	13	25	04/27/2300:42	NA	AD26-42	AD26-32	ICD028W	04/25/2311:10	04/26/23
TMW48042023D	D286-10J	990	100	NA	50	13	25	04/27/2301:02	NA	AD26-43	AD26-32	ICD028W	04/25/2311:30	04/26/23
BGMW13D042023	D286-11I	60	20	NA	10	2.6	5	04/27/2302:03	NA	AD26-46	AD26-44	ICD028W	04/25/2311:35	04/26/23
TMW31D042023	D286-12K	1300	100	NA	50	13	25	04/27/2302:23	NA	AD26-47	AD26-44	ICD028W	04/25/2313:45	04/26/23

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

Date: 07-12-2023
EMAX Batch No.: 23D292

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 04/26/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW33042023	D292-01	04/24/23	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)
MW36D042023	D292-02	04/24/23	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)
MW34042023	D292-03	04/24/23	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.
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Torrance, CA 90505
Tel: (310)-618-8889

Sample ID	Control #	Col Date	Matrix	Analysis
MW26042023	D292-04	04/24/23	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)
MW36S042023	D292-05	04/24/23	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)
MW23042023	D292-06	04/24/23	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
TMW28042023	D292-07	04/24/23	WATER	VOCS BY 8260C DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS
TMW57042023	D292-08	04/24/23	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.
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Sample ID	Control #	Col Date	Matrix	Analysis
TMW59042023	D292-09	04/24/23	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)
TMW61042023	D292-10	04/24/23	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)
TMW53042023	D292-11	04/24/23	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)
TMW24042023	D292-12	04/24/23	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
MW27042023	D292-13	04/24/23	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
TMW03042023	D292-14	04/24/23	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
TMW03042023D	D292-15	04/24/23	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
MW35042023	D292-16	04/24/23	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)
QC24042023EB04	D292-17	04/24/23	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)
QC24042023TB06	D292-18	04/24/23	WATER	VOCS BY 8260C
				TPH GASOLINE
TMW28042023MS	D292-07M	04/24/23	WATER	VOCS BY 8260C
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS

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

Sample ID	Control #	Col Date	Matrix	Analysis
TMW28042023MSD	D292-07S	04/24/23	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,

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 CA002912022-24
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#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of eighteen(18) water samples were received on 04/26/23 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 Chloroethane was detected biased high(%D=20.5) in CCV(Data File ID: REC002). However, note that Chloroethane 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, two(2) method blanks were analyzed. VO67D27B and VO67E01B 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. VO67D27L/VO67D27C and VO67E01L/VO67E01C 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. 23D292-07M/23D292-07S - 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.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

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

SDG NO. : 23D292
Instrument ID : 67

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V067D27L	1	NA	04/29/2308:57	04/29/2308:57	RDC669	RDC593	V067D27	Lab Control Sample (LCS)
LCD1W	V067D27C	1	NA	04/29/2309:22	04/29/2309:22	RDC670	RDC593	V067D27	LCS Duplicate
MBLK1W	V067D27B	1	NA	04/29/2310:13	04/29/2310:13	RDC672	RDC593	V067D27	Method Blank
MW33042023	23D292-01	1	NA	04/29/2314:55	04/29/2314:55	RDC683	RDC593	V067D27	Field Sample
MW36D042023	23D292-02	1	NA	04/29/2315:20	04/29/2315:20	RDC684	RDC593	V067D27	Field Sample
MW34042023	23D292-03	1	NA	04/29/2315:46	04/29/2315:46	RDC685	RDC593	V067D27	Field Sample
MW26042023	23D292-04	1	NA	04/29/2316:12	04/29/2316:12	RDC686	RDC593	V067D27	Field Sample
MW36S042023	23D292-05	1	NA	04/29/2316:37	04/29/2316:37	RDC687	RDC593	V067D27	Field Sample
MW23042023	23D292-06	1	NA	04/29/2317:03	04/29/2317:03	RDC688	RDC593	V067D27	Field Sample
TMW57042023	23D292-08	1	NA	04/29/2317:28	04/29/2317:28	RDC689	RDC593	V067D27	Field Sample
TMW59042023	23D292-09	1	NA	04/29/2317:54	04/29/2317:54	RDC690	RDC593	V067D27	Field Sample
TMW61042023	23D292-10	1	NA	04/29/2318:19	04/29/2318:19	RDC691	RDC593	V067D27	Field Sample
LCS2W	V067E01L	1	NA	05/01/2307:08	05/01/2307:08	REC003	RDC593	V067E01	Lab Control Sample (LCS)
LCD2W	V067E01C	1	NA	05/01/2307:34	05/01/2307:34	REC004	RDC593	V067E01	LCS Duplicate
MBLK2W	V067E01B	1	NA	05/01/2308:25	05/01/2308:25	REC006	RDC593	V067E01	Method Blank
QC24042023TB06	23D292-18	1	NA	05/01/2308:50	05/01/2308:50	REC007	RDC593	V067E01	Field Sample
QC24042023EB04	23D292-17	1	NA	05/01/2309:16	05/01/2309:16	REC008	RDC593	V067E01	Field Sample
TMW28042023	23D292-07	1	NA	05/01/2309:42	05/01/2309:42	REC009	RDC593	V067E01	Field Sample
TMW53042023	23D292-11	1	NA	05/01/2310:07	05/01/2310:07	REC010	RDC593	V067E01	Field Sample
TMW24042023	23D292-12	1	NA	05/01/2310:33	05/01/2310:33	REC011	RDC593	V067E01	Field Sample
MW27042023	23D292-13	1	NA	05/01/2310:58	05/01/2310:58	REC012	RDC593	V067E01	Field Sample
TMW03042023	23D292-14	1	NA	05/01/2311:24	05/01/2311:24	REC013	RDC593	V067E01	Field Sample
TMW03042023D	23D292-15	1	NA	05/01/2311:49	05/01/2311:49	REC014	RDC593	V067E01	Field Sample
MW35042023	23D292-16	1	NA	05/01/2312:15	05/01/2312:15	REC015	RDC593	V067E01	Field Sample
TMW28042023MS	23D292-07M	1	NA	05/01/2313:57	05/01/2313:57	REC019	RDC593	V067E01	Matrix Spike Sample (MS)
TMW28042023MSD	23D292-07S	1	NA	05/01/2314:23	05/01/2314:23	REC020	RDC593	V067E01	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:15
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/29/23 14:55
Sample ID : MW33042023	Date Analyzed: 04/29/23 14:55
Lab Samp ID: 23D292-01	Dilution Factor: 1
Lab File ID: RDC683	Matrix: WATER
Ext Btch ID: V067D27	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.05	10.0	90	81-118
4-Bromofluorobenzene	9.92	10.0	99	85-114
Toluene-d8	9.72	10.0	97	89-112
Dibromofluoromethane	9.81	10.0	98	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:20
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/29/23 15:20
Sample ID : MW36D042023	Date Analyzed: 04/29/23 15:20
Lab Samp ID: 23D292-02	Dilution Factor: 1
Lab File ID: RDC684	Matrix: WATER
Ext Btch ID: VO67D27	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	8.95	10.0	90	81-118
4-Bromofluorobenzene	10.0	10.0	100	85-114
Toluene-d8	9.79	10.0	98	89-112
Dibromofluoromethane	9.94	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/29/23 15:46
Sample ID	: MW34042023	Date Analyzed:	04/29/23 15:46
Lab Samp ID:	23D292-03	Dilution Factor:	1
Lab File ID:	RDC685	Matrix:	WATER
Ext Btch ID:	VO67D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.12	10.0	91	81-118
4-Bromofluorobenzene	9.99	10.0	100	85-114
Toluene-d8	9.66	10.0	97	89-112
Dibromofluoromethane	9.91	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/29/23 16:12
Sample ID	: MW26042023	Date Analyzed:	04/29/23 16:12
Lab Samp ID:	23D292-04	Dilution Factor:	1
Lab File ID:	RDC686	Matrix:	WATER
Ext Btch ID:	VO67D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.47	10.0	95	81-118
4-Bromofluorobenzene	9.90	10.0	99	85-114
Toluene-d8	9.65	10.0	96	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/29/23 16:37
Sample ID	: MW36S042023	Date Analyzed:	04/29/23 16:37
Lab Samp ID:	23D292-05	Dilution Factor:	1
Lab File ID:	RDC687	Matrix:	WATER
Ext Btch ID:	V067D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.75	10.0	98	81-118
4-Bromofluorobenzene	9.76	10.0	98	85-114
Toluene-d8	9.58	10.0	96	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/29/23 17:03
Sample ID	: MW23042023	Date Analyzed:	04/29/23 17:03
Lab Samp ID:	23D292-06	Dilution Factor:	1
Lab File ID:	RDC688	Matrix:	WATER
Ext Btch ID:	VO67D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.15	10.0	91	81-118
4-Bromofluorobenzene	9.82	10.0	98	85-114
Toluene-d8	9.57	10.0	96	89-112
Dibromofluoromethane	9.92	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 09:20
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 09:42
Sample ID : TMW28042023	Date Analyzed: 05/01/23 09:42
Lab Samp ID: 23D292-07	Dilution Factor: 1
Lab File ID: REC009	Matrix: WATER
Ext Btch ID: VO67E01	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.43	10.0	94	81-118
4-Bromofluorobenzene	9.83	10.0	98	85-114
Toluene-d8	9.61	10.0	96	89-112
Dibromofluoromethane	9.99	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/29/23 17:28
Sample ID	: TMW57042023	Date Analyzed:	04/29/23 17:28
Lab Samp ID:	23D292-08	Dilution Factor:	1
Lab File ID:	RDC689	Matrix:	WATER
Ext Btch ID:	VO67D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.83	10.0	98	85-114
Toluene-d8	9.68	10.0	97	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/29/23 17:54
Sample ID	: TMW59042023	Date Analyzed:	04/29/23 17:54
Lab Samp ID:	23D292-09	Dilution Factor:	1
Lab File ID:	RDC690	Matrix:	WATER
Ext Btch ID:	V067D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.09	10.0	91	81-118
4-Bromofluorobenzene	9.99	10.0	100	85-114
Toluene-d8	9.83	10.0	98	89-112
Dibromofluoromethane	9.97	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/29/23 18:19
Sample ID	: TMW61042023	Date Analyzed:	04/29/23 18:19
Lab Samp ID:	23D292-10	Dilution Factor:	1
Lab File ID:	RDC691	Matrix:	WATER
Ext Btch ID:	VO67D27	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.59	10.0	96	81-118
4-Bromofluorobenzene	9.82	10.0	98	85-114
Toluene-d8	9.62	10.0	96	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:07
Sample ID	: TMW53042023	Date Analyzed:	05/01/23 10:07
Lab Samp ID:	23D292-11	Dilution Factor:	1
Lab File ID:	REC010	Matrix:	WATER
Ext Btch ID:	VO67E01	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	0.40J	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	9.67	10.0	97	85-114
Toluene-d8	9.54	10.0	95	89-112
Dibromofluoromethane	10.3	10.0	103	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 10:50
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:33
Sample ID : TMW24042023	Date Analyzed: 05/01/23 10:33
Lab Samp ID: 23D292-12	Dilution Factor: 1
Lab File ID: REC011	Matrix: WATER
Ext Btch ID: V067E01	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.45	10.0	94	81-118
4-Bromofluorobenzene	9.77	10.0	98	85-114
Toluene-d8	9.62	10.0	96	89-112
Dibromofluoromethane	9.97	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 12:20
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:58
Sample ID : MW27042023	Date Analyzed: 05/01/23 10:58
Lab Samp ID: 23D292-13	Dilution Factor: 1
Lab File ID: REC012	Matrix: WATER
Ext Btch ID: V067E01	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.78	10.0	98	81-118
4-Bromofluorobenzene	9.78	10.0	98	85-114
Toluene-d8	9.45	10.0	94	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 13:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 11:24
Sample ID	: TMW03042023	Date Analyzed:	05/01/23 11:24
Lab Samp ID:	23D292-14	Dilution Factor:	1
Lab File ID:	REC013	Matrix:	WATER
Ext Btch ID:	VO67E01	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.28	10.0	93	81-118
4-Bromofluorobenzene	9.95	10.0	99	85-114
Toluene-d8	9.66	10.0	97	89-112
Dibromofluoromethane	10.0	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 13:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 11:49
Sample ID	: TMW03042023D	Date Analyzed:	05/01/23 11:49
Lab Samp ID:	23D292-15	Dilution Factor:	1
Lab File ID:	REC014	Matrix:	WATER
Ext Btch ID:	V067E01	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.22	10.0	92	81-118
4-Bromofluorobenzene	9.96	10.0	100	85-114
Toluene-d8	9.56	10.0	96	89-112
Dibromofluoromethane	9.86	10.0	99	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 13:25
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 12:15
Sample ID : MW35042023	Date Analyzed: 05/01/23 12:15
Lab Samp ID: 23D292-16	Dilution Factor: 1
Lab File ID: REC015	Matrix: WATER
Ext Btch ID: VO67E01	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	9.66	10.0	97	81-118
4-Bromofluorobenzene	9.85	10.0	98	85-114
Toluene-d8	9.65	10.0	96	89-112
Dibromofluoromethane	10.0	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 14:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 09:16
Sample ID	: QC24042023EB04	Date Analyzed:	05/01/23 09:16
Lab Samp ID:	23D292-17	Dilution Factor:	1
Lab File ID:	REC008	Matrix:	WATER
Ext Btch ID:	VO67E01	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	0.88J	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	1.0	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	0.37J	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	9.26	10.0	93	81-118
4-Bromofluorobenzene	9.92	10.0	99	85-114
Toluene-d8	9.64	10.0	96	89-112
Dibromofluoromethane	9.80	10.0	98	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D292
Sample ID : QC24042023TB06
Lab Samp ID: 23D292-18
Lab File ID: REC007
Ext Btch ID: V067E01
Calib. Ref.: RDC593

Date Collected: 04/24/23 08:00
Date Received: 04/26/23
Date Extracted: 05/01/23 08:50
Date Analyzed: 05/01/23 08:50
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	9.20	10.0	92	81-118
4-Bromofluorobenzene	9.89	10.0	99	85-114
Toluene-d8	9.63	10.0	96	89-112
Dibromofluoromethane	9.90	10.0	99	80-119

Notes:
Sample Amount : 25ml
Prepared by : VLu
Final Volume : 25ml
Analyzed by : VLu
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#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

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

A total of fifteen(15) water samples were received on 04/26/23 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: REJ019, REJ020, REJ051 and REJ052) 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. SVE003WB - 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: SVE003WL/SVE003WC - RPDs for 2,4-Dinitrophenol(RPD=25*), 4,6-Dinitro-2-Methylphenol(RPD=24*), and Benzidine(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
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 : 23D292

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

A total of fifteen(15) water samples were received on 04/26/23 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: REJ020 and REJ051) 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. SVE003WB - 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: CLE003WL/CLE003WC - RPD for Caprolactam(RPD=23*) 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 : 23D292

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

A total of fifteen(15) water samples were received on 04/26/23 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: REJ021 and REJ050) 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. SVE003WB - 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. CLE003WL/CLE003WC 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. : 23D292
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	SVE003WB	1	NA	05/04/2311:24	05/01/2313:30	REJ027	RCJ011	23SVE003W	Method Blank
LCS1W	SVE003WL	1	NA	05/04/2311:42	05/01/2313:30	REJ028	RCJ011	23SVE003W	Lab Control Sample (LCS)
LCD1W	SVE003WC	1	NA	05/04/2312:01	05/01/2313:30	REJ029	RCJ011	23SVE003W	LCS Duplicate
MW33042023	23D292-01	1	NA	05/04/2312:57	05/01/2313:30	REJ032	RCJ011	23SVE003W	Field Sample
MW36D042023	23D292-02	1	NA	05/04/2313:15	05/01/2313:30	REJ033	RCJ011	23SVE003W	Field Sample
MW34042023	23D292-03	1	NA	05/04/2313:34	05/01/2313:30	REJ034	RCJ011	23SVE003W	Field Sample
MW26042023	23D292-04	1	NA	05/04/2313:52	05/01/2313:30	REJ035	RCJ011	23SVE003W	Field Sample
MW36S042023	23D292-05	1	NA	05/04/2314:11	05/01/2313:30	REJ036	RCJ011	23SVE003W	Field Sample
MW23042023	23D292-06	1	NA	05/04/2314:30	05/01/2313:30	REJ037	RCJ011	23SVE003W	Field Sample
TMW57042023	23D292-08	1	NA	05/04/2314:48	05/01/2313:30	REJ038	RCJ011	23SVE003W	Field Sample
TMW59042023	23D292-09	1	NA	05/04/2315:07	05/01/2313:30	REJ039	RCJ011	23SVE003W	Field Sample
TMW61042023	23D292-10	1	NA	05/04/2315:25	05/01/2313:30	REJ040	RCJ011	23SVE003W	Field Sample
TMW53042023	23D292-11	1	NA	05/04/2315:44	05/01/2313:30	REJ041	RCJ011	23SVE003W	Field Sample
MW27042023	23D292-13	1	NA	05/04/2316:03	05/01/2313:30	REJ042	RCJ011	23SVE003W	Field Sample
TMW03042023	23D292-14	1	NA	05/04/2316:21	05/01/2313:30	REJ043	RCJ011	23SVE003W	Field Sample
TMW03042023D	23D292-15	1	NA	05/04/2316:40	05/01/2313:30	REJ044	RCJ011	23SVE003W	Field Sample
MW35042023	23D292-16	1	NA	05/04/2316:59	05/01/2313:30	REJ045	RCJ011	23SVE003W	Field Sample
QC24042023EB04	23D292-17	1	NA	05/04/2317:17	05/01/2313:30	REJ046	RCJ011	23SVE003W	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. : 23D292
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	SVE003WB	1	NA	05/04/2311:24	05/01/2313:30	REJ027	RCJ498	23SVE003W	Method Blank
LCS1W	CLE003WL	1	NA	05/04/2312:20	05/01/2313:30	REJ030	RCJ498	23SVE003W	Lab Control Sample (LCS)
LCD1W	CLE003WC	1	NA	05/04/2312:38	05/01/2313:30	REJ031	RCJ498	23SVE003W	LCS Duplicate
MW33042023	23D292-01	1	NA	05/04/2312:57	05/01/2313:30	REJ032	RCJ498	23SVE003W	Field Sample
MW36D042023	23D292-02	1	NA	05/04/2313:15	05/01/2313:30	REJ033	RCJ498	23SVE003W	Field Sample
MW34042023	23D292-03	1	NA	05/04/2313:34	05/01/2313:30	REJ034	RCJ498	23SVE003W	Field Sample
MW26042023	23D292-04	1	NA	05/04/2313:52	05/01/2313:30	REJ035	RCJ498	23SVE003W	Field Sample
MW36S042023	23D292-05	1	NA	05/04/2314:11	05/01/2313:30	REJ036	RCJ498	23SVE003W	Field Sample
MW23042023	23D292-06	1	NA	05/04/2314:30	05/01/2313:30	REJ037	RCJ498	23SVE003W	Field Sample
TMW57042023	23D292-08	1	NA	05/04/2314:48	05/01/2313:30	REJ038	RCJ498	23SVE003W	Field Sample
TMW59042023	23D292-09	1	NA	05/04/2315:07	05/01/2313:30	REJ039	RCJ498	23SVE003W	Field Sample
TMW61042023	23D292-10	1	NA	05/04/2315:25	05/01/2313:30	REJ040	RCJ498	23SVE003W	Field Sample
TMW53042023	23D292-11	1	NA	05/04/2315:44	05/01/2313:30	REJ041	RCJ498	23SVE003W	Field Sample
MW27042023	23D292-13	1	NA	05/04/2316:03	05/01/2313:30	REJ042	RCJ498	23SVE003W	Field Sample
TMW03042023	23D292-14	1	NA	05/04/2316:21	05/01/2313:30	REJ043	RCJ498	23SVE003W	Field Sample
TMW03042023D	23D292-15	1	NA	05/04/2316:40	05/01/2313:30	REJ044	RCJ498	23SVE003W	Field Sample
MW35042023	23D292-16	1	NA	05/04/2316:59	05/01/2313:30	REJ045	RCJ498	23SVE003W	Field Sample
QC24042023EB04	23D292-17	1	NA	05/04/2317:17	05/01/2313:30	REJ046	RCJ498	23SVE003W	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. : 23D292
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	SVE003WB	1	NA	05/04/2311:24	05/01/2313:30	REJ027	RCJ025	23SVE003W	Method Blank
LCS1W	CLE003WL	1	NA	05/04/2312:20	05/01/2313:30	REJ030	RCJ025	23SVE003W	Lab Control Sample (LCS)
LCD1W	CLE003WC	1	NA	05/04/2312:38	05/01/2313:30	REJ031	RCJ025	23SVE003W	LCS Duplicate
MW33042023	23D292-01	1	NA	05/04/2312:57	05/01/2313:30	REJ032	RCJ025	23SVE003W	Field Sample
MW36D042023	23D292-02	1	NA	05/04/2313:15	05/01/2313:30	REJ033	RCJ025	23SVE003W	Field Sample
MW34042023	23D292-03	1	NA	05/04/2313:34	05/01/2313:30	REJ034	RCJ025	23SVE003W	Field Sample
MW26042023	23D292-04	1	NA	05/04/2313:52	05/01/2313:30	REJ035	RCJ025	23SVE003W	Field Sample
MW36S042023	23D292-05	1	NA	05/04/2314:11	05/01/2313:30	REJ036	RCJ025	23SVE003W	Field Sample
MW23042023	23D292-06	1	NA	05/04/2314:30	05/01/2313:30	REJ037	RCJ025	23SVE003W	Field Sample
TMW57042023	23D292-08	1	NA	05/04/2314:48	05/01/2313:30	REJ038	RCJ025	23SVE003W	Field Sample
TMW59042023	23D292-09	1	NA	05/04/2315:07	05/01/2313:30	REJ039	RCJ025	23SVE003W	Field Sample
TMW61042023	23D292-10	1	NA	05/04/2315:25	05/01/2313:30	REJ040	RCJ025	23SVE003W	Field Sample
TMW53042023	23D292-11	1	NA	05/04/2315:44	05/01/2313:30	REJ041	RCJ025	23SVE003W	Field Sample
MW27042023	23D292-13	1	NA	05/04/2316:03	05/01/2313:30	REJ042	RCJ025	23SVE003W	Field Sample
TMW03042023	23D292-14	1	NA	05/04/2316:21	05/01/2313:30	REJ043	RCJ025	23SVE003W	Field Sample
TMW03042023D	23D292-15	1	NA	05/04/2316:40	05/01/2313:30	REJ044	RCJ025	23SVE003W	Field Sample
MW35042023	23D292-16	1	NA	05/04/2316:59	05/01/2313:30	REJ045	RCJ025	23SVE003W	Field Sample
QC24042023EB04	23D292-17	1	NA	05/04/2317:17	05/01/2313:30	REJ046	RCJ025	23SVE003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW33042023	Date Analyzed:	05/04/23 12:57
Lab Samp ID:	23D292-01	Dilution Factor:	1
Lab File ID:	REJ032	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	47.9	65.4	73	43-140
2-Fluorobiphenyl	16.4	21.8	75	44-119
2-Fluorophenol	37.3	65.4	57	19-119
Nitrobenzene-d5	15.2	21.8	70	44-120
Phenol-d5	48.2	65.4	74	40-130
Terphenyl-d14	15.0	21.8	69	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 07:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW33042023	Date Analyzed:	05/04/23 12:57
Lab Samp ID:	23D292-01	Dilution Factor:	1
Lab File ID:	REJ032	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 07:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW33042023	Date Analyzed:	05/04/23 12:57
Lab Samp ID:	23D292-01	Dilution Factor:	1
Lab File ID:	REJ032	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/24/23 07:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW36D042023	Date Analyzed:	05/04/23 13:15
Lab Samp ID:	23D292-02	Dilution Factor:	1
Lab File ID:	REJ033	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	48.6	66.0	74	43-140
2-Fluorobiphenyl	16.4	22.0	75	44-119
2-Fluorophenol	35.3	66.0	53	19-119
Nitrobenzene-d5	13.1	22.0	59	44-120
Phenol-d5	43.9	66.0	66	40-130
Terphenyl-d14	19.6	22.0	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 07:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW36D042023	Date Analyzed:	05/04/23 13:15
Lab Samp ID:	23D292-02	Dilution Factor:	1
Lab File ID:	REJ033	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 07:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW36D042023	Date Analyzed:	05/04/23 13:15
Lab Samp ID:	23D292-02	Dilution Factor:	1
Lab File ID:	REJ033	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/24/23 07:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW34042023	Date Analyzed:	05/04/23 13:34
Lab Samp ID:	23D292-03	Dilution Factor:	1
Lab File ID:	REJ034	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	50.4	73.8	68	43-140
2-Fluorobiphenyl	20.5	24.6	83	44-119
2-Fluorophenol	46.3	73.8	63	19-119
Nitrobenzene-d5	18.2	24.6	74	44-120
Phenol-d5	52.9	73.8	72	40-130
Terphenyl-d14	20.9	24.6	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: RCJ025 DCC Ref: REJ020

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml 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:	04/24/23 07:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW34042023	Date Analyzed:	05/04/23 13:34
Lab Samp ID:	23D292-03	Dilution Factor:	1
Lab File ID:	REJ034	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	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:	04/24/23 07:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW34042023	Date Analyzed:	05/04/23 13:34
Lab Samp ID:	23D292-03	Dilution Factor:	1
Lab File ID:	REJ034	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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 : POreto Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW26042023	Date Analyzed:	05/04/23 13:52
Lab Samp ID:	23D292-04	Dilution Factor:	1
Lab File ID:	REJ035	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	51.7	73.8	70	43-140
2-Fluorobiphenyl	19.8	24.6	80	44-119
2-Fluorophenol	33.9	73.8	46	19-119
Nitrobenzene-d5	18.3	24.6	74	44-120
Phenol-d5	45.9	73.8	62	40-130
Terphenyl-d14	23.8	24.6	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: RCJ025 DCC Ref: REJ020

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 810ml	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:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW26042023	Date Analyzed:	05/04/23 13:52
Lab Samp ID:	23D292-04	Dilution Factor:	1
Lab File ID:	REJ035	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	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:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW26042023	Date Analyzed:	05/04/23 13:52
Lab Samp ID:	23D292-04	Dilution Factor:	1
Lab File ID:	REJ035	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: POreto	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW36S042023	Date Analyzed:	05/04/23 14:11
Lab Samp ID:	23D292-05	Dilution Factor:	1
Lab File ID:	REJ036	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	57.4	71.4	80	43-140
2-Fluorobiphenyl	21.7	23.8	91	44-119
2-Fluorophenol	47.3	71.4	66	19-119
Nitrobenzene-d5	19.8	23.8	83	44-120
Phenol-d5	58.6	71.4	82	40-130
Terphenyl-d14	24.5	23.8	103	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW36S042023	Date Analyzed:	05/04/23 14:11
Lab Samp ID:	23D292-05	Dilution Factor:	1
Lab File ID:	REJ036	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW36S042023	Date Analyzed:	05/04/23 14:11
Lab Samp ID:	23D292-05	Dilution Factor:	1
Lab File ID:	REJ036	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/24/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW23042023	Date Analyzed:	05/04/23 14:30
Lab Samp ID:	23D292-06	Dilution Factor:	1
Lab File ID:	REJ037	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
1,2,4-Trichlorobenzene	ND	24	6.1	12
1,2-Dichlorobenzene	ND	12	3.1	6.1
1,2-Diphenylhydrazine	ND	12	3.1	6.1
1,3-Dichlorobenzene	ND	12	3.1	6.1
1,4-Dichlorobenzene	ND	12	3.1	6.1
2,4,5-Trichlorophenol	ND	12	3.1	6.1
2,4,6-Trichlorophenol	ND	12	3.1	6.1
2,4-Dichlorophenol	ND	12	3.1	6.1
2,4-Dimethylphenol	ND	12	3.1	6.1
2,4-Dinitrophenol	ND	24	3.1	6.1
2,4-Dinitrotoluene	ND	12	3.1	6.1
2,6-Dinitrotoluene	ND	12	3.1	6.1
2-Chloronaphthalene	ND	12	3.1	6.1
2-Chlorophenol	ND	12	3.1	6.1
2-Methylnaphthalene	ND	12	3.1	6.1
2-Methylphenol	ND	12	3.1	6.1
2-Nitroaniline	ND	12	3.1	6.1
2-Nitrophenol	ND	12	3.1	6.1
3,3'-Dichlorobenzidine	ND	12	3.1	6.1
3/4-Methylphenol	ND	12	3.1	6.1
3-Nitroaniline	ND	12	3.1	6.1
4,6-Dinitro-2-methylphenol	ND	24	3.1	6.1
4-Bromophenyl phenyl ether	ND	12	3.1	6.1
4-Chloro-3-methylphenol	ND	12	3.1	6.1
4-Chloroaniline	ND	24	6.1	12
4-Chlorophenyl-phenyl ether	ND	12	3.1	6.1
4-Nitroaniline	ND	12	3.1	6.1
4-Nitrophenol	ND	24	3.1	6.1
Acenaphthene	ND	12	3.1	6.1
Acenaphthylene	ND	12	3.1	6.1
Anthracene	ND	12	3.1	6.1
Benzo(a)anthracene	ND	12	3.1	6.1
Benzo(a)pyrene	ND	12	3.1	6.1
Benzo(b)fluoranthene	ND	12	3.1	6.1
Benzo(g,h,i)perylene	ND	12	3.1	6.1
Benzo(k)fluoranthene	ND	12	3.1	6.1
Benzoic Acid	ND	120	24	49
Benzyl Alcohol	ND	12	3.1	6.1
bis(2-Chloroisopropyl) ether	ND	12	3.1	6.1
bis(2-Chloroethoxy)methane	ND	12	3.1	6.1
bis(2-Chloroethyl) ether	ND	12	3.1	6.1
bis(2-Ethylhexyl) phthalate	ND	24	6.1	12
Butylbenzylphthalate	ND	12	3.1	6.1
Carbazole	ND	12	3.1	6.1
Chrysene	ND	12	3.1	6.1
Dibenzo(a,h)anthracene	ND	12	3.1	6.1
Dibenzofuran	ND	12	3.1	6.1
Diethylphthalate	ND	12	3.1	6.1
Dimethylphthalate	ND	12	3.1	6.1
Di-n-butyl phthalate	ND	12	3.1	6.1
Di-n-octyl phthalate	ND	12	3.1	6.1
Fluoranthene	ND	12	3.1	6.1
Fluorene	ND	12	3.1	6.1
Hexachlorobenzene	ND	12	3.1	6.1
Hexachlorobutadiene	ND	12	3.1	6.1
Hexachloroethane	ND	12	3.1	6.1
Indeno(1,2,3-cd)pyrene	ND	12	3.1	6.1
Isophorone	ND	12	3.1	6.1
Naphthalene	ND	12	3.1	6.1
Nitrobenzene	ND	12	3.1	6.1
N-Nitrosodimethylamine	ND	12	3.1	6.1
n-Nitroso-di-n-propylamine	ND	12	3.1	6.1
n-Nitrosodiphenylamine	ND	12	3.1	6.1
Pentachlorophenol	ND	24	3.1	6.1
Phenanthrene	ND	12	3.1	6.1
Phenol	ND	12	3.1	6.1
Pyrene	ND	12	3.1	6.1
Hexachlorocyclopentadiene	ND	12	3.1	6.1
Benzidine	ND	49	12	24
2,3,4,6-Tetrachlorophenol	ND	12	3.1	6.1
2,6-Dichlorophenol	ND	12	3.1	6.1

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
2,4,6-Tribromophenol	54.9	73.2	75	43-140
2-Fluorobiphenyl	19.8	24.4	81	44-119
2-Fluorophenol	43.0	73.2	59	19-119
Nitrobenzene-d5	18.0	24.4	74	44-120
Phenol-d5	53.6	73.2	73	40-130
Terphenyl-d14	22.8	24.4	93	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: RCJ025 DCC Ref: REJ020

Detection limits are reported relative to sample result significant figures.
Sample Amount : 820ml 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:	04/24/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW23042023	Date Analyzed:	05/04/23 14:30
Lab Samp ID:	23D292-06	Dilution Factor:	1
Lab File ID:	REJ037	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	6.1

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	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:	04/24/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW23042023	Date Analyzed:	05/04/23 14:30
Lab Samp ID:	23D292-06	Dilution Factor:	1
Lab File ID:	REJ037	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	Instrument ID:	E4

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Caprolactam	ND	24	6.1	12
Benzaldehyde	ND	24	6.1	12

Notes:

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 820ml	Final Volume	: 2ml
Prepared by	: POreto	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D292
Sample ID : TMW57042023
Lab Samp ID: 23D292-08
Lab File ID: REJ038
Ext Btch ID: 23SVE003W
Calib. Ref.: RCJ011

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/01/23 13:30
Date Analyzed: 05/04/23 14:48
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	49.8	68.4	73	43-140
2-Fluorobiphenyl	15.8	22.8	69	44-119
2-Fluorophenol	31.4	68.4	46	19-119
Nitrobenzene-d5	15.0	22.8	66	44-120
Phenol-d5	41.8	68.4	61	40-130
Terphenyl-d14	19.9	22.8	87	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: RCJ025 DCC Ref: REJ020

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 (APPENDIX 9)

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW57042023	Date Analyzed:	05/04/23 14:48
Lab Samp ID:	23D292-08	Dilution Factor:	1
Lab File ID:	REJ038	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 09:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW57042023	Date Analyzed:	05/04/23 14:48
Lab Samp ID:	23D292-08	Dilution Factor:	1
Lab File ID:	REJ038	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/24/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW59042023	Date Analyzed:	05/04/23 15:07
Lab Samp ID:	23D292-09	Dilution Factor:	1
Lab File ID:	REJ039	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	47.3	62.4	76	43-140
2-Fluorobiphenyl	16.6	20.8	80	44-119
2-Fluorophenol	21.2	62.4	34	19-119
Nitrobenzene-d5	13.6	20.8	65	44-120
Phenol-d5	36.7	62.4	59	40-130
Terphenyl-d14	17.8	20.8	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW59042023	Date Analyzed:	05/04/23 15:07
Lab Samp ID:	23D292-09	Dilution Factor:	1
Lab File ID:	REJ039	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: POreto	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW59042023	Date Analyzed:	05/04/23 15:07
Lab Samp ID:	23D292-09	Dilution Factor:	1
Lab File ID:	REJ039	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: POreto	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW61042023	Date Analyzed:	05/04/23 15:25
Lab Samp ID:	23D292-10	Dilution Factor:	1
Lab File ID:	REJ040	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	49.0	71.4	69	43-140
2-Fluorobiphenyl	17.2	23.8	72	44-119
2-Fluorophenol	40.8	71.4	57	19-119
Nitrobenzene-d5	16.6	23.8	70	44-120
Phenol-d5	48.5	71.4	68	40-130
Terphenyl-d14	21.2	23.8	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 10:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW61042023	Date Analyzed:	05/04/23 15:25
Lab Samp ID:	23D292-10	Dilution Factor:	1
Lab File ID:	REJ040	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 10:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW61042023	Date Analyzed:	05/04/23 15:25
Lab Samp ID:	23D292-10	Dilution Factor:	1
Lab File ID:	REJ040	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/24/23 10:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW53042023	Date Analyzed:	05/04/23 15:44
Lab Samp ID:	23D292-11	Dilution Factor:	1
Lab File ID:	REJ041	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	41.5	66.0	63	43-140
2-Fluorobiphenyl	13.5	22.0	61	44-119
2-Fluorophenol	31.2	66.0	47	19-119
Nitrobenzene-d5	13.5	22.0	61	44-120
Phenol-d5	38.2	66.0	58	40-130
Terphenyl-d14	21.3	22.0	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 10:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW53042023	Date Analyzed:	05/04/23 15:44
Lab Samp ID:	23D292-11	Dilution Factor:	1
Lab File ID:	REJ041	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 10:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW53042023	Date Analyzed:	05/04/23 15:44
Lab Samp ID:	23D292-11	Dilution Factor:	1
Lab File ID:	REJ041	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/24/23 12:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW27042023	Date Analyzed:	05/04/23 16:03
Lab Samp ID:	23D292-13	Dilution Factor:	1
Lab File ID:	REJ042	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	52.4	71.4	73	43-140
2-Fluorobiphenyl	19.0	23.8	80	44-119
2-Fluorophenol	42.3	71.4	59	19-119
Nitrobenzene-d5	17.1	23.8	72	44-120
Phenol-d5	51.1	71.4	72	40-130
Terphenyl-d14	22.4	23.8	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 12:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW27042023	Date Analyzed:	05/04/23 16:03
Lab Samp ID:	23D292-13	Dilution Factor:	1
Lab File ID:	REJ042	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 12:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW27042023	Date Analyzed:	05/04/23 16:03
Lab Samp ID:	23D292-13	Dilution Factor:	1
Lab File ID:	REJ042	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/24/23 13:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW03042023	Date Analyzed:	05/04/23 16:21
Lab Samp ID:	23D292-14	Dilution Factor:	1
Lab File ID:	REJ043	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	49.4	62.4	79	43-140
2-Fluorobiphenyl	17.2	20.8	83	44-119
2-Fluorophenol	38.6	62.4	62	19-119
Nitrobenzene-d5	15.9	20.8	76	44-120
Phenol-d5	46.4	62.4	74	40-130
Terphenyl-d14	20.1	20.8	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 13:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW03042023	Date Analyzed:	05/04/23 16:21
Lab Samp ID:	23D292-14	Dilution Factor:	1
Lab File ID:	REJ043	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: POreto	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 13:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW03042023	Date Analyzed:	05/04/23 16:21
Lab Samp ID:	23D292-14	Dilution Factor:	1
Lab File ID:	REJ043	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: POreto	Analyzed by	: KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D292
Sample ID : TMW03042023D
Lab Samp ID: 23D292-15
Lab File ID: REJ044
Ext Btch ID: 23SVE003W
Calib. Ref.: RCJ011

Date Collected: 04/24/23 13:20
Date Received: 04/26/23
Date Extracted: 05/01/23 13:30
Date Analyzed: 05/04/23 16:40
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	51.6	63.0	82	43-140
2-Fluorobiphenyl	18.1	21.0	86	44-119
2-Fluorophenol	35.5	63.0	56	19-119
Nitrobenzene-d5	17.8	21.0	85	44-120
Phenol-d5	46.6	63.0	74	40-130
Terphenyl-d14	20.6	21.0	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: RCJ025 DCC Ref: REJ020

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 13:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW03042023D	Date Analyzed:	05/04/23 16:40
Lab Samp ID:	23D292-15	Dilution Factor:	1
Lab File ID:	REJ044	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 13:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: TMW03042023D	Date Analyzed:	05/04/23 16:40
Lab Samp ID:	23D292-15	Dilution Factor:	1
Lab File ID:	REJ044	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/24/23 13:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW35042023	Date Analyzed:	05/04/23 16:59
Lab Samp ID:	23D292-16	Dilution Factor:	1
Lab File ID:	REJ045	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	49.8	69.6	72	43-140
2-Fluorobiphenyl	19.0	23.2	82	44-119
2-Fluorophenol	49.3	69.6	71	19-119
Nitrobenzene-d5	18.1	23.2	78	44-120
Phenol-d5	54.8	69.6	79	40-130
Terphenyl-d14	21.3	23.2	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: RCJ025 DCC Ref: REJ020

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:	04/24/23 13:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW35042023	Date Analyzed:	05/04/23 16:59
Lab Samp ID:	23D292-16	Dilution Factor:	1
Lab File ID:	REJ045	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 13:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: MW35042023	Date Analyzed:	05/04/23 16:59
Lab Samp ID:	23D292-16	Dilution Factor:	1
Lab File ID:	REJ045	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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.
Project : USACE WINGATE
Batch No. : 23D292
Sample ID : QC24042023EB04
Lab Samp ID: 23D292-17
Lab File ID: REJ046
Ext Btch ID: 23SVE003W
Calib. Ref.: RCJ011

Date Collected: 04/24/23 14:00
Date Received: 04/26/23
Date Extracted: 05/01/23 13:30
Date Analyzed: 05/04/23 17:17
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	45.4	66.0	69	43-140
2-Fluorobiphenyl	18.0	22.0	82	44-119
2-Fluorophenol	45.6	66.0	69	19-119
Nitrobenzene-d5	16.4	22.0	75	44-120
Phenol-d5	49.1	66.0	74	40-130
Terphenyl-d14	19.8	22.0	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: RCJ025 DCC Ref: REJ020

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 14:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: QC24042023EB04	Date Analyzed:	05/04/23 17:17
Lab Samp ID:	23D292-17	Dilution Factor:	1
Lab File ID:	REJ046	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/24/23 14:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 13:30
Sample ID	: QC24042023EB04	Date Analyzed:	05/04/23 17:17
Lab Samp ID:	23D292-17	Dilution Factor:	1
Lab File ID:	REJ046	Matrix:	WATER
Ext Btch ID:	23SVE003W	% Moisture:	NA
Calib. Ref.:	RCJ025	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

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

SDG#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

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

A total of thirteen(13) water samples were received on 04/26/23 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. VG39D13B - 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. VG39D13L/VG39D13C 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 D292-05M/D292-05S. 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
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
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D292
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	VG39D13B	1	NA	04/26/2316:34	04/26/2316:34	ED26011A	ED26010A	23VG39D13	Method Blank
LCS1W	VG39D13L	1	NA	04/26/2317:10	04/26/2317:10	ED26012A	ED26010A	23VG39D13	Lab Control Sample (LCS)
LCD1W	VG39D13C	1	NA	04/26/2317:46	04/26/2317:46	ED26013A	ED26010A	23VG39D13	LCS Duplicate
MW33042023	D292-01	1	NA	04/26/2318:22	04/26/2318:22	ED26014A	ED26010A	23VG39D13	Field Sample
MW36D042023	D292-02	1	NA	04/26/2318:58	04/26/2318:58	ED26015A	ED26010A	23VG39D13	Field Sample
MW34042023	D292-03	1	NA	04/26/2319:35	04/26/2319:35	ED26016A	ED26010A	23VG39D13	Field Sample
MW26042023	D292-04	1	NA	04/26/2320:11	04/26/2320:11	ED26017A	ED26010A	23VG39D13	Field Sample
MW36S042023	D292-05	1	NA	04/26/2320:47	04/26/2320:47	ED26018A	ED26010A	23VG39D13	Field Sample
MW36S042023MS	D292-05M	1	NA	04/26/2321:23	04/26/2321:23	ED26019A	ED26010A	23VG39D13	Matrix Spike Sample (MS)
MW36S042023MSD	D292-05S	1	NA	04/26/2321:59	04/26/2321:59	ED26020A	ED26010A	23VG39D13	MS Duplicate (MSD)
TMW57042023	D292-08	1	NA	04/26/2323:11	04/26/2323:11	ED26022A	ED26021A	23VG39D13	Field Sample
TMW59042023	D292-09	1	NA	04/26/2323:47	04/26/2323:47	ED26023A	ED26021A	23VG39D13	Field Sample
TMW61042023	D292-10	1	NA	04/27/2300:23	04/27/2300:23	ED26024A	ED26021A	23VG39D13	Field Sample
TMW53042023	D292-11	1	NA	04/27/2300:59	04/27/2300:59	ED26025A	ED26021A	23VG39D13	Field Sample
MW27042023	D292-13	1	NA	04/27/2301:36	04/27/2301:36	ED26026A	ED26021A	23VG39D13	Field Sample
MW35042023	D292-16	1	NA	04/27/2302:12	04/27/2302:12	ED26027A	ED26021A	23VG39D13	Field Sample
QC24042023EB04	D292-17	1	NA	04/27/2302:48	04/27/2302:48	ED26028A	ED26021A	23VG39D13	Field Sample
QC24042023TB06	D292-18	1	NA	04/27/2303:24	04/27/2303:24	ED26029A	ED26021A	23VG39D13	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:	04/24/23 07:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/26/23 18:22
Sample ID	: MW33042023	Date Analyzed:	04/26/23 18:22
Lab Samp ID:	D292-01	Dilution Factor:	1
Lab File ID:	ED26014A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26010A	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	35.6	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:	04/24/23 07:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/26/23 18:58
Sample ID	: MW36D042023	Date Analyzed:	04/26/23 18:58
Lab Samp ID:	D292-02	Dilution Factor:	1
Lab File ID:	ED26015A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26010A	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	35.9	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:	04/24/23 07:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/26/23 19:35
Sample ID	: MW34042023	Date Analyzed:	04/26/23 19:35
Lab Samp ID:	D292-03	Dilution Factor:	1
Lab File ID:	ED26016A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26010A	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	35.9	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:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/26/23 20:11
Sample ID	: MW26042023	Date Analyzed:	04/26/23 20:11
Lab Samp ID:	D292-04	Dilution Factor:	1
Lab File ID:	ED26017A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26010A	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	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:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/26/23 20:47
Sample ID	: MW36S042023	Date Analyzed:	04/26/23 20:47
Lab Samp ID:	D292-05	Dilution Factor:	1
Lab File ID:	ED26018A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26010A	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	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:	04/24/23 09:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/26/23 23:11
Sample ID	: TMW57042023	Date Analyzed:	04/26/23 23:11
Lab Samp ID:	D292-08	Dilution Factor:	1
Lab File ID:	ED26022A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26021A	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	35.6	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:	04/24/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/26/23 23:47
Sample ID	: TMW59042023	Date Analyzed:	04/26/23 23:47
Lab Samp ID:	D292-09	Dilution Factor:	1
Lab File ID:	ED26023A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26021A	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	35.6	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:	04/24/23 10:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/27/23 00:23
Sample ID	: TMW61042023	Date Analyzed:	04/27/23 00:23
Lab Samp ID:	D292-10	Dilution Factor:	1
Lab File ID:	ED26024A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26021A	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	35.3	40.0	88	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:	04/24/23 10:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/27/23 00:59
Sample ID	: TMW53042023	Date Analyzed:	04/27/23 00:59
Lab Samp ID:	D292-11	Dilution Factor:	1
Lab File ID:	ED26025A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26021A	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	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:	04/24/23 12:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/27/23 01:36
Sample ID	: MW27042023	Date Analyzed:	04/27/23 01:36
Lab Samp ID:	D292-13	Dilution Factor:	1
Lab File ID:	ED26026A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26021A	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	34.6	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:	04/24/23 13:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/27/23 02:12
Sample ID	: MW35042023	Date Analyzed:	04/27/23 02:12
Lab Samp ID:	D292-16	Dilution Factor:	1
Lab File ID:	ED26027A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26021A	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	34.9	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:	04/24/23 14:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/27/23 02:48
Sample ID	: QC24042023EB04	Date Analyzed:	04/27/23 02:48
Lab Samp ID:	D292-17	Dilution Factor:	1
Lab File ID:	ED26028A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26021A	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	34.1	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:	04/24/23 08:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/27/23 03:24
Sample ID	: QC24042023TB06	Date Analyzed:	04/27/23 03:24
Lab Samp ID:	D292-18	Dilution Factor:	1
Lab File ID:	ED26029A	Matrix:	WATER
Ext Btch ID:	23VG39D13	% Moisture:	NA
Calib. Ref.:	ED26021A	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	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#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of twelve(12) water samples were received on 04/26/23 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. DSE003WB - 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. DSE003WL/DSE003WC 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. : 23D292
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	DSE003WB	1	NA	05/02/2313:30	05/01/2310:45	LE02006A	LE02004A	23DSE003W	Method Blank
LCS1W	DSE003WL	1	NA	05/02/2313:48	05/01/2310:45	LE02007A	LE02004A	23DSE003W	Lab Control Sample (LCS)
LCD1W	DSE003WC	1	NA	05/02/2314:07	05/01/2310:45	LE02008A	LE02004A	23DSE003W	LCS Duplicate
MW33042023	D292-01	1	NA	05/02/2315:40	05/01/2310:45	LE02013A	LE02004A	23DSE003W	Field Sample
MW36D042023	D292-02	1	NA	05/02/2315:59	05/01/2310:45	LE02014A	LE02004A	23DSE003W	Field Sample
MW34042023	D292-03	1	NA	05/02/2316:17	05/01/2310:45	LE02015A	LE02004A	23DSE003W	Field Sample
MW26042023	D292-04	1	NA	05/02/2316:36	05/01/2310:45	LE02016A	LE02004A	23DSE003W	Field Sample
MW36S042023	D292-05	1	NA	05/02/2316:55	05/01/2310:45	LE02017A	LE02004A	23DSE003W	Field Sample
TMW57042023	D292-08	1	NA	05/02/2317:13	05/01/2310:45	LE02018A	LE02004A	23DSE003W	Field Sample
TMW59042023	D292-09	1	NA	05/02/2318:09	05/01/2310:45	LE02021A	LE02019A	23DSE003W	Field Sample
TMW61042023	D292-10	1	NA	05/02/2318:28	05/01/2310:45	LE02022A	LE02019A	23DSE003W	Field Sample
TMW53042023	D292-11	1	NA	05/02/2318:46	05/01/2310:45	LE02023A	LE02019A	23DSE003W	Field Sample
MW27042023	D292-13	1	NA	05/02/2319:05	05/01/2310:45	LE02024A	LE02019A	23DSE003W	Field Sample
MW35042023	D292-16	1	NA	05/02/2319:23	05/01/2310:45	LE02025A	LE02019A	23DSE003W	Field Sample
QC24042023EB04	D292-17	1	NA	05/02/2319:42	05/01/2310:45	LE02026A	LE02019A	23DSE003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:15
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: MW33042023	Date Analyzed:	05/02/23 15:40
Lab Samp ID:	23D292-01	Dilution Factor:	1
Lab File ID:	LE02013A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02004A	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	1.04	81	60-130
Hexacosane	0.245	0.260	94	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

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: MW36D042023	Date Analyzed:	05/02/23 15:59
Lab Samp ID:	23D292-02	Dilution Factor:	1
Lab File ID:	LE02014A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02004A	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	0.876	1.02	86	60-130
Hexacosane	0.247	0.255	97	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:	04/24/23 07:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: MW34042023	Date Analyzed:	05/02/23 16:17
Lab Samp ID:	23D292-03	Dilution Factor:	1
Lab File ID:	LE02015A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02004A	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	0.846	1.01	84	60-130
Hexacosane	0.251	0.253	99	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: 04/24/23 07:55
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:45
Sample ID : MW26042023	Date Analyzed: 05/02/23 16:36
Lab Samp ID: 23D292-04	Dilution Factor: 1
Lab File ID: LE02016A	Matrix: WATER
Ext Btch ID: 23DSE003W	% Moisture: NA
Calib. Ref.: LE02004A	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	0.925	1.05	88	60-130
Hexacosane	0.275	0.262	105	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: 04/24/23 07:55
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:45
Sample ID : MW36S042023	Date Analyzed: 05/02/23 16:55
Lab Samp ID: 23D292-05	Dilution Factor: 1
Lab File ID: LE02017A	Matrix: WATER
Ext Btch ID: 23DSE003W	% Moisture: NA
Calib. Ref.: LE02004A	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	0.807	1.04	78	60-130
Hexacosane	0.263	0.260	101	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

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: TMW57042023	Date Analyzed:	05/02/23 17:13
Lab Samp ID:	23D292-08	Dilution Factor:	1
Lab File ID:	LE02018A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02004A	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	0.978	1.14	86	60-130
Hexacosane	0.295	0.285	104	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:	04/24/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: TMW59042023	Date Analyzed:	05/02/23 18:09
Lab Samp ID:	23D292-09	Dilution Factor:	1
Lab File ID:	LE02021A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02019A	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	1.02	1.15	89	60-130
Hexacosane	0.315	0.288	109	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:	04/24/23 10:10
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: TMW61042023	Date Analyzed:	05/02/23 18:28
Lab Samp ID:	23D292-10	Dilution Factor:	1
Lab File ID:	LE02022A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02019A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	ND	0.48	0.048	0.096

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.815	0.960	85	60-130
Hexacosane	0.258	0.240	107	60-140

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

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1040ml Final Volume : 10ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:30
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: TMW53042023	Date Analyzed:	05/02/23 18:46
Lab Samp ID:	23D292-11	Dilution Factor:	1
Lab File ID:	LE02023A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02019A	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	0.910	1.05	87	60-130
Hexacosane	0.289	0.262	110	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:	04/24/23 12:20
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: MW27042023	Date Analyzed:	05/02/23 19:05
Lab Samp ID:	23D292-13	Dilution Factor:	1
Lab File ID:	LE02024A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02019A	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	1.02	1.15	89	60-130
Hexacosane	0.318	0.288	110	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:	04/24/23 13:25
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: MW35042023	Date Analyzed:	05/02/23 19:23
Lab Samp ID:	23D292-16	Dilution Factor:	1
Lab File ID:	LE02025A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02019A	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	1.02	1.18	86	60-130
Hexacosane	0.321	0.295	109	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:	04/24/23 14:00
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	05/01/23 10:45
Sample ID	: QC24042023EB04	Date Analyzed:	05/02/23 19:42
Lab Samp ID:	23D292-17	Dilution Factor:	1
Lab File ID:	LE02026A	Matrix:	WATER
Ext Btch ID:	23DSE003W	% Moisture:	NA
Calib. Ref.:	LE02019A	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	0.890	1.01	88	60-130
Hexacosane	0.281	0.253	111	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW3520C/8081B
PESTICIDES

A total of fourteen(14) water samples were received on 04/26/23 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. CPE001WB - 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. CPE001WL/CPE001WC 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. : 23D292
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	CPE001WB	1	NA	05/03/2312:30	05/01/2310:30	RE03006	RE03003	23CPE001W	Method Blank
LCS1W	CPE001WL	1	NA	05/03/2312:51	05/01/2310:30	RE03007	RE03003	23CPE001W	Lab Control Sample (LCS)
LCD1W	CPE001WC	1	NA	05/03/2313:11	05/01/2310:30	RE03008	RE03003	23CPE001W	LCS Duplicate
MW33042023	D292-01	1	NA	05/03/2314:12	05/01/2310:30	RE03011	RE03003	23CPE001W	Field Sample
MW36D042023	D292-02	1	NA	05/03/2314:33	05/01/2310:30	RE03012	RE03003	23CPE001W	Field Sample
MW34042023	D292-03	1	NA	05/03/2314:53	05/01/2310:30	RE03013	RE03003	23CPE001W	Field Sample
MW26042023	D292-04	1	NA	05/03/2315:14	05/01/2310:30	RE03014	RE03003	23CPE001W	Field Sample
MW36S042023	D292-05	1	NA	05/03/2316:36	05/01/2310:30	RE03018	RE03016	23CPE001W	Field Sample
MW23042023	D292-06	1	NA	05/03/2316:56	05/01/2310:30	RE03019	RE03016	23CPE001W	Field Sample
TMW57042023	D292-08	1	NA	05/03/2317:17	05/01/2310:30	RE03020	RE03016	23CPE001W	Field Sample
TMW59042023	D292-09	1	NA	05/03/2317:37	05/01/2310:30	RE03021	RE03016	23CPE001W	Field Sample
TMW61042023	D292-10	1	NA	05/03/2317:58	05/01/2310:30	RE03022	RE03016	23CPE001W	Field Sample
TMW53042023	D292-11	1	NA	05/03/2318:18	05/01/2310:30	RE03023	RE03016	23CPE001W	Field Sample
TMW24042023	D292-12	1	NA	05/03/2318:39	05/01/2310:30	RE03024	RE03016	23CPE001W	Field Sample
MW27042023	D292-13	1	NA	05/03/2319:00	05/01/2310:30	RE03025	RE03016	23CPE001W	Field Sample
MW35042023	D292-16	1	NA	05/03/2319:20	05/01/2310:30	RE03026	RE03016	23CPE001W	Field Sample
QC24042023EB04	D292-17	1	NA	05/03/2319:41	05/01/2310:30	RE03027	RE03016	23CPE001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:15
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : MW33042023	Date Analyzed: 05/03/23 14:12
Lab Samp ID: D292-01	Dilution Factor: 1
Lab File ID: RE03011	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03003	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	0.288 | (0.291)	0.449	65	44-124
Decachlorobiphenyl	(0.325) | 0.313	0.449	72	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 10ml
Prepared by : POreto Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE03004

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:20
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : MW36D042023	Date Analyzed: 05/03/23 14:33
Lab Samp ID: D292-02	Dilution Factor: 1
Lab File ID: RE03012	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03003	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	(0.341) | 0.341	0.476	72	44-124
Decachlorobiphenyl	(0.367) | 0.358	0.476	77	30-135

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

Sample Amount : 840ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03004	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:25
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : MW34042023	Date Analyzed: 05/03/23 14:53
Lab Samp ID: D292-03	Dilution Factor: 1
Lab File ID: RE03013	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03003	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	0.291 | (0.294)	0.404	73	44-124
Decachlorobiphenyl	(0.285) | 0.279	0.404	71	30-135

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

Sample Amount : 990ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03004	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:55
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : MW26042023	Date Analyzed: 05/03/23 15:14
Lab Samp ID: D292-04	Dilution Factor: 1
Lab File ID: RE03014	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03003	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.096	0.019	0.038
gamma-BHC (Lindane)	(ND) | ND	0.096	0.019	0.038
beta-BHC	(ND) | ND	0.096	0.019	0.038
Heptachlor	(ND) | ND	0.096	0.019	0.038
delta-BHC	(ND) | ND	0.096	0.019	0.038
Aldrin	(ND) | ND	0.096	0.019	0.038
Heptachlor Epoxide	(ND) | ND	0.096	0.019	0.038
gamma-Chlordane	(ND) | ND	0.096	0.019	0.038
alpha-Chlordane	(ND) | ND	0.096	0.019	0.038
Endosulfan I	(ND) | ND	0.096	0.019	0.038
4,4'-DDE	(ND) | ND	0.096	0.019	0.038
Dieldrin	(ND) | ND	0.096	0.019	0.038
Endrin	(ND) | ND	0.096	0.019	0.038
4,4'-DDD	(ND) | ND	0.096	0.019	0.038
Endosulfan II	(ND) | ND	0.096	0.019	0.038
4,4'-DDT	(ND) | ND	0.096	0.019	0.038
Endrin Aldehyde	(ND) | ND	0.096	0.019	0.038
Endosulfan Sulfate	(ND) | ND	0.096	0.019	0.038
Methoxychlor	(ND) | ND	0.96	0.096	0.19
Toxaphene	(ND) | ND	1.9	0.24	0.48
Endrin Ketone	(ND) | ND	0.096	0.019	0.038

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.285) | 0.282	0.385	74	44-124
Decachlorobiphenyl	(0.271) | 0.265	0.385	70	30-135

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

Sample Amount : 1040ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03004	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:55
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : MW36S042023	Date Analyzed: 05/03/23 16:36
Lab Samp ID: D292-05	Dilution Factor: 1
Lab File ID: RE03018	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.023	0.046
gamma-BHC (Lindane)	(ND) | ND	0.11	0.023	0.046
beta-BHC	(ND) | ND	0.11	0.023	0.046
Heptachlor	(ND) | ND	0.11	0.023	0.046
delta-BHC	(ND) | ND	0.11	0.023	0.046
Aldrin	(ND) | ND	0.11	0.023	0.046
Heptachlor Epoxide	(ND) | ND	0.11	0.023	0.046
gamma-Chlordane	(ND) | ND	0.11	0.023	0.046
alpha-Chlordane	(ND) | ND	0.11	0.023	0.046
Endosulfan I	(ND) | ND	0.11	0.023	0.046
4,4'-DDE	(ND) | ND	0.11	0.023	0.046
Dieldrin	(ND) | ND	0.11	0.023	0.046
Endrin	(ND) | ND	0.11	0.023	0.046
4,4'-DDD	(ND) | ND	0.11	0.023	0.046
Endosulfan II	(ND) | ND	0.11	0.023	0.046
4,4'-DDT	(ND) | ND	0.11	0.023	0.046
Endrin Aldehyde	(ND) | ND	0.11	0.023	0.046
Endosulfan Sulfate	(ND) | ND	0.11	0.023	0.046
Methoxychlor	(ND) | ND	1.1	0.11	0.23
Toxaphene	(ND) | ND	2.3	0.28	0.57
Endrin Ketone	(ND) | ND	0.11	0.023	0.046

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.313 | (0.314)	0.455	69	44-124
Decachlorobiphenyl	(0.325) | 0.314	0.455	71	30-135

Notes:
RL : Reporting limit
Detection limits are reported relative to sample result significant figures.
Sample Amount : 880ml Final Volume : 10ml
Prepared by : POreto Analyzed by : EKim
Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE03017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 08:30
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : MW23042023	Date Analyzed: 05/03/23 16:56
Lab Samp ID: D292-06	Dilution Factor: 1
Lab File ID: RE03019	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	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	0.333 | (0.334)	0.482	69	44-124
Decachlorobiphenyl	(0.335) | 0.329	0.482	70	30-135

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

Sample Amount : 830ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 09:20
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : TMW57042023	Date Analyzed: 05/03/23 17:17
Lab Samp ID: D292-08	Dilution Factor: 1
Lab File ID: RE03020	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	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	(0.302) | 0.297	0.440	69	44-124
Decachlorobiphenyl	(0.320) | 0.311	0.440	73	30-135

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

Sample Amount : 910ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE03017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 09:40
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : TMW59042023	Date Analyzed: 05/03/23 17:37
Lab Samp ID: D292-09	Dilution Factor: 1
Lab File ID: RE03021	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	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	(0.334) | 0.291	0.412	81	44-124
Decachlorobiphenyl	(0.303) | 0.290	0.412	73	30-135

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

Sample Amount : 970ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 10:10
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : TMW61042023	Date Analyzed: 05/03/23 17:58
Lab Samp ID: D292-10	Dilution Factor: 1
Lab File ID: RE03022	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.047
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.047
beta-BHC	(ND) | ND	0.12	0.024	0.047
Heptachlor	(ND) | ND	0.12	0.024	0.047
delta-BHC	(ND) | ND	0.12	0.024	0.047
Aldrin	(ND) | ND	0.12	0.024	0.047
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.047
gamma-Chlordane	(ND) | ND	0.12	0.024	0.047
alpha-Chlordane	(ND) | ND	0.12	0.024	0.047
Endosulfan I	(ND) | ND	0.12	0.024	0.047
4,4'-DDE	(ND) | ND	0.12	0.024	0.047
Dieldrin	(ND) | ND	0.12	0.024	0.047
Endrin	(ND) | ND	0.12	0.024	0.047
4,4'-DDD	(ND) | ND	0.12	0.024	0.047
Endosulfan II	(ND) | ND	0.12	0.024	0.047
4,4'-DDT	(ND) | ND	0.12	0.024	0.047
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.047
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.047
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.29	0.59
Endrin Ketone	(ND) | ND	0.12	0.024	0.047

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.323) | 0.322	0.471	69	44-124
Decachlorobiphenyl	(0.347) | 0.334	0.471	74	30-135

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

Sample Amount : 850ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 10:30
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : TMW53042023	Date Analyzed: 05/03/23 18:18
Lab Samp ID: D292-11	Dilution Factor: 1
Lab File ID: RE03023	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.049
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.049
beta-BHC	(ND) | ND	0.12	0.024	0.049
Heptachlor	(ND) | ND	0.12	0.024	0.049
delta-BHC	(ND) | ND	0.12	0.024	0.049
Aldrin	(ND) | ND	0.12	0.024	0.049
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.049
gamma-Chlordane	(ND) | ND	0.12	0.024	0.049
alpha-Chlordane	(ND) | ND	0.12	0.024	0.049
Endosulfan I	(ND) | ND	0.12	0.024	0.049
4,4'-DDE	(ND) | ND	0.12	0.024	0.049
Dieldrin	(ND) | ND	0.12	0.024	0.049
Endrin	(ND) | ND	0.12	0.024	0.049
4,4'-DDD	(ND) | ND	0.12	0.024	0.049
Endosulfan II	(ND) | ND	0.12	0.024	0.049
4,4'-DDT	(ND) | ND	0.12	0.024	0.049
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.049
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.049
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.30	0.61
Endrin Ketone	(ND) | ND	0.12	0.024	0.049

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.328 | (0.332)	0.488	68	44-124
Decachlorobiphenyl	(0.351) | 0.340	0.488	72	30-135

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

Sample Amount : 820ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 10:50
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : TMW24042023	Date Analyzed: 05/03/23 18:39
Lab Samp ID: D292-12	Dilution Factor: 1
Lab File ID: RE03024	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	Instrument ID: F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.12	0.024	0.047
gamma-BHC (Lindane)	(ND) | ND	0.12	0.024	0.047
beta-BHC	(ND) | ND	0.12	0.024	0.047
Heptachlor	(ND) | ND	0.12	0.024	0.047
delta-BHC	(ND) | ND	0.12	0.024	0.047
Aldrin	(ND) | ND	0.12	0.024	0.047
Heptachlor Epoxide	(ND) | ND	0.12	0.024	0.047
gamma-Chlordane	(ND) | ND	0.12	0.024	0.047
alpha-Chlordane	(ND) | ND	0.12	0.024	0.047
Endosulfan I	(ND) | ND	0.12	0.024	0.047
4,4'-DDE	(ND) | ND	0.12	0.024	0.047
Dieldrin	(ND) | ND	0.12	0.024	0.047
Endrin	(ND) | ND	0.12	0.024	0.047
4,4'-DDD	(ND) | ND	0.12	0.024	0.047
Endosulfan II	(ND) | ND	0.12	0.024	0.047
4,4'-DDT	(ND) | ND	0.12	0.024	0.047
Endrin Aldehyde	(ND) | ND	0.12	0.024	0.047
Endosulfan Sulfate	(ND) | ND	0.12	0.024	0.047
Methoxychlor	(ND) | ND	1.2	0.12	0.24
Toxaphene	(ND) | ND	2.4	0.29	0.59
Endrin Ketone	(ND) | ND	0.12	0.024	0.047

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	(0.356) | 0.351	0.471	76	44-124
Decachlorobiphenyl	(0.346) | 0.332	0.471	73	30-135

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

Sample Amount : 850ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 12:20
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : MW27042023	Date Analyzed: 05/03/23 19:00
Lab Samp ID: D292-13	Dilution Factor: 1
Lab File ID: RE03025	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	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	0.318 | (0.319)	0.440	72	44-124
Decachlorobiphenyl	(0.325) | 0.313	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 : POreto	Analyzed by : EKim

Result Quantified : First column|Second column
Reportable Result : Bracketed (value)
Toxaphene Calib. Ref.: RE03017

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 13:25
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : MW35042023	Date Analyzed: 05/03/23 19:20
Lab Samp ID: D292-16	Dilution Factor: 1
Lab File ID: RE03026	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	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	(0.294) | 0.293	0.412	71	44-124
Decachlorobiphenyl	(0.309) | 0.297	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 : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE03017	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 14:00
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID : QC24042023EB04	Date Analyzed: 05/03/23 19:41
Lab Samp ID: D292-17	Dilution Factor: 1
Lab File ID: RE03027	Matrix: WATER
Ext Btch ID: 23CPE001W	% Moisture: NA
Calib. Ref.: RE03016	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	0.312 | (0.316)	0.408	77	44-124
Decachlorobiphenyl	(0.303) | 0.293	0.408	74	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.: RE03017	

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW3520C/8082A
PCBS

A total of twelve(12) water samples were received on 04/26/23 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. CPE001WB - 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. 60E001WL/60E001WC 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. : 23D292
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	CPE001WB	1	NA	05/02/2316:47	05/01/2310:30	KE02004A	KE02002A	CPE001W	Method Blank
LCS1W	60E001WL	1	NA	05/02/2317:07	05/01/2310:30	KE02005A	KE02002A	CPE001W	Lab Control Sample (LCS)
LCD1W	60E001WC	1	NA	05/02/2317:27	05/01/2310:30	KE02006A	KE02002A	CPE001W	LCS Duplicate
MW33042023	D292-01	1.12	NA	05/02/2317:47	05/01/2310:30	KE02007A	KE02002A	CPE001W	Field Sample
MW36D042023	D292-02	1.19	NA	05/02/2318:07	05/01/2310:30	KE02008A	KE02002A	CPE001W	Field Sample
MW34042023	D292-03	1.01	NA	05/02/2318:27	05/01/2310:30	KE02009A	KE02002A	CPE001W	Field Sample
MW26042023	D292-04	0.96	NA	05/02/2318:47	05/01/2310:30	KE02010A	KE02002A	CPE001W	Field Sample
MW36S042023	D292-05	1.14	NA	05/02/2319:07	05/01/2310:30	KE02011A	KE02002A	CPE001W	Field Sample
TMW57042023	D292-08	1.10	NA	05/02/2319:27	05/01/2310:30	KE02012A	KE02002A	CPE001W	Field Sample
TMW59042023	D292-09	1.03	NA	05/02/2319:47	05/01/2310:30	KE02013A	KE02002A	CPE001W	Field Sample
TMW61042023	D292-10	1.18	NA	05/02/2321:07	05/01/2310:30	KE02017A	KE02015A	CPE001W	Field Sample
TMW53042023	D292-11	1.22	NA	05/02/2321:27	05/01/2310:30	KE02018A	KE02015A	CPE001W	Field Sample
MW27042023	D292-13	1.10	NA	05/02/2321:47	05/01/2310:30	KE02019A	KE02015A	CPE001W	Field Sample
MW35042023	D292-16	1.03	NA	05/02/2322:07	05/01/2310:30	KE02020A	KE02015A	CPE001W	Field Sample
QC24042023EB04	D292-17	1.02	NA	05/02/2322:27	05/01/2310:30	KE02021A	KE02015A	CPE001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: MW33042023	Date Analyzed: 05/02/23 17:47
Lab Samp ID: D292-01	Dilution Factor: 1.12
Lab File ID: KE02007A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02002A	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)|0.5080	0.4480	(119)|113	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: MW36D042023	Date Analyzed: 05/02/23 18:07
Lab Samp ID: D292-02	Dilution Factor: 1.19
Lab File ID: KE02008A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02002A	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	(0.5820)|0.5367	0.4760	(122)|113	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: MW34042023	Date Analyzed: 05/02/23 18:27
Lab Samp ID: D292-03	Dilution Factor: 1.01
Lab File ID: KE02009A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02002A	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	(0.4988)|0.4478	0.4040	(123)|111	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: MW26042023	Date Analyzed: 05/02/23 18:47
Lab Samp ID: D292-04	Dilution Factor: 0.96
Lab File ID: KE02010A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	0.96	0.24	0.48
PCB-1221	(ND)|ND	0.96	0.24	0.48
PCB-1232	(ND)|ND	0.96	0.24	0.48
PCB-1242	(ND)|ND	0.96	0.24	0.48
PCB-1248	(ND)|ND	0.96	0.24	0.48
PCB-1254	(ND)|ND	0.96	0.24	0.48
PCB-1260	(ND)|ND	0.96	0.24	0.48

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.4625)|0.4299	0.3840	(120)|112	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: MW36S042023	Date Analyzed: 05/02/23 19:07
Lab Samp ID: D292-05	Dilution Factor: 1.14
Lab File ID: KE02011A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02002A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.1	0.28	0.57
PCB-1221	(ND)|ND	1.1	0.28	0.57
PCB-1232	(ND)|ND	1.1	0.28	0.57
PCB-1242	(ND)|ND	1.1	0.28	0.57
PCB-1248	(ND)|ND	1.1	0.28	0.57
PCB-1254	(ND)|ND	1.1	0.28	0.57
PCB-1260	(ND)|ND	1.1	0.28	0.57

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.5490)|0.5061	0.4560	(120)|111	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: TMW57042023	Date Analyzed: 05/02/23 19:27
Lab Samp ID: D292-08	Dilution Factor: 1.10
Lab File ID: KE02012A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02002A	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	(0.5473)|0.4890	0.4400	(124)|111	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: TMW59042023	Date Analyzed: 05/02/23 19:47
Lab Samp ID: D292-09	Dilution Factor: 1.03
Lab File ID: KE02013A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02002A	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	(0.5337)|0.4690	0.4120	(130)|114	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: TMW61042023	Date Analyzed: 05/02/23 21:07
Lab Samp ID: D292-10	Dilution Factor: 1.18
Lab File ID: KE02017A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.2	0.29	0.59
PCB-1221	(ND)|ND	1.2	0.29	0.59
PCB-1232	(ND)|ND	1.2	0.29	0.59
PCB-1242	(ND)|ND	1.2	0.29	0.59
PCB-1248	(ND)|ND	1.2	0.29	0.59
PCB-1254	(ND)|ND	1.2	0.29	0.59
PCB-1260	(ND)|ND	1.2	0.29	0.59

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.5786)|0.5218	0.4720	(123)|111	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: TMW53042023	Date Analyzed: 05/02/23 21:27
Lab Samp ID: D292-11	Dilution Factor: 1.22
Lab File ID: KE02018A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02015A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
PCB-1016	(ND)|ND	1.2	0.30	0.61
PCB-1221	(ND)|ND	1.2	0.30	0.61
PCB-1232	(ND)|ND	1.2	0.30	0.61
PCB-1242	(ND)|ND	1.2	0.30	0.61
PCB-1248	(ND)|ND	1.2	0.30	0.61
PCB-1254	(ND)|ND	1.2	0.30	0.61
PCB-1260	(ND)|ND	1.2	0.30	0.61

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
DECACHLOROBIPHENYL	(0.6049)|0.5528	0.4880	(124)|113	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: MW27042023	Date Analyzed: 05/02/23 21:47
Lab Samp ID: D292-13	Dilution Factor: 1.10
Lab File ID: KE02019A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02015A	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	(0.5493)|0.5130	0.4400	(125)|117	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: MW35042023	Date Analyzed: 05/02/23 22:07
Lab Samp ID: D292-16	Dilution Factor: 1.03
Lab File ID: KE02020A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02015A	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	(0.5055)|0.4726	0.4120	(123)|115	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 05/01/23 10:30
Sample ID: QC24042023EB04	Date Analyzed: 05/02/23 22:27
Lab Samp ID: D292-17	Dilution Factor: 1.02
Lab File ID: KE02021A	Matrix : WATER
Ext Btch ID: CPE001W	% Moisture : NA
Calib. Ref.: KE02015A	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	(0.4929)|0.4629	0.4080	(121)|113	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#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD 8151A
HERBICIDES

A total of twelve(12) water samples were received on 04/26/23 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. HED008WB - 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. HED008WL/HED008WC 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.

Samples D292-01, D292-08, and D292-09 were initially analyzed at dilution to minimize suspected matrix interference exhibited by the color of their extracts.

Dalapon results were reported from channel A due to contamination observed in channel B.

LAB CHRONICLE
HERBICIDES

Client : ECO & ASSOCIATES, INC. SDG NO. : 23D292
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	HED008WB	1	NA	05/02/2320:22	04/27/2311:00	WE02003A	WE02002A	HED008W	Method Blank
LCS1W	HED008WL	1	NA	05/02/2320:51	04/27/2311:00	WE02004A	WE02002A	HED008W	Lab Control Sample (LCS)
LCD1W	HED008WC	1	NA	05/02/2321:19	04/27/2311:00	WE02005A	WE02002A	HED008W	LCS Duplicate
MW33042023	D292-01I	2	NA	05/02/2321:48	04/27/2311:00	WE02006A	WE02002A	HED008W	Diluted Sample
MW36D042023	D292-02	1	NA	05/02/2322:16	04/27/2311:00	WE02007A	WE02002A	HED008W	Field Sample
MW34042023	D292-03	1	NA	05/02/2322:44	04/27/2311:00	WE02008A	WE02002A	HED008W	Field Sample
MW26042023	D292-04	1	NA	05/02/2323:13	04/27/2311:00	WE02009A	WE02002A	HED008W	Field Sample
MW36S042023	D292-05	1	NA	05/02/2323:41	04/27/2311:00	WE02010A	WE02002A	HED008W	Field Sample
TMW57042023	D292-08I	2	NA	05/03/2301:06	04/27/2311:00	WE02013A	WE02012A	HED008W	Diluted Sample
TMW59042023	D292-09I	2	NA	05/03/2301:35	04/27/2311:00	WE02014A	WE02012A	HED008W	Diluted Sample
TMW61042023	D292-10	1	NA	05/03/2302:03	04/27/2311:00	WE02015A	WE02012A	HED008W	Field Sample
TMW53042023	D292-11	1	NA	05/03/2302:31	04/27/2311:00	WE02016A	WE02012A	HED008W	Field Sample
MW27042023	D292-13	1	NA	05/03/2303:00	04/27/2311:00	WE02017A	WE02012A	HED008W	Field Sample
MW35042023	D292-16	1	NA	05/03/2303:28	04/27/2311:00	WE02018A	WE02012A	HED008W	Field Sample
QC24042023EB04	D292-17	1	NA	05/03/2303:56	04/27/2311:00	WE02019A	WE02012A	HED008W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: MW33042023	Date Analyzed: 05/02/23 21:48
Lab Samp ID: D292-01I	Dilution Factor: 2
Lab File ID: WE02006A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02002A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	2.0	0.20	0.40
2,4-DB	(ND) | ND	2.0	0.20	0.40
2,4,5-T	(ND) | ND	2.0	0.20	0.40
2,4,5-TP (SILVEX)	(ND) | ND	2.0	0.20	0.40
DALAPON	(ND) | 0.80J	2.0	0.20	0.40
DICAMBA	(ND) | ND	2.0	0.20	0.40
DICHLOROPROP	(ND) | ND	2.0	0.20	0.40
DINOSEB	(ND) | ND	2.0	0.20	0.40
MCPA	(ND) | ND	80	20	40

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(11.74) | 11.44	10.00	(117) | 114	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: MW36D042023	Date Analyzed: 05/02/23 22:16
Lab Samp ID: D292-02	Dilution Factor: 1
Lab File ID: WE02007A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02002A	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) | 0.70J	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	9.554 | (10.17)	10.00	95.5 | (102)	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: MW34042023	Date Analyzed: 05/02/23 22:44
Lab Samp ID: D292-03	Dilution Factor: 1
Lab File ID: WE02008A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02002A	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) | 0.72J	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	9.410 | (9.901)	10.00	94.1 | (99.0)	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: MW26042023	Date Analyzed: 05/02/23 23:13
Lab Samp ID: D292-04	Dilution Factor: 1
Lab File ID: WE02009A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02002A	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) | 0.51J	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	9.732 | (9.978)	10.00	97.3 | (99.8)	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: MW36S042023	Date Analyzed: 05/02/23 23:41
Lab Samp ID: D292-05	Dilution Factor: 1
Lab File ID: WE02010A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02002A	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) | 0.54J	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	9.804 | (10.01)	10.00	98.0 | (100)	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: TMW57042023	Date Analyzed: 05/03/23 01:06
Lab Samp ID: D292-08I	Dilution Factor: 2
Lab File ID: WE02013A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02012A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	2.0	0.20	0.40
2,4-DB	(ND) | ND	2.0	0.20	0.40
2,4,5-T	(ND) | ND	2.0	0.20	0.40
2,4,5-TP (SILVEX)	(ND) | ND	2.0	0.20	0.40
DALAPON	(ND) | 1.4J	2.0	0.20	0.40
DICAMBA	(ND) | ND	2.0	0.20	0.40
DICHLOROPROP	(ND) | ND	2.0	0.20	0.40
DINOSEB	(ND) | ND	2.0	0.20	0.40
MCPA	(ND) | ND	80	20	40

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	10.55 | (10.83)	10.00	106 | (108)	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: TMW59042023	Date Analyzed: 05/03/23 01:35
Lab Samp ID: D292-09I	Dilution Factor: 2
Lab File ID: WE02014A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02012A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | 0.47J	2.0	0.20	0.40
2,4-DB	(0.51J) | 0.51J	2.0	0.20	0.40
2,4,5-T	(ND) | ND	2.0	0.20	0.40
2,4,5-TP (SILVEX)	(ND) | ND	2.0	0.20	0.40
DALAPON	(ND) | 1.1J	2.0	0.20	0.40
DICAMBA	(ND) | ND	2.0	0.20	0.40
DICHLOROPROP	(ND) | ND	2.0	0.20	0.40
DINOSEB	(ND) | ND	2.0	0.20	0.40
MCPA	(ND) | ND	80	20	40

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	8.520 | (10.59)	10.00	85.2 | (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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: TMW61042023	Date Analyzed: 05/03/23 02:03
Lab Samp ID: D292-10	Dilution Factor: 1
Lab File ID: WE02015A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02012A	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) | 1.1	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	9.223 | (9.416)	10.00	92.2 | (94.2)	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: TMW53042023	Date Analyzed: 05/03/23 02:31
Lab Samp ID: D292-11	Dilution Factor: 1
Lab File ID: WE02016A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02012A	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) | 0.97J	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	(8.588) | 8.380	10.00	(85.9) | 83.8	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: MW27042023	Date Analyzed: 05/03/23 03:00
Lab Samp ID: D292-13	Dilution Factor: 1
Lab File ID: WE02017A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02012A	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) | 0.98J	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	9.136 | (9.227)	10.00	91.4 | (92.3)	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: MW35042023	Date Analyzed: 05/03/23 03:28
Lab Samp ID: D292-16	Dilution Factor: 1
Lab File ID: WE02018A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02012A	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)|0.68J	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	(9.544)|9.508	10.00	(95.4)|95.1	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/27/23 11:00
Sample ID: QC24042023EB04	Date Analyzed: 05/03/23 03:56
Lab Samp ID: D292-17	Dilution Factor: 1
Lab File ID: WE02019A	Matrix : WATER
Ext Btch ID: HED008W	% Moisture : NA
Calib. Ref.: WE02012A	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) | 0.73J	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	9.493 | (9.599)	10.00	94.9 | (96.0)	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#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW8330B
EXPLOSIVES

A total of sixteen(16) water samples were received on 04/26/23 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. EXD017WB - 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. 35D017WL/35D017WC 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 : 23D292

METHOD SW8330B
EXPLOSIVES

A total of sixteen(16) water samples were received on 04/26/23 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. EXD017WB - 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. EXD017WL/EXD017WC 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: D292-14I and -15I - 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.

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D292
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	EXD017WB	1	NA	05/18/2318:04	04/28/2311:00	XE15091A	XE15088A	EXD017W	Method Blank
LCS1W	EXD017WL	1	NA	05/18/2318:52	04/28/2311:00	XE15092A	XE15088A	EXD017W	Lab Control Sample (LCS)
LCD1W	EXD017WC	1	NA	05/18/2319:48	04/28/2311:00	XE15093A	XE15088A	EXD017W	LCS Duplicate
MW33042023	D292-01	1	NA	05/18/2322:21	04/28/2311:00	XE15096A	XE15088A	EXD017W	Field Sample
MW36D042023	D292-02	1	NA	05/18/2323:18	04/28/2311:00	XE15097A	XE15088A	EXD017W	Field Sample
MW34042023	D292-03	1	NA	05/19/2300:06	04/28/2311:00	XE15098A	XE15088A	EXD017W	Field Sample
MW26042023	D292-04	1	NA	05/19/2301:02	04/28/2311:00	XE15099A	XE15088A	EXD017W	Field Sample
MW36S042023	D292-05	1	NA	05/19/2303:36	04/28/2311:00	XE15102A	XE15100A	EXD017W	Field Sample
MW23042023	D292-06	1	NA	05/19/2304:32	04/28/2311:00	XE15103A	XE15100A	EXD017W	Field Sample
TMW57042023	D292-08	1	NA	05/19/2305:20	04/28/2311:00	XE15104A	XE15100A	EXD017W	Field Sample
TMW59042023	D292-09	1	NA	05/19/2306:17	04/28/2311:00	XE15105A	XE15100A	EXD017W	Field Sample
TMW59042023DL	D292-09I	10	NA	05/22/2314:46	04/28/2311:00	XE22006A	XE22002A	EXD017W	Diluted Sample
TMW61042023	D292-10	1	NA	05/19/2307:05	04/28/2311:00	XE15106A	XE15100A	EXD017W	Field Sample
TMW53042023	D292-11	1	NA	05/19/2308:01	04/28/2311:00	XE15107A	XE15100A	EXD017W	Field Sample
TMW24042023	D292-12	1	NA	05/19/2308:50	04/28/2311:00	XE15108A	XE15100A	EXD017W	Field Sample
MW27042023	D292-13	1	NA	05/19/2309:46	04/28/2311:00	XE15109A	XE15100A	EXD017W	Field Sample
TMW03042023	D292-14	1	NA	05/19/2310:34	04/28/2311:00	XE15110A	XE15100A	EXD017W	Field Sample
TMW03042023DL	D292-14I	100	NA	05/22/2315:34	04/28/2311:00	XE22007A	XE22002A	EXD017W	Diluted Sample
TMW03042023D	D292-15	1	NA	05/19/2311:31	04/28/2311:00	XE15111A	XE15100A	EXD017W	Field Sample
TMW03042023DDL	D292-15I	100	NA	05/22/2316:31	04/28/2311:00	XE22008A	XE22002A	EXD017W	Diluted Sample
MW35042023	D292-16	1	NA	05/22/2313:01	04/28/2311:00	XE22004A	XE22002A	EXD017W	Field Sample
QC24042023EB04	D292-17	1	NA	05/22/2313:49	04/28/2311:00	XE22005A	XE22002A	EXD017W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D292
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	EXD017WB	1	NA	05/18/2318:04	04/28/2311:00	XE15091A	XE15089A	EXD017W	Method Blank
LCS1W	35D017WL	1	NA	05/18/2320:37	04/28/2311:00	XE15094A	XE15089A	EXD017W	Lab Control Sample (LCS)
LCD1W	35D017WC	1	NA	05/18/2321:33	04/28/2311:00	XE15095A	XE15089A	EXD017W	LCS Duplicate
MW33042023	D292-01	1	NA	05/18/2322:21	04/28/2311:00	XE15096A	XE15089A	EXD017W	Field Sample
MW36D042023	D292-02	1	NA	05/18/2323:18	04/28/2311:00	XE15097A	XE15089A	EXD017W	Field Sample
MW34042023	D292-03	1	NA	05/19/2300:06	04/28/2311:00	XE15098A	XE15089A	EXD017W	Field Sample
MW26042023	D292-04	1	NA	05/19/2301:02	04/28/2311:00	XE15099A	XE15089A	EXD017W	Field Sample
MW36S042023	D292-05	1	NA	05/19/2303:36	04/28/2311:00	XE15102A	XE15101A	EXD017W	Field Sample
MW23042023	D292-06	1	NA	05/19/2304:32	04/28/2311:00	XE15103A	XE15101A	EXD017W	Field Sample
TMW57042023	D292-08	1	NA	05/19/2305:20	04/28/2311:00	XE15104A	XE15101A	EXD017W	Field Sample
TMW59042023	D292-09	1	NA	05/19/2306:17	04/28/2311:00	XE15105A	XE15101A	EXD017W	Field Sample
TMW61042023	D292-10	1	NA	05/19/2307:05	04/28/2311:00	XE15106A	XE15101A	EXD017W	Field Sample
TMW53042023	D292-11	1	NA	05/19/2308:01	04/28/2311:00	XE15107A	XE15101A	EXD017W	Field Sample
TMW24042023	D292-12	1	NA	05/19/2308:50	04/28/2311:00	XE15108A	XE15101A	EXD017W	Field Sample
MW27042023	D292-13	1	NA	05/19/2309:46	04/28/2311:00	XE15109A	XE15101A	EXD017W	Field Sample
TMW03042023	D292-14	1	NA	05/19/2310:34	04/28/2311:00	XE15110A	XE15101A	EXD017W	Field Sample
TMW03042023D	D292-15	1	NA	05/19/2311:31	04/28/2311:00	XE15111A	XE15101A	EXD017W	Field Sample
MW35042023	D292-16	1	NA	05/22/2313:01	04/28/2311:00	XE22004A	XE22003A	EXD017W	Field Sample
QC24042023EB04	D292-17	1	NA	05/22/2313:49	04/28/2311:00	XE22005A	XE22003A	EXD017W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW33042023	Date Analyzed: 05/18/23 22:21
Lab Samp ID: D292-01	Dilution Factor: 1
Lab File ID: XE15096A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15088A	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	3.26	4.000	81.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW33042023	Date Analyzed: 05/18/23 22:21
Lab Samp ID: D292-01	Dilution Factor: 1
Lab File ID: XE15096A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15089A	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	3.26	4.000	81.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW36D042023	Date Analyzed: 05/18/23 23:18
Lab Samp ID: D292-02	Dilution Factor: 1
Lab File ID: XE15097A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15088A	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	2.72	4.000	67.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW36D042023	Date Analyzed: 05/18/23 23:18
Lab Samp ID: D292-02	Dilution Factor: 1
Lab File ID: XE15097A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15089A	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	2.72	4.000	67.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW34042023	Date Analyzed: 05/19/23 00:06
Lab Samp ID: D292-03	Dilution Factor: 1
Lab File ID: XE15098A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15088A	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	3.14	4.000	78.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW34042023	Date Analyzed: 05/19/23 00:06
Lab Samp ID: D292-03	Dilution Factor: 1
Lab File ID: XE15098A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15089A	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	3.14	4.000	78.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW26042023	Date Analyzed: 05/19/23 01:02
Lab Samp ID: D292-04	Dilution Factor: 1
Lab File ID: XE15099A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15088A	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	3.18	4.000	79.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW26042023	Date Analyzed: 05/19/23 01:02
Lab Samp ID: D292-04	Dilution Factor: 1
Lab File ID: XE15099A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15089A	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	3.18	4.000	79.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW36S042023	Date Analyzed: 05/19/23 03:36
Lab Samp ID: D292-05	Dilution Factor: 1
Lab File ID: XE15102A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	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	3.32	4.000	82.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW36S042023	Date Analyzed: 05/19/23 03:36
Lab Samp ID: D292-05	Dilution Factor: 1
Lab File ID: XE15102A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	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	3.32	4.000	82.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW23042023	Date Analyzed: 05/19/23 04:32
Lab Samp ID: D292-06	Dilution Factor: 1
Lab File ID: XE15103A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	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	3.31	4.000	82.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW23042023	Date Analyzed: 05/19/23 04:32
Lab Samp ID: D292-06	Dilution Factor: 1
Lab File ID: XE15103A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	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	3.31	4.000	82.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW57042023	Date Analyzed: 05/19/23 05:20
Lab Samp ID: D292-08	Dilution Factor: 1
Lab File ID: XE15104A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW57042023	Date Analyzed: 05/19/23 05:20
Lab Samp ID: D292-08	Dilution Factor: 1
Lab File ID: XE15104A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	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	: 04/24/23
Project	: USACE WINGATE	Date Received	: 04/26/23
Batch No.	: 23D292	Date Extracted	: 04/28/23 11:00
Sample ID	: TMW59042023	Date Analyzed	: 05/19/23 06:17 # 05/22/23 14:46
Lab Samp ID	: D292-09 #D292-09I	Dilution Factor	: 1 # 10
Lab File ID	: XE15105A #XE22006A	Matrix	: WATER
Ext Btch ID	: EXD017W	% Moisture	: NA
Calib. Ref.	: XE15100A #XE22002A	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	64	10	1.0	2.0
	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	3.26	4.000	81.5	60-140
#	3,4-DINITROTOLUENE	3.47	4.000	86.8	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW59042023	Date Analyzed: 05/19/23 06:17
Lab Samp ID: D292-09	Dilution Factor: 1
Lab File ID: XE15105A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	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	61E	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	3.26	4.000	81.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW59042023	Date Analyzed: 05/19/23 06:17
Lab Samp ID: D292-09	Dilution Factor: 1
Lab File ID: XE15105A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	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	3.26	4.000	81.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW59042023DL	Date Analyzed: 05/22/23 14:46
Lab Samp ID: D292-09I	Dilution Factor: 10
Lab File ID: XE22006A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE22002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	10	1.0	2.0
RDX	64	10	1.0	2.0
1,3,5-TRINITROBENZENE	ND	10	1.0	2.0
1,3-DINITROBENZENE	ND	10	1.0	2.0
TETRYL	ND	10	1.0	2.0
NITROBENZENE	ND	10	1.0	2.0
2,4,6-TRINITROTOLUENE	ND	10	1.0	2.0
4-AMINO-2,6-DINITROTOLUENE	ND	10	1.0	2.0
2-AMINO-4,6-DINITROTOLUENE	ND	10	1.0	2.0
2,6-DINITROTOLUENE	ND	10	1.0	2.0
2,4-DINITROTOLUENE	ND	10	1.0	2.0
2-NITROTOLUENE	ND	10	1.0	2.0
3-NITROTOLUENE	ND	10	1.0	2.0
4-NITROTOLUENE	ND	10	1.0	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	3.47	4.000	86.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW61042023	Date Analyzed: 05/19/23 07:05
Lab Samp ID: D292-10	Dilution Factor: 1
Lab File ID: XE15106A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	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	3.25	4.000	81.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW61042023	Date Analyzed: 05/19/23 07:05
Lab Samp ID: D292-10	Dilution Factor: 1
Lab File ID: XE15106A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	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	3.25	4.000	81.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW53042023	Date Analyzed: 05/19/23 08:01
Lab Samp ID: D292-11	Dilution Factor: 1
Lab File ID: XE15107A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	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	3.38	4.000	84.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW53042023	Date Analyzed: 05/19/23 08:01
Lab Samp ID: D292-11	Dilution Factor: 1
Lab File ID: XE15107A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	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	3.38	4.000	84.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW24042023	Date Analyzed: 05/19/23 08:50
Lab Samp ID: D292-12	Dilution Factor: 1
Lab File ID: XE15108A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	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	3.38	4.000	84.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW24042023	Date Analyzed: 05/19/23 08:50
Lab Samp ID: D292-12	Dilution Factor: 1
Lab File ID: XE15108A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	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	3.38	4.000	84.5	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW27042023	Date Analyzed: 05/19/23 09:46
Lab Samp ID: D292-13	Dilution Factor: 1
Lab File ID: XE15109A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	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	3.38	4.000	84.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW27042023	Date Analyzed: 05/19/23 09:46
Lab Samp ID: D292-13	Dilution Factor: 1
Lab File ID: XE15109A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	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	3.38	4.000	84.6	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW03042023	Date Analyzed: 05/19/23 10:34 # 05/22/23 15:34
Lab Samp ID: D292-14 #D292-14I	Dilution Factor: 1 # 100
Lab File ID: XE15110A #XE22007A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A #XE22002A	Instrument ID : T-081

	PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
	HMX	5.6	1.0	0.10	0.20
#	RDX	330	100	10	20
	1,3,5-TRINITROBENZENE	0.42J	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	0.99J	1.0	0.10	0.20
	2-AMINO-4,6-DINITROTOLUENE	0.60J	1.0	0.10	0.20
	2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2,4-DINITROTOLUENE	0.34J	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	4.27	4.000	107	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW03042023	Date Analyzed: 05/19/23 10:34
Lab Samp ID: D292-14	Dilution Factor: 1
Lab File ID: XE15110A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	5.6	1.0	0.10	0.20
RDX	350E	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	0.42J	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	0.99J	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	0.60J	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	0.34J	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	4.27	4.000	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW03042023	Date Analyzed: 05/19/23 10:34
Lab Samp ID: D292-14	Dilution Factor: 1
Lab File ID: XE15110A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	5.4	0.40	0.10	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
3,4-DINITROTOLUENE	4.27	4.000	107	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW03042023DL	Date Analyzed: 05/22/23 15:34
Lab Samp ID: D292-14I	Dilution Factor: 100
Lab File ID: XE22007A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE22002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	100	10	20
RDX	330	100	10	20
1,3,5-TRINITROBENZENE	ND	100	10	20
1,3-DINITROBENZENE	ND	100	10	20
TETRYL	ND	100	10	20
NITROBENZENE	ND	100	10	20
2,4,6-TRINITROTOLUENE	ND	100	10	20
4-AMINO-2,6-DINITROTOLUENE	ND	100	10	20
2-AMINO-4,6-DINITROTOLUENE	ND	100	10	20
2,6-DINITROTOLUENE	ND	100	10	20
2,4-DINITROTOLUENE	ND	100	10	20
2-NITROTOLUENE	ND	100	10	20
3-NITROTOLUENE	ND	100	10	20
4-NITROTOLUENE	ND	100	10	20

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:	04/24/23
Project	: USACE WINGATE	Date Received:	04/26/23
Batch No.	: 23D292	Date Extracted:	04/28/23 11:00
Sample ID	: TMW03042023D	Date Analyzed:	05/19/23 11:31 # 05/22/23 16:31
Lab Samp ID	: D292-15 #D292-15I	Dilution Factor:	1 # 100
Lab File ID	: XE15111A #XE22008A	Matrix :	WATER
Ext Btch ID	: EXD017W	% Moisture :	NA
Calib. Ref.	: XE15100A #XE22002A	Instrument ID :	T-081

	PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
	HMX	5.2	1.0	0.10	0.20
#	RDX	320	100	10	20
	1,3,5-TRINITROBENZENE	0.43J	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	0.62J	1.0	0.10	0.20
	2-AMINO-4,6-DINITROTOLUENE	0.49J	1.0	0.10	0.20
	2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
	2,4-DINITROTOLUENE	0.30J	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
#	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW03042023D	Date Analyzed: 05/19/23 11:31
Lab Samp ID: D292-15	Dilution Factor: 1
Lab File ID: XE15111A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15100A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	5.2	1.0	0.10	0.20
RDX	330E	1.0	0.10	0.20
1,3,5-TRINITROBENZENE	0.43J	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	0.62J	1.0	0.10	0.20
2-AMINO-4,6-DINITROTOLUENE	0.49J	1.0	0.10	0.20
2,6-DINITROTOLUENE	ND	1.0	0.10	0.20
2,4-DINITROTOLUENE	0.30J	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW03042023D	Date Analyzed: 05/19/23 11:31
Lab Samp ID: D292-15	Dilution Factor: 1
Lab File ID: XE15111A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE15101A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
3,5-DINITROANILINE	5.0	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: TMW03042023DDL	Date Analyzed: 05/22/23 16:31
Lab Samp ID: D292-15I	Dilution Factor: 100
Lab File ID: XE22008A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE22002A	Instrument ID : T-081

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
HMX	ND	100	10	20
RDX	320	100	10	20
1,3,5-TRINITROBENZENE	ND	100	10	20
1,3-DINITROBENZENE	ND	100	10	20
TETRYL	ND	100	10	20
NITROBENZENE	ND	100	10	20
2,4,6-TRINITROTOLUENE	ND	100	10	20
4-AMINO-2,6-DINITROTOLUENE	ND	100	10	20
2-AMINO-4,6-DINITROTOLUENE	ND	100	10	20
2,6-DINITROTOLUENE	ND	100	10	20
2,4-DINITROTOLUENE	ND	100	10	20
2-NITROTOLUENE	ND	100	10	20
3-NITROTOLUENE	ND	100	10	20
4-NITROTOLUENE	ND	100	10	20

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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW35042023	Date Analyzed: 05/22/23 13:01
Lab Samp ID: D292-16	Dilution Factor: 1
Lab File ID: XE22004A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE22002A	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	3.48	4.000	87.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: MW35042023	Date Analyzed: 05/22/23 13:01
Lab Samp ID: D292-16	Dilution Factor: 1
Lab File ID: XE22004A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE22003A	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	3.48	4.000	87.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: QC24042023EB04	Date Analyzed: 05/22/23 13:49
Lab Samp ID: D292-17	Dilution Factor: 1
Lab File ID: XE22005A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE22002A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 11:00
Sample ID: QC24042023EB04	Date Analyzed: 05/22/23 13:49
Lab Samp ID: D292-17	Dilution Factor: 1
Lab File ID: XE22005A	Matrix : WATER
Ext Btch ID: EXD017W	% Moisture : NA
Calib. Ref.: XE22003A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW8332
NITROGLYCERIN AND PETN

SDG#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW8332
NITROGLYCERIN AND PETN

A total of sixteen(16) water samples were received on 04/26/23 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. EXD016WB - 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. EXD016WL/EXD016WC 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. : 23D292
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	EXD016WB	1	NA	05/16/2305:54	04/28/2315:30	NE15113A	NE15106A	EXD016W	Method Blank
LCS1W	EXD016WL	1	NA	05/16/2306:03	04/28/2315:30	NE15114A	NE15106A	EXD016W	Lab Control Sample (LCS)
LCD1W	EXD016WC	1	NA	05/16/2306:12	04/28/2315:30	NE15115A	NE15106A	EXD016W	LCS Duplicate
MW33042023	D292-01	1	NA	05/16/2306:21	04/28/2315:30	NE15116A	NE15106A	EXD016W	Field Sample
MW36D042023	D292-02	1	NA	05/16/2306:30	04/28/2315:30	NE15117A	NE15106A	EXD016W	Field Sample
MW34042023	D292-03	1	NA	05/16/2306:40	04/28/2315:30	NE15118A	NE15106A	EXD016W	Field Sample
MW26042023	D292-04	1	NA	05/16/2306:49	04/28/2315:30	NE15119A	NE15106A	EXD016W	Field Sample
MW36S042023	D292-05	1	NA	05/16/2307:07	04/28/2315:30	NE15121A	NE15120A	EXD016W	Field Sample
MW23042023	D292-06	1	NA	05/16/2307:16	04/28/2315:30	NE15122A	NE15120A	EXD016W	Field Sample
TMW57042023	D292-08	1	NA	05/16/2307:25	04/28/2315:30	NE15123A	NE15120A	EXD016W	Field Sample
TMW59042023	D292-09	1	NA	05/16/2307:34	04/28/2315:30	NE15124A	NE15120A	EXD016W	Field Sample
TMW61042023	D292-10	1	NA	05/16/2307:43	04/28/2315:30	NE15125A	NE15120A	EXD016W	Field Sample
TMW53042023	D292-11	1	NA	05/16/2307:52	04/28/2315:30	NE15126A	NE15120A	EXD016W	Field Sample
TMW24042023	D292-12	1	NA	05/16/2308:01	04/28/2315:30	NE15127A	NE15120A	EXD016W	Field Sample
MW27042023	D292-13	1	NA	05/16/2308:10	04/28/2315:30	NE15128A	NE15120A	EXD016W	Field Sample
TMW03042023	D292-14	1	NA	05/16/2308:19	04/28/2315:30	NE15129A	NE15120A	EXD016W	Field Sample
TMW03042023D	D292-15	1	NA	05/16/2308:28	04/28/2315:30	NE15130A	NE15120A	EXD016W	Field Sample
MW35042023	D292-16	1	NA	05/16/2308:46	04/28/2315:30	NE15132A	NE15131A	EXD016W	Field Sample
QC24042023EB04	D292-17	1	NA	05/16/2308:55	04/28/2315:30	NE15133A	NE15131A	EXD016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: MW33042023	Date Analyzed: 05/16/23 06:21
Lab Samp ID: D292-01	Dilution Factor: 1
Lab File ID: NE15116A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: MW36D042023	Date Analyzed: 05/16/23 06:30
Lab Samp ID: D292-02	Dilution Factor: 1
Lab File ID: NE15117A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: MW34042023	Date Analyzed: 05/16/23 06:40
Lab Samp ID: D292-03	Dilution Factor: 1
Lab File ID: NE15118A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: MW26042023	Date Analyzed: 05/16/23 06:49
Lab Samp ID: D292-04	Dilution Factor: 1
Lab File ID: NE15119A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15106A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: MW36S042023	Date Analyzed: 05/16/23 07:07
Lab Samp ID: D292-05	Dilution Factor: 1
Lab File ID: NE15121A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: MW23042023	Date Analyzed: 05/16/23 07:16
Lab Samp ID: D292-06	Dilution Factor: 1
Lab File ID: NE15122A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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	532	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: TMW57042023	Date Analyzed: 05/16/23 07:25
Lab Samp ID: D292-08	Dilution Factor: 1
Lab File ID: NE15123A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: TMW59042023	Date Analyzed: 05/16/23 07:34
Lab Samp ID: D292-09	Dilution Factor: 1
Lab File ID: NE15124A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: TMW61042023	Date Analyzed: 05/16/23 07:43
Lab Samp ID: D292-10	Dilution Factor: 1
Lab File ID: NE15125A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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	532	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: TMW53042023	Date Analyzed: 05/16/23 07:52
Lab Samp ID: D292-11	Dilution Factor: 1
Lab File ID: NE15126A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: TMW24042023	Date Analyzed: 05/16/23 08:01
Lab Samp ID: D292-12	Dilution Factor: 1
Lab File ID: NE15127A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: MW27042023	Date Analyzed: 05/16/23 08:10
Lab Samp ID: D292-13	Dilution Factor: 1
Lab File ID: NE15128A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: TMW03042023	Date Analyzed: 05/16/23 08:19
Lab Samp ID: D292-14	Dilution Factor: 1
Lab File ID: NE15129A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: TMW03042023D	Date Analyzed: 05/16/23 08:28
Lab Samp ID: D292-15	Dilution Factor: 1
Lab File ID: NE15130A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15120A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: MW35042023	Date Analyzed: 05/16/23 08:46
Lab Samp ID: D292-16	Dilution Factor: 1
Lab File ID: NE15132A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15131A	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: 04/24/23
Project : USACE WINGATE	Date Received: 04/26/23
Batch No. : 23D292	Date Extracted: 04/28/23 15:30
Sample ID: QC24042023EB04	Date Analyzed: 05/16/23 08:55
Lab Samp ID: D292-17	Dilution Factor: 1
Lab File ID: NE15133A	Matrix : WATER
Ext Btch ID: EXD016W	% Moisture : NA
Calib. Ref.: NE15131A	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	515	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW6020A
METALS BY ICP-MS

A total of seventeen(17) water samples were received on 04/26/23 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. IME012WB - 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. IME012WL/IME012WC 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: D292-07M/D292-07S - Percent recoveries for Calcium(58X), Manganese(20X) and Sodium(224X) were not within MS/MSD QC limits. Percent recoveries for Magnesium(17X) and Zinc were 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. : 23D292
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	IME012WB	1	NA	07/10/2311:37	05/08/2311:58	H6G05022	H6G05020	IME012W	Method Blank
LCS1W	IME012WL	1	NA	07/10/2311:44	05/08/2311:58	H6G05023	H6G05020	IME012W	Lab Control Sample (LCS)
LCD1W	IME012WC	1	NA	07/10/2311:47	05/08/2311:58	H6G05024	H6G05020	IME012W	LCS Duplicate
MW33042023	D292-01G	5	NA	07/10/2311:50	05/08/2311:58	H6G05025	H6G05020	IME012W	Diluted Sample
MW36D042023	D292-02G	5	NA	07/10/2311:53	05/08/2311:58	H6G05026	H6G05020	IME012W	Diluted Sample
MW34042023	D292-03I	10	NA	07/10/2311:56	05/08/2311:58	H6G05027	H6G05020	IME012W	Diluted Sample
MW26042023	D292-04G	5	NA	07/10/2311:59	05/08/2311:58	H6G05028	H6G05020	IME012W	Diluted Sample
MW36S042023	D292-05I	10	NA	07/10/2312:02	05/08/2311:58	H6G05029	H6G05020	IME012W	Diluted Sample
MW23042023	D292-06G	5	NA	07/10/2312:05	05/08/2311:58	H6G05030	H6G05020	IME012W	Diluted Sample
TMW28042023	D292-07A	5	NA	07/10/2312:14	05/08/2311:58	H6G05033	H6G05031	IME012W	Analytical Spike Sample
TMW28042023	D292-07G	5	NA	07/10/2312:17	05/08/2311:58	H6G05034	H6G05031	IME012W	Diluted Sample
TMW28042023	D292-07J	25	NA	07/10/2312:19	05/08/2311:58	H6G05035	H6G05031	IME012W	Diluted Sample
TMW28042023MS	D292-07M	5	NA	07/10/2312:22	05/08/2311:58	H6G05036	H6G05031	IME012W	Matrix Spike Sample (MS)
TMW28042023MSD	D292-07S	5	NA	07/10/2312:25	05/08/2311:58	H6G05037	H6G05031	IME012W	MS Duplicate (MSD)
TMW57042023	D292-08G	5	NA	07/10/2312:28	05/08/2311:58	H6G05038	H6G05031	IME012W	Diluted Sample
TMW59042023	D292-09G	5	NA	07/10/2312:31	05/08/2311:58	H6G05039	H6G05031	IME012W	Diluted Sample
TMW61042023	D292-10I	10	NA	07/10/2312:34	05/08/2311:58	H6G05040	H6G05031	IME012W	Diluted Sample
TMW53042023	D292-11G	5	NA	07/10/2312:37	05/08/2311:58	H6G05041	H6G05031	IME012W	Diluted Sample
TMW24042023	D292-12G	5	NA	07/10/2312:40	05/08/2311:58	H6G05042	H6G05031	IME012W	Diluted Sample
MW27042023	D292-13G	5	NA	07/10/2312:49	05/08/2311:58	H6G05045	H6G05043	IME012W	Diluted Sample
TMW03042023	D292-14G	5	NA	07/10/2312:52	05/08/2311:58	H6G05046	H6G05043	IME012W	Diluted Sample
TMW03042023D	D292-15G	5	NA	07/10/2312:55	05/08/2311:58	H6G05047	H6G05043	IME012W	Diluted Sample
MW35042023	D292-16G	5	NA	07/10/2312:57	05/08/2311:58	H6G05048	H6G05043	IME012W	Diluted Sample
QC24042023EB04	D292-17	1	NA	07/10/2313:00	05/08/2311:58	H6G05049	H6G05043	IME012W	Field Sample
MW33042023	D292-01T	50	NA	07/10/2313:03	05/08/2311:58	H6G05050	H6G05043	IME012W	Diluted Sample
MW36D042023	D292-02T	50	NA	07/10/2313:06	05/08/2311:58	H6G05051	H6G05043	IME012W	Diluted Sample
MW34042023	D292-03T	50	NA	07/10/2313:09	05/08/2311:58	H6G05052	H6G05043	IME012W	Diluted Sample
MW26042023	D292-04T	50	NA	07/10/2313:12	05/08/2311:58	H6G05053	H6G05043	IME012W	Diluted Sample
MW36S042023	D292-05T	100	NA	07/10/2313:15	05/08/2311:58	H6G05054	H6G05043	IME012W	Diluted Sample
MW23042023	D292-06T	50	NA	07/10/2313:24	05/08/2311:58	H6G05057	H6G05055	IME012W	Diluted Sample
TMW28042023	D292-07A	50	NA	07/10/2313:27	05/08/2311:58	H6G05058	H6G05055	IME012W	Analytical Spike Sample
TMW28042023	D292-07T	50	NA	07/10/2313:30	05/08/2311:58	H6G05059	H6G05055	IME012W	Diluted Sample
TMW28042023	D292-07J	250	NA	07/10/2313:33	05/08/2311:58	H6G05060	H6G05055	IME012W	Diluted Sample
TMW28042023MS	D292-07M	50	NA	07/10/2313:35	05/08/2311:58	H6G05061	H6G05055	IME012W	Matrix Spike Sample (MS)
TMW28042023MSD	D292-07S	50	NA	07/10/2313:38	05/08/2311:58	H6G05062	H6G05055	IME012W	MS Duplicate (MSD)
TMW57042023	D292-08T	50	NA	07/10/2313:41	05/08/2311:58	H6G05063	H6G05055	IME012W	Diluted Sample
TMW59042023	D292-09T	50	NA	07/10/2313:44	05/08/2311:58	H6G05064	H6G05055	IME012W	Diluted Sample
TMW61042023	D292-10T	50	NA	07/10/2313:47	05/08/2311:58	H6G05065	H6G05055	IME012W	Diluted Sample
TMW53042023	D292-11T	50	NA	07/10/2313:53	05/08/2311:58	H6G05066	H6G05055	IME012W	Diluted Sample
TMW24042023	D292-12T	50	NA	07/10/2314:02	05/08/2311:58	H6G05069	H6G05067	IME012W	Diluted Sample
MW27042023	D292-13T	50	NA	07/10/2314:05	05/08/2311:58	H6G05070	H6G05067	IME012W	Diluted Sample
TMW03042023	D292-14T	50	NA	07/10/2314:08	05/08/2311:58	H6G05071	H6G05067	IME012W	Diluted Sample
TMW03042023D	D292-15T	50	NA	07/10/2314:10	05/08/2311:58	H6G05072	H6G05067	IME012W	Diluted Sample
MW35042023	D292-16T	50	NA	07/10/2314:13	05/08/2311:58	H6G05073	H6G05067	IME012W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:15
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW33042023	Date Analyzed:	07/10/23 11:50
Lab Samp ID:	D292-01G	Dilution Factor:	5
Lab File ID:	H6G05025	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05020	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	2.8J	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	9400	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	430J	1000	120	250
Lead	0.35J	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	38	5.0	1.2	2.5
Nickel	1.3J	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	7.0	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	MW33042023	Date Analyzed:	07/10/23 13:03
Lab Samp ID:	D292-01T	Dilution Factor:	50
Lab File ID:	H6G05050	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05043	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	680000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:15
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW33042023	Date Analyzed:	07/10/23 11:50
Lab Samp ID:	D292-01G	Dilution Factor:	5
Lab File ID:	H6G05025	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05020	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	2.8J	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	9400	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	430J	1000	120	250
Lead	0.35J	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	38	5.0	1.2	2.5
Nickel	1.3J	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	640000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:15
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW33042023	Date Analyzed:	07/10/23 13:03
Lab Samp ID:	D292-01T	Dilution Factor:	50
Lab File ID:	H6G05050	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05043	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	35J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	9300J	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	39J	50	12	25
Nickel	ND	50	12	25
Potassium	3500J	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	16J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW36D042023
Lab Samp ID: D292-02G
Lab File ID: H6G05026
Ext Btch ID: IME012W
Calib. Ref.: H6G05020

Date Collected: 04/24/23 07:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 11:53
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	230	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	1100	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	280	5.0	1.2	2.5
Nickel	ND	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	29J	100	25	50

Sample ID: MW36D042023
Lab Samp ID: D292-02T
Lab File ID: H6G05051
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Analyzed: 07/10/23 13:06
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:20
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW36D042023	Date Analyzed:	07/10/23 11:53
Lab Samp ID:	D292-02G	Dilution Factor:	5
Lab File ID:	H6G05026	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05020	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	230	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	1100	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	280	5.0	1.2	2.5
Nickel	ND	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	540000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	ND	5.0	1.2	2.5
Zinc	29J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:20
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW36D042023	Date Analyzed:	07/10/23 13:06
Lab Samp ID:	D292-02T	Dilution Factor:	50
Lab File ID:	H6G05051	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05043	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	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	290	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW34042023
Lab Samp ID: D292-03I
Lab File ID: H6G05027
Ext Btch ID: IME012W
Calib. Ref.: H6G05020

Date Collected: 04/24/23 07:25
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 11:56
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	720J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.3J	10	1.2	2.5
Barium	27	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	72000	2000	500	1000
Chromium	1.4J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	490J	2000	250	500
Lead	0.56J	10	0.50	1.0
Magnesium	16000	1000	200	500
Manganese	660	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	700J	2000	500	1000
Selenium	2.2J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	6.1J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW34042023
Lab Samp ID: D292-03T
Lab File ID: H6G05052
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Analyzed: 07/10/23 13:09
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1600000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:25
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:58
Sample ID: MW34042023	Date Analyzed: 07/10/23 11:56
Lab Samp ID: D292-03I	Dilution Factor: 10
Lab File ID: H6G05027	Matrix: WATER
Ext Btch ID: IME012W	% Moisture: NA
Calib. Ref.: H6G05020	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	720J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	1.3J	10	1.2	2.5
Barium	27	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	72000	2000	500	1000
Chromium	1.4J	10	1.0	2.0
Cobalt	ND	7.5	1.0	2.0
Copper	ND	20	5.0	10
Iron	490J	2000	250	500
Lead	0.56J	10	0.50	1.0
Magnesium	16000	1000	200	500
Manganese	660	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	700J	2000	500	1000
Selenium	2.2J	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	6.1J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:25
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW34042023	Date Analyzed:	07/10/23 13:09
Lab Samp ID:	D292-03T	Dilution Factor:	50
Lab File ID:	H6G05052	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05043	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	73000	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	660	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW26042023
Lab Samp ID: D292-04G
Lab File ID: H6G05028
Ext Btch ID: IME012W
Calib. Ref.: H6G05020

Date Collected: 04/24/23 07:55
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 11:59
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	500J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	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	100000	1000	250	500
Chromium	15	5.0	0.50	1.0
Cobalt	1.3J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	420J	1000	120	250
Lead	0.29J	5.0	0.25	0.50
Magnesium	19000	500	100	250
Manganese	1400	5.0	1.2	2.5
Nickel	23	5.0	1.2	2.5
Potassium	770J	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	34J	100	25	50

Sample ID: MW26042023
Lab Samp ID: D292-04T
Lab File ID: H6G05053
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Analyzed: 07/10/23 13:12
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1000000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW26042023	Date Analyzed:	07/10/23 11:59
Lab Samp ID:	D292-04G	Dilution Factor:	5
Lab File ID:	H6G05028	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05020	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	500J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	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	100000	1000	250	500
Chromium	15	5.0	0.50	1.0
Cobalt	1.3J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	420J	1000	120	250
Lead	0.29J	5.0	0.25	0.50
Magnesium	19000	500	100	250
Manganese	1400	5.0	1.2	2.5
Nickel	23	5.0	1.2	2.5
Potassium	770J	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	3.3J	5.0	1.2	2.5
Zinc	34J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW26042023	Date Analyzed:	07/10/23 13:12
Lab Samp ID:	D292-04T	Dilution Factor:	50
Lab File ID:	H6G05053	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05043	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	100000	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	19000	5000	1000	2500
Manganese	1400	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW36S042023
Lab Samp ID: D292-05I
Lab File ID: H6G05029
Ext Btch ID: IME012W
Calib. Ref.: H6G05020

Date Collected: 04/24/23 07:55
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:02
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	380J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	9.2J	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	1.8J	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	130000	1000	200	500
Manganese	1400	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1800J	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: MW36S042023
Lab Samp ID: D292-05T
Lab File ID: H6G05054
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Analyzed: 07/10/23 13:15
Dilution Factor: 100
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2000000	20000	5000	10000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW36S042023	Date Analyzed:	07/10/23 12:02
Lab Samp ID:	D292-05I	Dilution Factor:	10
Lab File ID:	H6G05029	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05020	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	380J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	9.2J	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	1.8J	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	130000	1000	200	500
Manganese	1400	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1800J	2000	500	1000
Selenium	ND	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW36S042023	Date Analyzed:	07/10/23 13:15
Lab Samp ID:	D292-05T	Dilution Factor:	100
Lab File ID:	H6G05054	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05043	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	300000	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	1400	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW23042023
Lab Samp ID: D292-06G
Lab File ID: H6G05030
Ext Btch ID: IME012W
Calib. Ref.: H6G05020

Date Collected: 04/24/23 08:30
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:05
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	2.3J	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	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	6100	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	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: MW23042023
Lab Samp ID: D292-06T
Lab File ID: H6G05057
Ext Btch ID: IME012W
Calib. Ref.: H6G05055

Date Analyzed: 07/10/23 13:24
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	490000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW23042023	Date Analyzed:	07/10/23 12:05
Lab Samp ID:	D292-06G	Dilution Factor:	5
Lab File ID:	H6G05030	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05020	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	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	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	6100	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	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	480000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 08:30
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MW23042023	Date Analyzed:	07/10/23 13:24
Lab Samp ID:	D292-06T	Dilution Factor:	50
Lab File ID:	H6G05057	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05055	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	6400	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	490000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW28042023
Lab Samp ID: D292-07G
Lab File ID: H6G05034
Ext Btch ID: IME012W
Calib. Ref.: H6G05031

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:17
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	61	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	170000	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	440J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	51000	500	100	250
Manganese	590	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	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: TMW28042023
Lab Samp ID: D292-07T
Lab File ID: H6G05059
Ext Btch ID: IME012W
Calib. Ref.: H6G05055

Date Analyzed: 07/10/23 13:30
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	670000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:20
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW28042023	Date Analyzed:	07/10/23 12:17
Lab Samp ID:	D292-07G	Dilution Factor:	5
Lab File ID:	H6G05034	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05031	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	61	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	170000	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	440J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	51000	500	100	250
Manganese	590	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	640000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 09:20
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:58
Sample ID: TMW28042023	Date Analyzed: 07/10/23 13:30
Lab Samp ID: D292-07T	Dilution Factor: 50
Lab File ID: H6G05059	Matrix: WATER
Ext Btch ID: IME012W	% Moisture: NA
Calib. Ref.: H6G05055	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	57	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	180000	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	51000	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW57042023
Lab Samp ID: D292-08G
Lab File ID: H6G05038
Ext Btch ID: IME012W
Calib. Ref.: H6G05031

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:28
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	710	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	5.0	0.62	1.2
Barium	50	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	1.8J	5.0	0.50	1.0
Cobalt	0.91J	3.7	0.50	1.0
Copper	6.4J	10	2.5	5.0
Iron	510J	1000	120	250
Lead	0.64J	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	240	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	9.7	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	4.2J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW57042023
Lab Samp ID: D292-08T
Lab File ID: H6G05063
Ext Btch ID: IME012W
Calib. Ref.: H6G05055

Date Analyzed: 07/10/23 13:41
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	540000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:20
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW57042023	Date Analyzed:	07/10/23 12:28
Lab Samp ID:	D292-08G	Dilution Factor:	5
Lab File ID:	H6G05038	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05031	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	710	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.5J	5.0	0.62	1.2
Barium	50	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	1.8J	5.0	0.50	1.0
Cobalt	0.91J	3.7	0.50	1.0
Copper	6.4J	10	2.5	5.0
Iron	510J	1000	120	250
Lead	0.64J	5.0	0.25	0.50
Magnesium	2900	500	100	250
Manganese	240	5.0	1.2	2.5
Nickel	1.8J	5.0	1.2	2.5
Potassium	630J	1000	250	500
Selenium	9.7	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	4.2J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:20
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW57042023	Date Analyzed:	07/10/23 13:41
Lab Samp ID:	D292-08T	Dilution Factor:	50
Lab File ID:	H6G05063	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05055	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	14000	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	250	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW59042023
Lab Samp ID: D292-09G
Lab File ID: H6G05039
Ext Btch ID: IME012W
Calib. Ref.: H6G05031

Date Collected: 04/24/23 09:40
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:31
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1700	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	3.4J	5.0	0.62	1.2
Barium	46	5.0	1.2	2.5
Beryllium	0.53J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	51000	1000	250	500
Chromium	7.2	5.0	0.50	1.0
Cobalt	3.3J	3.7	0.50	1.0
Copper	25	10	2.5	5.0
Iron	3100	1000	120	250
Lead	4.2J	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	400	5.0	1.2	2.5
Nickel	4.8J	5.0	1.2	2.5
Potassium	950J	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	13	5.0	1.2	2.5
Zinc	32J	100	25	50

Sample ID: TMW59042023
Lab Samp ID: D292-09T
Lab File ID: H6G05064
Ext Btch ID: IME012W
Calib. Ref.: H6G05055

Date Analyzed: 07/10/23 13:44
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW59042023
Lab Samp ID: D292-09G
Lab File ID: H6G05039
Ext Btch ID: IME012W
Calib. Ref.: H6G05031

Date Collected: 04/24/23 09:40
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:31
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1700	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	3.4J	5.0	0.62	1.2
Barium	46	5.0	1.2	2.5
Beryllium	0.53J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	51000	1000	250	500
Chromium	7.2	5.0	0.50	1.0
Cobalt	3.3J	3.7	0.50	1.0
Copper	25	10	2.5	5.0
Iron	3100	1000	120	250
Lead	4.2J	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	400	5.0	1.2	2.5
Nickel	4.8J	5.0	1.2	2.5
Potassium	950J	1000	250	500
Selenium	1.5J	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	13	5.0	1.2	2.5
Zinc	32J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 09:40
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW59042023	Date Analyzed:	07/10/23 13:44
Lab Samp ID:	D292-09T	Dilution Factor:	50
Lab File ID:	H6G05064	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05055	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1700J	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	50000	10000	2500	5000
Chromium	ND	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	1400J	10000	1200	2500
Lead	2.8J	50	2.5	5.0
Magnesium	11000	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	790000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW61042023
Lab Samp ID: D292-10I
Lab File ID: H6G05040
Ext Btch ID: IME012W
Calib. Ref.: H6G05031

Date Collected: 04/24/23 10:10
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:34
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	310J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	32	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	1000	10	2.5	5.0
Nickel	11	10	2.5	5.0
Potassium	740J	2000	500	1000
Selenium	1.7J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	6.2J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW61042023
Lab Samp ID: D292-10T
Lab File ID: H6G05065
Ext Btch ID: IME012W
Calib. Ref.: H6G05055

Date Analyzed: 07/10/23 13:47
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1500000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:10
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW61042023	Date Analyzed:	07/10/23 12:34
Lab Samp ID:	D292-10I	Dilution Factor:	10
Lab File ID:	H6G05040	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05031	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	310J	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	ND	10	1.2	2.5
Barium	32	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	1000	10	2.5	5.0
Nickel	11	10	2.5	5.0
Potassium	740J	2000	500	1000
Selenium	1.7J	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	6.2J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:10
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW61042023	Date Analyzed:	07/10/23 13:47
Lab Samp ID:	D292-10T	Dilution Factor:	50
Lab File ID:	H6G05065	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05055	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	66000	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	1000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW53042023
Lab Samp ID: D292-11G
Lab File ID: H6G05041
Ext Btch ID: IME012W
Calib. Ref.: H6G05031

Date Collected: 04/24/23 10:30
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:37
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	3.1J	5.0	0.62	1.2
Barium	290	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8500	1000	250	500
Chromium	5.5	5.0	0.50	1.0
Cobalt	1.5J	3.7	0.50	1.0
Copper	3.2J	10	2.5	5.0
Iron	2600	1000	120	250
Lead	2.8J	5.0	0.25	0.50
Magnesium	1900	500	100	250
Manganese	190	5.0	1.2	2.5
Nickel	3.7J	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	8.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW53042023
Lab Samp ID: D292-11T
Lab File ID: H6G05066
Ext Btch ID: IME012W
Calib. Ref.: H6G05055

Date Analyzed: 07/10/23 13:53
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	360000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 10:30
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:58
Sample ID: TMW53042023	Date Analyzed: 07/10/23 12:37
Lab Samp ID: D292-11G	Dilution Factor: 5
Lab File ID: H6G05041	Matrix: WATER
Ext Btch ID: IME012W	% Moisture: NA
Calib. Ref.: H6G05031	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	5600	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	3.1J	5.0	0.62	1.2
Barium	290	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	8500	1000	250	500
Chromium	5.5	5.0	0.50	1.0
Cobalt	1.5J	3.7	0.50	1.0
Copper	3.2J	10	2.5	5.0
Iron	2600	1000	120	250
Lead	2.8J	5.0	0.25	0.50
Magnesium	1900	500	100	250
Manganese	190	5.0	1.2	2.5
Nickel	3.7J	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	350000E	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:30
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW53042023	Date Analyzed:	07/10/23 13:53
Lab Samp ID:	D292-11T	Dilution Factor:	50
Lab File ID:	H6G05066	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05055	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	280	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	2800J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	1800J	5000	1000	2500
Manganese	180	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW24042023
Lab Samp ID: D292-12G
Lab File ID: H6G05042
Ext Btch ID: IME012W
Calib. Ref.: H6G05031

Date Collected: 04/24/23 10:50
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:40
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	1.2J	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	40000	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	10000	500	100	250
Manganese	140	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	430J	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	3.0J	5.0	1.2	2.5
Zinc	31J	100	25	50

Sample ID: TMW24042023
Lab Samp ID: D292-12T
Lab File ID: H6G05069
Ext Btch ID: IME012W
Calib. Ref.: H6G05067

Date Analyzed: 07/10/23 14:02
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:50
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW24042023	Date Analyzed:	07/10/23 12:40
Lab Samp ID:	D292-12G	Dilution Factor:	5
Lab File ID:	H6G05042	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05031	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	1.2J	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	40000	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	10000	500	100	250
Manganese	140	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	430J	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	3.0J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:50
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW24042023	Date Analyzed:	07/10/23 14:02
Lab Samp ID:	D292-12T	Dilution Factor:	50
Lab File ID:	H6G05069	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05067	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	38J	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	11000	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW27042023
Lab Samp ID: D292-13G
Lab File ID: H6G05045
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Collected: 04/24/23 12:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:49
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1500	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	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	80000	1000	250	500
Chromium	4.0J	5.0	0.50	1.0
Cobalt	1.7J	3.7	0.50	1.0
Copper	28	10	2.5	5.0
Iron	1500	1000	120	250
Lead	2.5J	5.0	0.25	0.50
Magnesium	15000	500	100	250
Manganese	200	5.0	1.2	2.5
Nickel	2.1J	5.0	1.2	2.5
Potassium	1100	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	7.0	5.0	1.2	2.5
Zinc	41J	100	25	50

Sample ID: MW27042023
Lab Samp ID: D292-13T
Lab File ID: H6G05070
Ext Btch ID: IME012W
Calib. Ref.: H6G05067

Date Analyzed: 07/10/23 14:05
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	950000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW27042023
Lab Samp ID: D292-13G
Lab File ID: H6G05045
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Collected: 04/24/23 12:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:49
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1500	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	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	80000	1000	250	500
Chromium	4.0J	5.0	0.50	1.0
Cobalt	1.7J	3.7	0.50	1.0
Copper	28	10	2.5	5.0
Iron	1500	1000	120	250
Lead	2.5J	5.0	0.25	0.50
Magnesium	15000	500	100	250
Manganese	200	5.0	1.2	2.5
Nickel	2.1J	5.0	1.2	2.5
Potassium	1100	1000	250	500
Selenium	32	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	890000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	7.0	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 12:20
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:58
Sample ID: MW27042023	Date Analyzed: 07/10/23 14:05
Lab Samp ID: D292-13T	Dilution Factor: 50
Lab File ID: H6G05070	Matrix: WATER
Ext Btch ID: IME012W	% Moisture: NA
Calib. Ref.: H6G05067	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	1500J	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	83000	10000	2500	5000
Chromium	ND	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	16000	5000	1000	2500
Manganese	190	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	33J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW03042023
Lab Samp ID: D292-14G
Lab File ID: H6G05046
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Collected: 04/24/23 13:15
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:52
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	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	52000	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	4.6J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	470J	1000	250	500
Selenium	65	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: TMW03042023
Lab Samp ID: D292-14T
Lab File ID: H6G05071
Ext Btch ID: IME012W
Calib. Ref.: H6G05067

Date Analyzed: 07/10/23 14:08
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW03042023
Lab Samp ID: D292-14G
Lab File ID: H6G05046
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Collected: 04/24/23 13:15
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:52
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	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	52000	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	4.6J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	470J	1000	250	500
Selenium	65	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW03042023
Lab Samp ID: D292-14T
Lab File ID: H6G05071
Ext Btch ID: IME012W
Calib. Ref.: H6G05067

Date Collected: 04/24/23 13:15
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 14:08
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	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	13000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	62	50	7.5	15
Silver	ND	50	5.0	10
Sodium	970000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW03042023D
Lab Samp ID: D292-15G
Lab File ID: H6G05047
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Collected: 04/24/23 13:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:55
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	52000	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	4.6J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	66	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: TMW03042023D
Lab Samp ID: D292-15T
Lab File ID: H6G05072
Ext Btch ID: IME012W
Calib. Ref.: H6G05067

Date Analyzed: 07/10/23 14:10
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 13:20
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	TMW03042023D	Date Analyzed:	07/10/23 12:55
Lab Samp ID:	D292-15G	Dilution Factor:	5
Lab File ID:	H6G05047	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05043	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	52000	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	4.6J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	480J	1000	250	500
Selenium	66	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	2.1J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 13:20
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:58
Sample ID: TMW03042023D	Date Analyzed: 07/10/23 14:10
Lab Samp ID: D292-15T	Dilution Factor: 50
Lab File ID: H6G05072	Matrix: WATER
Ext Btch ID: IME012W	% Moisture: NA
Calib. Ref.: H6G05067	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	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	12000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	62	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW35042023
Lab Samp ID: D292-16G
Lab File ID: H6G05048
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Collected: 04/24/23 13:25
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 12:57
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	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	20000	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	42	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	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	4.5J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW35042023
Lab Samp ID: D292-16T
Lab File ID: H6G05073
Ext Btch ID: IME012W
Calib. Ref.: H6G05067

Date Analyzed: 07/10/23 14:13
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 13:25
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:58
Sample ID: MW35042023	Date Analyzed: 07/10/23 12:57
Lab Samp ID: D292-16G	Dilution Factor: 5
Lab File ID: H6G05048	Matrix: WATER
Ext Btch ID: IME012W	% Moisture: NA
Calib. Ref.: H6G05043	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	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	20000	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	42	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	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	4.5J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 13:25
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:58
Sample ID: MW35042023	Date Analyzed: 07/10/23 14:13
Lab Samp ID: D292-16T	Dilution Factor: 50
Lab File ID: H6G05073	Matrix: WATER
Ext Btch ID: IME012W	% Moisture: NA
Calib. Ref.: H6G05067	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	2800J	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: QC24042023EB04
Lab Samp ID: D292-17
Lab File ID: H6G05049
Ext Btch ID: IME012W
Calib. Ref.: H6G05043

Date Collected: 04/24/23 14:00
Date Received: 04/26/23
Date Extracted: 05/08/23 11:58
Date Analyzed: 07/10/23 13:00
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	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	72J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:58
Sample ID:	MBLK1W	Date Analyzed:	07/10/23 11:37
Lab Samp ID:	IME012WB	Dilution Factor:	1
Lab File ID:	H6G05022	Matrix:	WATER
Ext Btch ID:	IME012W	% Moisture:	NA
Calib. Ref.:	H6G05020	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of seventeen(17) water samples were received on 04/26/23 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. Chromium(0.14J <1/2 LOQ) was detected at trace level in IME013WB. 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. IME013WL/IME013WC 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: D292-07M/D292-07S - Percent recoveries for Calcium(57X), Magnesium(17X) and Sodium(216X) were not within MS/MSD QC limits. Percent recovery for Manganese(20X) 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
DISSOLVED METALS BY ICP-MS

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

SDG NO. : 23D292
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	IME013WB	1	NA	07/10/2314:22	05/08/2311:59	H6G05076	H6G05074	IME013W	Method Blank
LCS1W	IME013WL	1	NA	07/10/2314:25	05/08/2311:59	H6G05077	H6G05074	IME013W	Lab Control Sample (LCS)
LCD1W	IME013WC	1	NA	07/10/2314:33	05/08/2311:59	H6G05078	H6G05074	IME013W	LCS Duplicate
MW33042023	D292-01G	5	NA	07/10/2314:36	05/08/2311:59	H6G05079	H6G05074	IME013W	Diluted Sample
MW36D042023	D292-02G	5	NA	07/10/2314:39	05/08/2311:59	H6G05080	H6G05074	IME013W	Diluted Sample
MW34042023	D292-03I	10	NA	07/10/2314:42	05/08/2311:59	H6G05081	H6G05074	IME013W	Diluted Sample
MW26042023	D292-04G	5	NA	07/10/2314:44	05/08/2311:59	H6G05082	H6G05074	IME013W	Diluted Sample
MW36S042023	D292-05I	10	NA	07/10/2314:47	05/08/2311:59	H6G05083	H6G05074	IME013W	Diluted Sample
MW23042023	D292-06G	5	NA	07/10/2314:50	05/08/2311:59	H6G05084	H6G05074	IME013W	Diluted Sample
TMW28042023	D292-07A	5	NA	07/10/2314:59	05/08/2311:59	H6G05087	H6G05085	IME013W	Analytical Spike Sample
TMW28042023	D292-07G	5	NA	07/10/2315:02	05/08/2311:59	H6G05088	H6G05085	IME013W	Diluted Sample
TMW28042023	D292-07J	25	NA	07/10/2315:05	05/08/2311:59	H6G05089	H6G05085	IME013W	Diluted Sample
TMW28042023MS	D292-07M	5	NA	07/10/2315:08	05/08/2311:59	H6G05090	H6G05085	IME013W	Matrix Spike Sample (MS)
TMW28042023MSD	D292-07S	5	NA	07/10/2315:11	05/08/2311:59	H6G05091	H6G05085	IME013W	MS Duplicate (MSD)
TMW57042023	D292-08G	5	NA	07/10/2315:14	05/08/2311:59	H6G05092	H6G05085	IME013W	Diluted Sample
TMW59042023	D292-09G	5	NA	07/10/2315:17	05/08/2311:59	H6G05093	H6G05085	IME013W	Diluted Sample
TMW61042023	D292-10I	10	NA	07/10/2315:20	05/08/2311:59	H6G05094	H6G05085	IME013W	Diluted Sample
TMW53042023	D292-11G	5	NA	07/10/2315:23	05/08/2311:59	H6G05095	H6G05085	IME013W	Diluted Sample
TMW24042023	D292-12G	5	NA	07/10/2315:26	05/08/2311:59	H6G05096	H6G05085	IME013W	Diluted Sample
MW27042023	D292-13G	5	NA	07/10/2315:34	05/08/2311:59	H6G05099	H6G05097	IME013W	Diluted Sample
TMW03042023	D292-14G	5	NA	07/10/2315:37	05/08/2311:59	H6G05100	H6G05097	IME013W	Diluted Sample
TMW03042023D	D292-15G	5	NA	07/10/2315:41	05/08/2311:59	H6G05101	H6G05097	IME013W	Diluted Sample
MW35042023	D292-16G	5	NA	07/10/2315:44	05/08/2311:59	H6G05102	H6G05097	IME013W	Diluted Sample
QC24042023EB04	D292-17	1	NA	07/10/2315:47	05/08/2311:59	H6G05103	H6G05097	IME013W	Field Sample
MW33042023	D292-01T	50	NA	07/10/2315:50	05/08/2311:59	H6G05104	H6G05097	IME013W	Diluted Sample
MW36D042023	D292-02T	50	NA	07/10/2315:53	05/08/2311:59	H6G05105	H6G05097	IME013W	Diluted Sample
MW34042023	D292-03T	50	NA	07/10/2315:56	05/08/2311:59	H6G05106	H6G05097	IME013W	Diluted Sample
MW26042023	D292-04T	50	NA	07/10/2315:59	05/08/2311:59	H6G05107	H6G05097	IME013W	Diluted Sample
MW36S042023	D292-05T	100	NA	07/10/2316:02	05/08/2311:59	H6G05108	H6G05097	IME013W	Diluted Sample
MW23042023	D292-06T	50	NA	07/10/2316:11	05/08/2311:59	H6G05111	H6G05109	IME013W	Diluted Sample
TMW28042023	D292-07A	50	NA	07/10/2316:14	05/08/2311:59	H6G05112	H6G05109	IME013W	Analytical Spike Sample
TMW28042023	D292-07T	50	NA	07/10/2316:17	05/08/2311:59	H6G05113	H6G05109	IME013W	Diluted Sample
TMW28042023	D292-07J	250	NA	07/10/2316:20	05/08/2311:59	H6G05114	H6G05109	IME013W	Diluted Sample
TMW28042023MS	D292-07M	50	NA	07/10/2316:23	05/08/2311:59	H6G05115	H6G05109	IME013W	Matrix Spike Sample (MS)
TMW28042023MSD	D292-07S	50	NA	07/10/2316:26	05/08/2311:59	H6G05116	H6G05109	IME013W	MS Duplicate (MSD)
TMW57042023	D292-08T	50	NA	07/10/2316:29	05/08/2311:59	H6G05117	H6G05109	IME013W	Diluted Sample
TMW59042023	D292-09T	50	NA	07/10/2316:32	05/08/2311:59	H6G05118	H6G05109	IME013W	Diluted Sample
TMW61042023	D292-10T	50	NA	07/10/2316:34	05/08/2311:59	H6G05119	H6G05109	IME013W	Diluted Sample
TMW53042023	D292-11T	50	NA	07/10/2316:37	05/08/2311:59	H6G05120	H6G05109	IME013W	Diluted Sample
TMW24042023	D292-12T	50	NA	07/10/2316:46	05/08/2311:59	H6G05123	H6G05121	IME013W	Diluted Sample
MW27042023	D292-13T	50	NA	07/10/2316:49	05/08/2311:59	H6G05124	H6G05121	IME013W	Diluted Sample
TMW03042023	D292-14T	50	NA	07/10/2316:52	05/08/2311:59	H6G05125	H6G05121	IME013W	Diluted Sample
TMW03042023D	D292-15T	50	NA	07/10/2316:55	05/08/2311:59	H6G05126	H6G05121	IME013W	Diluted Sample
MW35042023	D292-16T	50	NA	07/10/2316:58	05/08/2311:59	H6G05127	H6G05121	IME013W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW33042023
Lab Samp ID: D292-01G
Lab File ID: H6G05079
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 07:15
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:36
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	3.3J	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	8400	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	2600	500	100	250
Manganese	17	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	2000	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	31J	100	25	50

Sample ID: MW33042023
Lab Samp ID: D292-01T
Lab File ID: H6G05104
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Analyzed: 07/10/23 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	670000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:15
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:59
Sample ID: MW33042023	Date Analyzed: 07/10/23 14:36
Lab Samp ID: D292-01G	Dilution Factor: 5
Lab File ID: H6G05079	Matrix: WATER
Ext Btch ID: IME013W	% Moisture: NA
Calib. Ref.: H6G05074	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	3.3J	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	8400	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	2600	500	100	250
Manganese	17	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	2000	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	7.2	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW33042023
Lab Samp ID: D292-01T
Lab File ID: H6G05104
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 07:15
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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)
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	8400J	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	19J	50	12	25
Nickel	ND	50	12	25
Potassium	2900J	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW36D042023
Lab Samp ID: D292-02G
Lab File ID: H6G05080
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 07:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:39
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	170	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	22	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	230	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	990J	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: MW36D042023
Lab Samp ID: D292-02T
Lab File ID: H6G05105
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Analyzed: 07/10/23 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	570000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 07:20
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:59
Sample ID: MW36D042023	Date Analyzed: 07/10/23 14:39
Lab Samp ID: D292-02G	Dilution Factor: 5
Lab File ID: H6G05080	Matrix: WATER
Ext Btch ID: IME013W	% Moisture: NA
Calib. Ref.: H6G05074	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	170	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	22	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	230	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	990J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW36D042023
Lab Samp ID: D292-02T
Lab File ID: H6G05105
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 07:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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	240	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	240	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW34042023
Lab Samp ID: D292-03I
Lab File ID: H6G05081
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 07:25
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:42
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	7.6J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	300000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	1.2J	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	130000	1000	200	500
Manganese	1200	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1600J	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: MW34042023
Lab Samp ID: D292-03T
Lab File ID: H6G05106
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Analyzed: 07/10/23 15:56
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2000000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW34042023
Lab Samp ID: D292-03I
Lab File ID: H6G05081
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 07:25
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:42
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	7.6J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	300000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	1.2J	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	130000	1000	200	500
Manganese	1200	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1600J	2000	500	1000
Selenium	ND	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW34042023
Lab Samp ID: D292-03T
Lab File ID: H6G05106
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 07:25
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:56
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	300000	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	140000	5000	1000	2500
Manganese	1200	50	12	25
Nickel	ND	50	12	25
Potassium	2700J	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	2000000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	250J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW26042023
Lab Samp ID: D292-04G
Lab File ID: H6G05082
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 07:55
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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	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	100000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	1000	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	3.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW26042023
Lab Samp ID: D292-04T
Lab File ID: H6G05107
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Analyzed: 07/10/23 15:59
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:59
Sample ID:	MW26042023	Date Analyzed:	07/10/23 14:44
Lab Samp ID:	D292-04G	Dilution Factor:	5
Lab File ID:	H6G05082	Matrix:	WATER
Ext Btch ID:	IME013W	% Moisture:	NA
Calib. Ref.:	H6G05074	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	100000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	2.5J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	18000	500	100	250
Manganese	1000	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	1000000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 07:55
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:59
Sample ID:	MW26042023	Date Analyzed:	07/10/23 15:59
Lab Samp ID:	D292-04T	Dilution Factor:	50
Lab File ID:	H6G05107	Matrix:	WATER
Ext Btch ID:	IME013W	% Moisture:	NA
Calib. Ref.:	H6G05097	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	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	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	1100000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	310J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW36S042023
Lab Samp ID: D292-05I
Lab File ID: H6G05083
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 07:55
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:47
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	6.2J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	300000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	1.0J	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	130000	1000	200	500
Manganese	1200	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1600J	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	2.8J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW36S042023
Lab Samp ID: D292-05T
Lab File ID: H6G05108
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Analyzed: 07/10/23 16:02
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW36S042023
Lab Samp ID: D292-05I
Lab File ID: H6G05083
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 07:55
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:47
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	6.2J	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	300000	2000	500	1000
Chromium	ND	10	1.0	2.0
Cobalt	1.0J	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	130000	1000	200	500
Manganese	1200	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	1600J	2000	500	1000
Selenium	ND	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	2.8J	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW36S042023
Lab Samp ID: D292-05T
Lab File ID: H6G05108
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 07:55
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 16:02
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	290000	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	1200	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW23042023
Lab Samp ID: D292-06G
Lab File ID: H6G05084
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 08:30
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:50
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	2.0J	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	12000	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	6100	500	100	250
Manganese	48	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	3.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW23042023
Lab Samp ID: D292-06T
Lab File ID: H6G05111
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Analyzed: 07/10/23 16:11
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	480000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW23042023
Lab Samp ID: D292-06G
Lab File ID: H6G05084
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: 04/24/23 08:30
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:50
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	2.0J	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	12000	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	6100	500	100	250
Manganese	48	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	470000E	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW23042023
Lab Samp ID: D292-06T
Lab File ID: H6G05111
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Collected: 04/24/23 08:30
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 16:11
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	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	52	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	ND	50	12	25
Zinc	250J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW28042023
Lab Samp ID: D292-07G
Lab File ID: H6G05088
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	62	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	170000	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	450J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	50000	500	100	250
Manganese	590	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	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW28042023
Lab Samp ID: D292-07T
Lab File ID: H6G05113
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Analyzed: 07/10/23 16:17
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	650000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW28042023
Lab Samp ID: D292-07G
Lab File ID: H6G05088
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	5.0	0.62	1.2
Barium	62	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	170000	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	450J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	50000	500	100	250
Manganese	590	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	650000E	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW28042023
Lab Samp ID: D292-07T
Lab File ID: H6G05113
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 16:17
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	62	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	170000	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	51000	5000	1000	2500
Manganese	610	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	280J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW57042023
Lab Samp ID: D292-08G
Lab File ID: H6G05092
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:14
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	1.2J	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	11000	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	2700	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	570J	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	2.7J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW57042023
Lab Samp ID: D292-08T
Lab File ID: H6G05117
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Analyzed: 07/10/23 16:29
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW57042023
Lab Samp ID: D292-08G
Lab File ID: H6G05092
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:14
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	1.2J	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	11000	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	2700	500	100	250
Manganese	11	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	570J	1000	250	500
Selenium	9.9	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	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW57042023
Lab Samp ID: D292-08T
Lab File ID: H6G05117
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Collected: 04/24/23 09:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 16:29
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	32J	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	2700J	5000	1000	2500
Manganese	16J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	9.4J	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	290J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW59042023
Lab Samp ID: D292-09G
Lab File ID: H6G05093
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 09:40
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:17
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	24	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	3.6J	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	9900	500	100	250
Manganese	4.0J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	700J	1000	250	500
Selenium	1.4J	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	30J	100	25	50

Sample ID: TMW59042023
Lab Samp ID: D292-09T
Lab File ID: H6G05118
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Analyzed: 07/10/23 16:32
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	780000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW59042023
Lab Samp ID: D292-09G
Lab File ID: H6G05093
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 09:40
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:17
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	24	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	3.6J	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	9900	500	100	250
Manganese	4.0J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	700J	1000	250	500
Selenium	1.4J	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	4.8J	5.0	1.2	2.5
Zinc	30J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW59042023
Lab Samp ID: D292-09T
Lab File ID: H6G05118
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Collected: 04/24/23 09:40
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 16:32
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	24J	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	9800	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	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW61042023
Lab Samp ID: D292-10I
Lab File ID: H6G05094
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 10:10
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:20
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	31	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	64000	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	19	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	640J	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	4.9J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: TMW61042023
Lab Samp ID: D292-10T
Lab File ID: H6G05119
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Analyzed: 07/10/23 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	1500000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 10:10
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:59
Sample ID: TMW61042023	Date Analyzed: 07/10/23 15:20
Lab Samp ID: D292-10I	Dilution Factor: 10
Lab File ID: H6G05094	Matrix: WATER
Ext Btch ID: IME013W	% Moisture: NA
Calib. Ref.: H6G05085	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	31	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	64000	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	19	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	640J	2000	500	1000
Selenium	1.9J	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	4.9J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW61042023
Lab Samp ID: D292-10T
Lab File ID: H6G05119
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Collected: 04/24/23 10:10
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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)
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	66000	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	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW53042023
Lab Samp ID: D292-11G
Lab File ID: H6G05095
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 10:30
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:23
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	2.4J	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	410J	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	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	1.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW53042023
Lab Samp ID: D292-11T
Lab File ID: H6G05120
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Analyzed: 07/10/23 16:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	360000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 10:30
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:59
Sample ID:	TMW53042023	Date Analyzed:	07/10/23 15:23
Lab Samp ID:	D292-11G	Dilution Factor:	5
Lab File ID:	H6G05095	Matrix:	WATER
Ext Btch ID:	IME013W	% Moisture:	NA
Calib. Ref.:	H6G05085	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	2.4J	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	410J	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	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	350000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW53042023
Lab Samp ID: D292-11T
Lab File ID: H6G05120
Ext Btch ID: IME013W
Calib. Ref.: H6G05109

Date Collected: 04/24/23 10:30
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 16:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	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	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	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	360000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW24042023
Lab Samp ID: D292-12G
Lab File ID: H6G05096
Ext Btch ID: IME013W
Calib. Ref.: H6G05085

Date Collected: 04/24/23 10:50
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:26
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	1.2J	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	40000	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	130	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	2.6J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW24042023
Lab Samp ID: D292-12T
Lab File ID: H6G05123
Ext Btch ID: IME013W
Calib. Ref.: H6G05121

Date Analyzed: 07/10/23 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	1000000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 10:50
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:59
Sample ID: TMW24042023	Date Analyzed: 07/10/23 15:26
Lab Samp ID: D292-12G	Dilution Factor: 5
Lab File ID: H6G05096	Matrix: WATER
Ext Btch ID: IME013W	% Moisture: NA
Calib. Ref.: H6G05085	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	1.2J	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	40000	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	130	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	1000000E	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW24042023
Lab Samp ID: D292-12T
Lab File ID: H6G05123
Ext Btch ID: IME013W
Calib. Ref.: H6G05121

Date Collected: 04/24/23 10:50
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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)
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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW27042023
Lab Samp ID: D292-13G
Lab File ID: H6G05099
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 12:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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	22	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	63000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	19	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	850J	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	1.4J	5.0	1.2	2.5
Zinc	39J	100	25	50

Sample ID: MW27042023
Lab Samp ID: D292-13T
Lab File ID: H6G05124
Ext Btch ID: IME013W
Calib. Ref.: H6G05121

Date Analyzed: 07/10/23 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	930000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW27042023
Lab Samp ID: D292-13G
Lab File ID: H6G05099
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 12:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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	22	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	63000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	19	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	12	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	850J	1000	250	500
Selenium	30	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	1.4J	5.0	1.2	2.5
Zinc	39J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW27042023
Lab Samp ID: D292-13T
Lab File ID: H6G05124
Ext Btch ID: IME013W
Calib. Ref.: H6G05121

Date Collected: 04/24/23 12:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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)
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	64000	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	15J	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	28J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW03042023
Lab Samp ID: D292-14G
Lab File ID: H6G05100
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 13:15
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:37
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	13	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	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	4.1J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	450J	1000	250	500
Selenium	63	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: TMW03042023
Lab Samp ID: D292-14T
Lab File ID: H6G05125
Ext Btch ID: IME013W
Calib. Ref.: H6G05121

Date Analyzed: 07/10/23 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	950000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 13:15
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:59
Sample ID:	TMW03042023	Date Analyzed:	07/10/23 15:37
Lab Samp ID:	D292-14G	Dilution Factor:	5
Lab File ID:	H6G05100	Matrix:	WATER
Ext Btch ID:	IME013W	% Moisture:	NA
Calib. Ref.:	H6G05097	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	52000	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	4.1J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	450J	1000	250	500
Selenium	63	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW03042023
Lab Samp ID: D292-14T
Lab File ID: H6G05125
Ext Btch ID: IME013W
Calib. Ref.: H6G05121

Date Collected: 04/24/23 13:15
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 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)
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	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	12000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	61	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: TMW03042023D
Lab Samp ID: D292-15G
Lab File ID: H6G05101
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 13:20
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:41
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	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	4.5J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	460J	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: TMW03042023D
Lab Samp ID: D292-15T
Lab File ID: H6G05126
Ext Btch ID: IME013W
Calib. Ref.: H6G05121

Date Analyzed: 07/10/23 16:55
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	970000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 13:20
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:59
Sample ID:	TMW03042023D	Date Analyzed:	07/10/23 15:41
Lab Samp ID:	D292-15G	Dilution Factor:	5
Lab File ID:	H6G05101	Matrix:	WATER
Ext Btch ID:	IME013W	% Moisture:	NA
Calib. Ref.:	H6G05097	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	4.5J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	460J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/24/23 13:20
Project : USACE WINGATE	Date Received: 04/26/23
SDG NO. : 23D292	Date Extracted: 05/08/23 11:59
Sample ID: TMW03042023D	Date Analyzed: 07/10/23 16:55
Lab Samp ID: D292-15T	Dilution Factor: 50
Lab File ID: H6G05126	Matrix: WATER
Ext Btch ID: IME013W	% Moisture: NA
Calib. Ref.: H6G05121	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	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	12000	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	59	50	7.5	15
Silver	ND	50	5.0	10
Sodium	970000	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW35042023
Lab Samp ID: D292-16G
Lab File ID: H6G05102
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 13:25
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:44
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	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	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	30	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	4.0J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW35042023
Lab Samp ID: D292-16T
Lab File ID: H6G05127
Ext Btch ID: IME013W
Calib. Ref.: H6G05121

Date Analyzed: 07/10/23 16:58
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	750000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MW35042023
Lab Samp ID: D292-16G
Lab File ID: H6G05102
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 13:25
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:44
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	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	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	30	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	750000E	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/24/23 13:25
Project	: USACE WINGATE	Date Received:	04/26/23
SDG NO.	: 23D292	Date Extracted:	05/08/23 11:59
Sample ID:	MW35042023	Date Analyzed:	07/10/23 16:58
Lab Samp ID:	D292-16T	Dilution Factor:	50
Lab File ID:	H6G05127	Matrix:	WATER
Ext Btch ID:	IME013W	% Moisture:	NA
Calib. Ref.:	H6G05121	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	2800J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: QC24042023EB04
Lab Samp ID: D292-17
Lab File ID: H6G05103
Ext Btch ID: IME013W
Calib. Ref.: H6G05097

Date Collected: 04/24/23 14:00
Date Received: 04/26/23
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 15:47
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	49J	100	20	50
Antimony	ND	1.0	0.25	0.50
Arsenic	ND	1.0	0.12	0.25
Barium	0.33J	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	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	0.61J	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	93J	200	50	100
Thallium	ND	0.50	0.10	0.20
Vanadium	ND	1.0	0.25	0.50
Zinc	18J	20	5.0	10

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D292
Sample ID: MBLK1W
Lab Samp ID: IME013WB
Lab File ID: H6G05076
Ext Btch ID: IME013W
Calib. Ref.: H6G05074

Date Collected: NA
Date Received: NA
Date Extracted: 05/08/23 11:59
Date Analyzed: 07/10/23 14:22
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	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of seventeen(17) water samples were received on 04/26/23 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 HGE023WB. 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. HGE023WL/HGE023WC 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 D292-07M/D292-07S. 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. : 23D292
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	HGE023WB	1	NA	05/19/2318:05	05/19/2312:41	M47E020012	M47E020	23HGE023W	Method Blank
LCS1W	HGE023WL	1	NA	05/19/2318:07	05/19/2312:41	M47E020013	M47E020	23HGE023W	Lab Control Sample (LCS)
LCD1W	HGE023WC	1	NA	05/19/2318:09	05/19/2312:41	M47E020014	M47E020	23HGE023W	LCS Duplicate
MW33042023	D292-01	1	NA	05/19/2318:11	05/19/2312:41	M47E020015	M47E020	23HGE023W	Field Sample
MW36D042023	D292-02	1	NA	05/19/2318:13	05/19/2312:41	M47E020016	M47E020	23HGE023W	Field Sample
MW34042023	D292-03	1	NA	05/19/2318:14	05/19/2312:41	M47E020017	M47E020	23HGE023W	Field Sample
MW26042023	D292-04	1	NA	05/19/2318:16	05/19/2312:41	M47E020018	M47E020	23HGE023W	Field Sample
MW36S042023	D292-05	1	NA	05/19/2318:18	05/19/2312:41	M47E020019	M47E020	23HGE023W	Field Sample
MW23042023	D292-06	1	NA	05/19/2318:20	05/19/2312:41	M47E020020	M47E020	23HGE023W	Field Sample
TMW28042023MS	D292-07M	1	NA	05/19/2318:21	05/19/2312:41	M47E020021	M47E020	23HGE023W	Matrix Spike Sample (MS)
TMW28042023MSD	D292-07S	1	NA	05/19/2318:27	05/19/2312:41	M47E020024	M47E020	23HGE023W	MS Duplicate (MSD)
TMW28042023	D292-07	1	NA	05/19/2318:30	05/19/2312:41	M47E020026	M47E020	23HGE023W	Field Sample
TMW57042023	D292-08	1	NA	05/19/2318:34	05/19/2312:41	M47E020028	M47E020	23HGE023W	Field Sample
TMW59042023	D292-09	1	NA	05/19/2318:36	05/19/2312:41	M47E020029	M47E020	23HGE023W	Field Sample
TMW61042023	D292-10	1	NA	05/19/2318:38	05/19/2312:41	M47E020030	M47E020	23HGE023W	Field Sample
TMW53042023	D292-11	1	NA	05/19/2318:39	05/19/2312:41	M47E020031	M47E020	23HGE023W	Field Sample
TMW24042023	D292-12	1	NA	05/19/2318:41	05/19/2312:41	M47E020032	M47E020	23HGE023W	Field Sample
MW27042023	D292-13	1	NA	05/19/2318:43	05/19/2312:41	M47E020033	M47E020	23HGE023W	Field Sample
TMW03042023	D292-14	1	NA	05/19/2318:48	05/19/2312:41	M47E020036	M47E020	23HGE023W	Field Sample
TMW03042023D	D292-15	1	NA	05/19/2318:50	05/19/2312:41	M47E020037	M47E020	23HGE023W	Field Sample
MW35042023	D292-16	1	NA	05/19/2318:52	05/19/2312:41	M47E020038	M47E020	23HGE023W	Field Sample
QC24042023EB04	D292-17	1	NA	05/19/2318:54	05/19/2312:41	M47E020039	M47E020	23HGE023W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D292
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	HGE023WB	ND	1	NA	0.50	0.10	0.20	05/19/2318:05	05/19/2312:41	M47E020012	M47E020	23HGE023W	NA	NA
LCS1W	HGE023WL	2.5	1	NA	0.50	0.10	0.20	05/19/2318:07	05/19/2312:41	M47E020013	M47E020	23HGE023W	NA	NA
LCD1W	HGE023WC	2.5	1	NA	0.50	0.10	0.20	05/19/2318:09	05/19/2312:41	M47E020014	M47E020	23HGE023W	NA	NA
MW33042023	D292-01	ND	1	NA	0.50	0.10	0.20	05/19/2318:11	05/19/2312:41	M47E020015	M47E020	23HGE023W	04/24/2307:15	04/26/23
MW36D042023	D292-02	ND	1	NA	0.50	0.10	0.20	05/19/2318:13	05/19/2312:41	M47E020016	M47E020	23HGE023W	04/24/2307:20	04/26/23
MW34042023	D292-03	ND	1	NA	0.50	0.10	0.20	05/19/2318:14	05/19/2312:41	M47E020017	M47E020	23HGE023W	04/24/2307:25	04/26/23
MW26042023	D292-04	ND	1	NA	0.50	0.10	0.20	05/19/2318:16	05/19/2312:41	M47E020018	M47E020	23HGE023W	04/24/2307:55	04/26/23
MW36S042023	D292-05	ND	1	NA	0.50	0.10	0.20	05/19/2318:18	05/19/2312:41	M47E020019	M47E020	23HGE023W	04/24/2307:55	04/26/23
MW23042023	D292-06	ND	1	NA	0.50	0.10	0.20	05/19/2318:20	05/19/2312:41	M47E020020	M47E020	23HGE023W	04/24/2308:30	04/26/23
TMW28042023MS	D292-07M	2.5	1	NA	0.50	0.10	0.20	05/19/2318:21	05/19/2312:41	M47E020021	M47E020	23HGE023W	04/24/2309:20	04/26/23
TMW28042023MSD	D292-07S	2.6	1	NA	0.50	0.10	0.20	05/19/2318:27	05/19/2312:41	M47E020024	M47E020	23HGE023W	04/24/2309:20	04/26/23
TMW28042023	D292-07	ND	1	NA	0.50	0.10	0.20	05/19/2318:30	05/19/2312:41	M47E020026	M47E020	23HGE023W	04/24/2309:20	04/26/23
TMW57042023	D292-08	ND	1	NA	0.50	0.10	0.20	05/19/2318:34	05/19/2312:41	M47E020028	M47E020	23HGE023W	04/24/2309:20	04/26/23
TMW59042023	D292-09	ND	1	NA	0.50	0.10	0.20	05/19/2318:36	05/19/2312:41	M47E020029	M47E020	23HGE023W	04/24/2309:40	04/26/23
TMW61042023	D292-10	ND	1	NA	0.50	0.10	0.20	05/19/2318:38	05/19/2312:41	M47E020030	M47E020	23HGE023W	04/24/2310:10	04/26/23
TMW53042023	D292-11	ND	1	NA	0.50	0.10	0.20	05/19/2318:39	05/19/2312:41	M47E020031	M47E020	23HGE023W	04/24/2310:30	04/26/23
TMW24042023	D292-12	ND	1	NA	0.50	0.10	0.20	05/19/2318:41	05/19/2312:41	M47E020032	M47E020	23HGE023W	04/24/2310:50	04/26/23
MW27042023	D292-13	ND	1	NA	0.50	0.10	0.20	05/19/2318:43	05/19/2312:41	M47E020033	M47E020	23HGE023W	04/24/2312:20	04/26/23
TMW03042023	D292-14	ND	1	NA	0.50	0.10	0.20	05/19/2318:48	05/19/2312:41	M47E020036	M47E020	23HGE023W	04/24/2313:15	04/26/23
TMW03042023D	D292-15	ND	1	NA	0.50	0.10	0.20	05/19/2318:50	05/19/2312:41	M47E020037	M47E020	23HGE023W	04/24/2313:20	04/26/23
MW35042023	D292-16	ND	1	NA	0.50	0.10	0.20	05/19/2318:52	05/19/2312:41	M47E020038	M47E020	23HGE023W	04/24/2313:25	04/26/23
QC24042023EB04	D292-17	ND	1	NA	0.50	0.10	0.20	05/19/2318:54	05/19/2312:41	M47E020039	M47E020	23HGE023W	04/24/2314:00	04/26/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of seventeen(17) water samples were received on 04/26/23 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 HGE024WB. 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. HGE024WL/HGE024WC 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 D292-07M/D292-07S. 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. : 23D292
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	HGE024WB	1	NA	05/19/2318:55	05/19/2314:08	M47E020040	M47E020	23HGE024W	Method Blank
LCS1W	HGE024WL	1	NA	05/19/2318:57	05/19/2314:08	M47E020041	M47E020	23HGE024W	Lab Control Sample (LCS)
LCD1W	HGE024WC	1	NA	05/19/2318:59	05/19/2314:08	M47E020042	M47E020	23HGE024W	LCS Duplicate
MW33042023	D292-01	1	NA	05/19/2319:01	05/19/2314:08	M47E020043	M47E020	23HGE024W	Field Sample
MW36D042023	D292-02	1	NA	05/19/2319:03	05/19/2314:08	M47E020044	M47E020	23HGE024W	Field Sample
MW34042023	D292-03	1	NA	05/19/2319:05	05/19/2314:08	M47E020045	M47E020	23HGE024W	Field Sample
MW26042023	D292-04	1	NA	05/19/2319:10	05/19/2314:08	M47E020048	M47E020	23HGE024W	Field Sample
MW36S042023	D292-05	1	NA	05/19/2319:12	05/19/2314:08	M47E020049	M47E020	23HGE024W	Field Sample
MW23042023	D292-06	1	NA	05/19/2319:14	05/19/2314:08	M47E020050	M47E020	23HGE024W	Field Sample
TMW28042023MS	D292-07M	1	NA	05/19/2319:16	05/19/2314:08	M47E020051	M47E020	23HGE024W	Matrix Spike Sample (MS)
TMW28042023MSD	D292-07S	1	NA	05/19/2319:18	05/19/2314:08	M47E020052	M47E020	23HGE024W	MS Duplicate (MSD)
TMW28042023	D292-07	1	NA	05/19/2319:21	05/19/2314:08	M47E020054	M47E020	23HGE024W	Field Sample
TMW57042023	D292-08	1	NA	05/19/2319:25	05/19/2314:08	M47E020056	M47E020	23HGE024W	Field Sample
TMW59042023	D292-09	1	NA	05/19/2319:27	05/19/2314:08	M47E020057	M47E020	23HGE024W	Field Sample
TMW61042023	D292-10	1	NA	05/19/2319:33	05/19/2314:08	M47E020060	M47E020	23HGE024W	Field Sample
TMW53042023	D292-11	1	NA	05/19/2319:34	05/19/2314:08	M47E020061	M47E020	23HGE024W	Field Sample
TMW24042023	D292-12	1	NA	05/19/2319:36	05/19/2314:08	M47E020062	M47E020	23HGE024W	Field Sample
MW27042023	D292-13	1	NA	05/19/2319:38	05/19/2314:08	M47E020063	M47E020	23HGE024W	Field Sample
TMW03042023	D292-14	1	NA	05/19/2319:40	05/19/2314:08	M47E020064	M47E020	23HGE024W	Field Sample
TMW03042023D	D292-15	1	NA	05/19/2319:41	05/19/2314:08	M47E020065	M47E020	23HGE024W	Field Sample
MW35042023	D292-16	1	NA	05/19/2319:43	05/19/2314:08	M47E020066	M47E020	23HGE024W	Field Sample
QC24042023EB04	D292-17	1	NA	05/19/2319:45	05/19/2314:08	M47E020067	M47E020	23HGE024W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D292

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	HGE024WB	ND	1	NA	0.50	0.10	0.20	05/19/2318:55	05/19/2314:08	M47E020040	M47E020	23HGE024W	NA	NA
LCS1W	HGE024WL	2.7	1	NA	0.50	0.10	0.20	05/19/2318:57	05/19/2314:08	M47E020041	M47E020	23HGE024W	NA	NA
LCD1W	HGE024WC	2.6	1	NA	0.50	0.10	0.20	05/19/2318:59	05/19/2314:08	M47E020042	M47E020	23HGE024W	NA	NA
MW33042023	D292-01	ND	1	NA	0.50	0.10	0.20	05/19/2319:01	05/19/2314:08	M47E020043	M47E020	23HGE024W	04/24/2307:15	04/26/23
MW36D042023	D292-02	ND	1	NA	0.50	0.10	0.20	05/19/2319:03	05/19/2314:08	M47E020044	M47E020	23HGE024W	04/24/2307:20	04/26/23
MW34042023	D292-03	ND	1	NA	0.50	0.10	0.20	05/19/2319:05	05/19/2314:08	M47E020045	M47E020	23HGE024W	04/24/2307:25	04/26/23
MW26042023	D292-04	ND	1	NA	0.50	0.10	0.20	05/19/2319:10	05/19/2314:08	M47E020048	M47E020	23HGE024W	04/24/2307:55	04/26/23
MW36S042023	D292-05	ND	1	NA	0.50	0.10	0.20	05/19/2319:12	05/19/2314:08	M47E020049	M47E020	23HGE024W	04/24/2307:55	04/26/23
MW23042023	D292-06	ND	1	NA	0.50	0.10	0.20	05/19/2319:14	05/19/2314:08	M47E020050	M47E020	23HGE024W	04/24/2308:30	04/26/23
TMW28042023MS	D292-07M	2.5	1	NA	0.50	0.10	0.20	05/19/2319:16	05/19/2314:08	M47E020051	M47E020	23HGE024W	04/24/2309:20	04/26/23
TMW28042023MSD	D292-07S	2.3	1	NA	0.50	0.10	0.20	05/19/2319:18	05/19/2314:08	M47E020052	M47E020	23HGE024W	04/24/2309:20	04/26/23
TMW28042023	D292-07	ND	1	NA	0.50	0.10	0.20	05/19/2319:21	05/19/2314:08	M47E020054	M47E020	23HGE024W	04/24/2309:20	04/26/23
TMW57042023	D292-08	ND	1	NA	0.50	0.10	0.20	05/19/2319:25	05/19/2314:08	M47E020056	M47E020	23HGE024W	04/24/2309:20	04/26/23
TMW59042023	D292-09	ND	1	NA	0.50	0.10	0.20	05/19/2319:27	05/19/2314:08	M47E020057	M47E020	23HGE024W	04/24/2309:40	04/26/23
TMW61042023	D292-10	ND	1	NA	0.50	0.10	0.20	05/19/2319:33	05/19/2314:08	M47E020060	M47E020	23HGE024W	04/24/2310:10	04/26/23
TMW53042023	D292-11	ND	1	NA	0.50	0.10	0.20	05/19/2319:34	05/19/2314:08	M47E020061	M47E020	23HGE024W	04/24/2310:30	04/26/23
TMW24042023	D292-12	ND	1	NA	0.50	0.10	0.20	05/19/2319:36	05/19/2314:08	M47E020062	M47E020	23HGE024W	04/24/2310:50	04/26/23
MW27042023	D292-13	ND	1	NA	0.50	0.10	0.20	05/19/2319:38	05/19/2314:08	M47E020063	M47E020	23HGE024W	04/24/2312:20	04/26/23
TMW03042023	D292-14	ND	1	NA	0.50	0.10	0.20	05/19/2319:40	05/19/2314:08	M47E020064	M47E020	23HGE024W	04/24/2313:15	04/26/23
TMW03042023D	D292-15	ND	1	NA	0.50	0.10	0.20	05/19/2319:41	05/19/2314:08	M47E020065	M47E020	23HGE024W	04/24/2313:20	04/26/23
MW35042023	D292-16	ND	1	NA	0.50	0.10	0.20	05/19/2319:43	05/19/2314:08	M47E020066	M47E020	23HGE024W	04/24/2313:25	04/26/23
QC24042023EB04	D292-17	ND	1	NA	0.50	0.10	0.20	05/19/2319:45	05/19/2314:08	M47E020067	M47E020	23HGE024W	04/24/2314:00	04/26/23

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#: 23D292

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D292

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of sixteen(16) water samples were received on 04/26/23 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. PLE005WB and PLE006WB 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. PLE005WL/PLE005WC and PLE006WL/PLE006WC 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 D292-01M/D292-01S. 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 D292-01I, -02I, -03J, -04I, -05I, -06J, -08I, -09I, -10I, -11J, -12J, -13I and -16I 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. : 23D292

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	PLE005WB	ND	1	NA	0.20	0.050	0.10	05/09/2315:15	NA	23ME09007	ME09004	PLE005W	NA	NA
LCS1W	PLE005WL	0.20J	1	NA	0.20	0.050	0.10	05/09/2315:50	NA	23ME09008	ME09004	PLE005W	NA	NA
LCD1W	PLE005WC	0.20J	1	NA	0.20	0.050	0.10	05/09/2316:38	NA	23ME09009	ME09004	PLE005W	NA	NA
QC24042023EB04	D292-17	ND	1	NA	0.20	0.050	0.10	05/10/2303:27	NA	23ME09046	ME09039	PLE005W	04/24/2314:00	04/26/23
MW33042023	D292-01I	ND	5	NA	1.0	0.25	0.50	05/10/2303:41	NA	23ME09047	ME09039	PLE005W	04/24/2307:15	04/26/23
MW36D042023	D292-02I	ND	5	NA	1.0	0.25	0.50	05/10/2303:56	NA	23ME09048	ME09039	PLE005W	04/24/2307:20	04/26/23
MW26042023	D292-04I	ND	5	NA	1.0	0.25	0.50	05/10/2305:09	NA	23ME09051	ME09050	PLE005W	04/24/2307:55	04/26/23
MW36S042023	D292-05I	ND	5	NA	1.0	0.25	0.50	05/10/2305:24	NA	23ME09052	ME09050	PLE005W	04/24/2307:55	04/26/23
TMW57042023	D292-08I	ND	5	NA	1.0	0.25	0.50	05/10/2305:53	NA	23ME09054	ME09050	PLE005W	04/24/2309:20	04/26/23
TMW59042023	D292-09I	ND	5	NA	1.0	0.25	0.50	05/10/2306:08	NA	23ME09055	ME09050	PLE005W	04/24/2309:40	04/26/23
TMW61042023	D292-10I	ND	5	NA	1.0	0.25	0.50	05/10/2306:22	NA	23ME09056	ME09050	PLE005W	04/24/2310:10	04/26/23
MW27042023	D292-13I	ND	5	NA	1.0	0.25	0.50	05/10/2307:06	NA	23ME09059	ME09050	PLE005W	04/24/2312:20	04/26/23
MW35042023	D292-16I	ND	5	NA	1.0	0.25	0.50	05/10/2308:34	NA	23ME09063	ME09061	PLE005W	04/24/2313:25	04/26/23
MW33042023MS	D292-01M	1.0	5	NA	1.0	0.25	0.50	05/10/2311:16	NA	23ME09065	ME09061	PLE005W	04/24/2307:15	04/26/23
MW33042023MSD	D292-01S	0.92J	5	NA	1.0	0.25	0.50	05/10/2311:35	NA	23ME09066	ME09061	PLE005W	04/24/2307:15	04/26/23
MBLK2W	PLE006WB	ND	1	NA	0.20	0.050	0.10	05/12/2311:24	NA	23ME12007	ME12004	PLE006W	NA	NA
LCS2W	PLE006WL	0.19J	1	NA	0.20	0.050	0.10	05/12/2311:57	NA	23ME12008	ME12004	PLE006W	NA	NA
LCD2W	PLE006WC	0.19J	1	NA	0.20	0.050	0.10	05/12/2312:52	NA	23ME12009	ME12004	PLE006W	NA	NA
MW34042023	D292-03J	ND	10	NA	2.0	0.50	1.0	05/12/2313:10	NA	23ME12010	ME12004	PLE006W	04/24/2307:25	04/26/23
MW23042023	D292-06J	ND	10	NA	2.0	0.50	1.0	05/12/2313:25	NA	23ME12011	ME12004	PLE006W	04/24/2308:30	04/26/23
TMW53042023	D292-11J	ND	10	NA	2.0	0.50	1.0	05/12/2313:40	NA	23ME12012	ME12004	PLE006W	04/24/2310:30	04/26/23
TMW24042023	D292-12J	ND	10	NA	2.0	0.50	1.0	05/12/2313:55	NA	23ME12013	ME12004	PLE006W	04/24/2310:50	04/26/23
TMW03042023D	D292-15J	0.78J	10	NA	2.0	0.50	1.0	05/12/2314:24	NA	23ME12015	ME12004	PLE006W	04/24/2313:20	04/26/23
TMW03042023	D292-14K	1.8J	20	NA	4.0	1.0	2.0	05/12/2314:49	NA	23ME12016	ME12004	PLE006W	04/24/2313:15	04/26/23

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: 07-17-2023
EMAX Batch No.: 23D301

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 04/27/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW30042023	D301-01	04/26/23	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
TMW15042023	D301-02	04/26/23	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
MW31042023	D301-03	04/26/23	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
TMW15042023D	D301-04	04/26/23	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
FW31042023	D301-05	04/26/23	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 ANIONS BY IC
TMW06042023	D301-06	04/26/23	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
TMW49042023	D301-07	04/26/23	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
TMW35042023	D301-08	04/26/23	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
TMW64042023	D301-09	04/26/23	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
MW20042023	D301-10	04/26/23	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
MW18D042023	D301-11	04/26/23	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
TMW34042023	D301-12	04/26/23	WATER	VOCS BY 8260C
				TPH GASOLINE
				PERCHLORATE BY 6850
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
				TPH-DRO
				ANIONS BY IC
QC26042023EB05	D301-13	04/26/23	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
TMW13042023	D301-14	04/26/23	WATER	VOCS BY 8260C
				PERCHLORATE BY 6850
				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
QC26042023TB08	D301-15	04/26/23	WATER	VOCS BY 8260C TPH GASOLINE
TMW13042023MS	D301-14M	04/26/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 DISSOLVED METALS BY ICP-MS DISSOLVED MERCURY MERCURY TOTAL METALS BY ICP-MS ANIONS BY IC
TMW13042023MSD	D301-14S	04/26/23	WATER	VOCS BY 8260C PERCHLORATE BY 6850 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

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

NELAP Accredited Certificate Number CA002912022-24
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#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of fifteen(15) water samples were received on 04/27/23 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, one(1) method blank was analyzed. VO67E07B - 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. VO67E07L/VO67E07C 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: 23D301-14M/23D301-14S - Percent recovery for Styrene(unstable in acidic matrix) was not within MS. 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. : 23D301
Instrument ID : 67

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	V067E07L	1	NA	05/04/2317:44	05/04/2317:44	REC116	RDC593	V067E07	Lab Control Sample (LCS)
LCD1W	V067E07C	1	NA	05/04/2318:09	05/04/2318:09	REC117	RDC593	V067E07	LCS Duplicate
MBLK1W	V067E07B	1	NA	05/04/2319:01	05/04/2319:01	REC119	RDC593	V067E07	Method Blank
QC26042023TB08	23D301-15	1	NA	05/04/2320:43	05/04/2320:43	REC123	RDC593	V067E07	Field Sample
TMW13042023	23D301-14	1	NA	05/04/2321:08	05/04/2321:08	REC124	RDC593	V067E07	Field Sample
MW30042023	23D301-01	1	NA	05/04/2321:34	05/04/2321:34	REC125	RDC593	V067E07	Field Sample
TMW15042023	23D301-02	1	NA	05/04/2321:59	05/04/2321:59	REC126	RDC593	V067E07	Field Sample
MW31042023	23D301-03	1	NA	05/04/2322:25	05/04/2322:25	REC127	RDC593	V067E07	Field Sample
TMW15042023D	23D301-04	1	NA	05/04/2322:50	05/04/2322:50	REC128	RDC593	V067E07	Field Sample
FW31042023	23D301-05	1	NA	05/04/2323:16	05/04/2323:16	REC129	RDC593	V067E07	Field Sample
TMW06042023	23D301-06	1	NA	05/04/2323:41	05/04/2323:41	REC130	RDC593	V067E07	Field Sample
TMW49042023	23D301-07	1	NA	05/05/2300:07	05/05/2300:07	REC131	RDC593	V067E07	Field Sample
TMW35042023	23D301-08	1	NA	05/05/2300:32	05/05/2300:32	REC132	RDC593	V067E07	Field Sample
TMW64042023	23D301-09	1	NA	05/05/2300:58	05/05/2300:58	REC133	RDC593	V067E07	Field Sample
MW20042023	23D301-10	1	NA	05/05/2301:23	05/05/2301:23	REC134	RDC593	V067E07	Field Sample
MW18D042023	23D301-11	1	NA	05/05/2301:49	05/05/2301:49	REC135	RDC593	V067E07	Field Sample
TMW34042023	23D301-12	1	NA	05/05/2302:14	05/05/2302:14	REC136	RDC593	V067E07	Field Sample
QC26042023EB05	23D301-13	1	NA	05/05/2302:40	05/05/2302:40	REC137	RDC593	V067E07	Field Sample
TMW13042023MS	23D301-14M	1	NA	05/05/2303:05	05/05/2303:05	REC138	RDC593	V067E07	Matrix Spike Sample (MS)
TMW13042023MSD	23D301-14S	1	NA	05/05/2303:31	05/05/2303:31	REC139	RDC593	V067E07	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:15
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/04/23 21:34
Sample ID	: MW30042023	Date Analyzed:	05/04/23 21:34
Lab Samp ID:	23D301-01	Dilution Factor:	1
Lab File ID:	REC125	Matrix:	WATER
Ext Btch ID:	V067E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	11.0	10.0	110	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301
Sample ID : TMW15042023
Lab Samp ID: 23D301-02
Lab File ID: REC126
Ext Btch ID: VO67E07
Calib. Ref.: RDC593

Date Collected: 04/26/23 07:50
Date Received: 04/27/23
Date Extracted: 05/04/23 21:59
Date Analyzed: 05/04/23 21:59
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 07:55
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/04/23 22:25
Sample ID : MW31042023	Date Analyzed: 05/04/23 22:25
Lab Samp ID: 23D301-03	Dilution Factor: 1
Lab File ID: REC127	Matrix: WATER
Ext Btch ID: VO67E07	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	28	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	10.8	10.0	108	85-114
Toluene-d8	10.6	10.0	106	89-112
Dibromofluoromethane	11.0	10.0	110	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/04/23 22:50
Sample ID	: TMW15042023D	Date Analyzed:	05/04/23 22:50
Lab Samp ID:	23D301-04	Dilution Factor:	1
Lab File ID:	REC128	Matrix:	WATER
Ext Btch ID:	V067E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	11.0	10.0	110	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/04/23 23:16
Sample ID	: FW31042023	Date Analyzed:	05/04/23 23:16
Lab Samp ID:	23D301-05	Dilution Factor:	1
Lab File ID:	REC129	Matrix:	WATER
Ext Btch ID:	VO67E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/04/23 23:41
Sample ID	: TMW06042023	Date Analyzed:	05/04/23 23:41
Lab Samp ID:	23D301-06	Dilution Factor:	1
Lab File ID:	REC130	Matrix:	WATER
Ext Btch ID:	V067E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	9.95	10.0	100	81-118
4-Bromofluorobenzene	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 08:25
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/05/23 00:07
Sample ID	: TMW49042023	Date Analyzed:	05/05/23 00:07
Lab Samp ID:	23D301-07	Dilution Factor:	1
Lab File ID:	REC131	Matrix:	WATER
Ext Btch ID:	V067E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.8	10.0	108	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/05/23 00:32
Sample ID	: TMW35042023	Date Analyzed:	05/05/23 00:32
Lab Samp ID:	23D301-08	Dilution Factor:	1
Lab File ID:	REC132	Matrix:	WATER
Ext Btch ID:	VO67E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	0.50J	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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 11:20
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/05/23 00:58
Sample ID : TMW64042023	Date Analyzed: 05/05/23 00:58
Lab Samp ID: 23D301-09	Dilution Factor: 1
Lab File ID: REC133	Matrix: WATER
Ext Btch ID: V067E07	% Moisture: NA
Calib. Ref.: RDC593	Instrument ID: 67

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	10.8	10.0	108	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301
Sample ID : MW20042023
Lab Samp ID: 23D301-10
Lab File ID: REC134
Ext Btch ID: VO67E07
Calib. Ref.: RDC593

Date Collected: 04/26/23 12:20
Date Received: 04/27/23
Date Extracted: 05/05/23 01:23
Date Analyzed: 05/05/23 01:23
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
Instrument ID: 67

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	1.3	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	11.0	10.0	110	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 13:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/05/23 01:49
Sample ID	: MW18D042023	Date Analyzed:	05/05/23 01:49
Lab Samp ID:	23D301-11	Dilution Factor:	1
Lab File ID:	REC135	Matrix:	WATER
Ext Btch ID:	VO67E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	93	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	10.9	10.0	109	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 13:50
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/05/23 02:14
Sample ID	: TMW34042023	Date Analyzed:	05/05/23 02:14
Lab Samp ID:	23D301-12	Dilution Factor:	1
Lab File ID:	REC136	Matrix:	WATER
Ext Btch ID:	VO67E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.8	10.0	108	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	11.0	10.0	110	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 14:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/05/23 02:40
Sample ID	: QC26042023EB05	Date Analyzed:	05/05/23 02:40
Lab Samp ID:	23D301-13	Dilution Factor:	1
Lab File ID:	REC137	Matrix:	WATER
Ext Btch ID:	V067E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	0.77J	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	0.90J	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	0.34J	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	10.8	10.0	108	85-114
Toluene-d8	10.7	10.0	107	89-112
Dibromofluoromethane	10.8	10.0	108	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:05
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/04/23 21:08
Sample ID	: TMW13042023	Date Analyzed:	05/04/23 21:08
Lab Samp ID:	23D301-14	Dilution Factor:	1
Lab File ID:	REC124	Matrix:	WATER
Ext Btch ID:	V067E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.8	10.0	108	85-114
Toluene-d8	10.8	10.0	108	89-112
Dibromofluoromethane	10.9	10.0	109	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 08:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/04/23 20:43
Sample ID	: QC26042023TB08	Date Analyzed:	05/04/23 20:43
Lab Samp ID:	23D301-15	Dilution Factor:	1
Lab File ID:	REC123	Matrix:	WATER
Ext Btch ID:	V067E07	% Moisture:	NA
Calib. Ref.:	RDC593	Instrument ID:	67

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	10.8	10.0	108	85-114
Toluene-d8	10.9	10.0	109	89-112
Dibromofluoromethane	10.7	10.0	107	80-119

Notes:
Sample Amount : 25ml
Prepared by : VLu
Final Volume : 25ml
Analyzed by : VLu
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#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

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

A total of eleven(11) water samples were received on 04/27/23 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: REJ075, REJ076, REJ103 and REJ104) 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. SVE005WB - 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. SVE005WL/SVE005WC 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.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

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

A total of eleven(11) water samples were received on 04/27/23 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: REJ077 and REJ102) 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. SVE005WB - 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. CLE005WL/CLE005WC 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 : 23D301

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

A total of eleven(11) water samples were received on 04/27/23 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: REJ076 and REJ103) 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. SVE005WB - 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. CLE005WL/CLE005WC 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. : 23D301
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	SVE005WB	1	NA	05/08/2309:45	05/03/2317:30	REJ078	RCJ011	23SVE005W	Method Blank
LCS1W	SVE005WL	1	NA	05/08/2310:04	05/03/2317:30	REJ079	RCJ011	23SVE005W	Lab Control Sample (LCS)
LCD1W	SVE005WC	1	NA	05/08/2310:22	05/03/2317:30	REJ080	RCJ011	23SVE005W	LCS Duplicate
MW30042023	23D301-01	1	NA	05/08/2311:37	05/03/2317:30	REJ084	RCJ011	23SVE005W	Field Sample
TMW15042023	23D301-02	1	NA	05/08/2311:55	05/03/2317:30	REJ085	RCJ011	23SVE005W	Field Sample
MW31042023	23D301-03	1	NA	05/08/2312:14	05/03/2317:30	REJ086	RCJ011	23SVE005W	Field Sample
TMW15042023D	23D301-04	1	NA	05/08/2312:32	05/03/2317:30	REJ087	RCJ011	23SVE005W	Field Sample
FW31042023	23D301-05	1	NA	05/08/2312:51	05/03/2317:30	REJ088	RCJ011	23SVE005W	Field Sample
TMW06042023	23D301-06	1	NA	05/08/2313:09	05/03/2317:30	REJ089	RCJ011	23SVE005W	Field Sample
TMW49042023	23D301-07	1	NA	05/08/2313:28	05/03/2317:30	REJ090	RCJ011	23SVE005W	Field Sample
TMW35042023	23D301-08	1	NA	05/08/2313:46	05/03/2317:30	REJ091	RCJ011	23SVE005W	Field Sample
TMW64042023	23D301-09	1	NA	05/08/2314:05	05/03/2317:30	REJ092	RCJ011	23SVE005W	Field Sample
MW20042023	23D301-10	1	NA	05/08/2314:24	05/03/2317:30	REJ093	RCJ011	23SVE005W	Field Sample
QC26042023EB05	23D301-13	1	NA	05/08/2314:42	05/03/2317:30	REJ094	RCJ011	23SVE005W	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. : 23D301
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	SVE005WB	1	NA	05/08/2309:45	05/03/2317:30	REJ078	RCJ498	23SVE005W	Method Blank
LCS1W	CLE005WL	1	NA	05/08/2310:41	05/03/2317:30	REJ081	RCJ498	23SVE005W	Lab Control Sample (LCS)
LCD1W	CLE005WC	1	NA	05/08/2310:59	05/03/2317:30	REJ082	RCJ498	23SVE005W	LCS Duplicate
MW30042023	23D301-01	1	NA	05/08/2311:37	05/03/2317:30	REJ084	RCJ498	23SVE005W	Field Sample
TMW15042023	23D301-02	1	NA	05/08/2311:55	05/03/2317:30	REJ085	RCJ498	23SVE005W	Field Sample
MW31042023	23D301-03	1	NA	05/08/2312:14	05/03/2317:30	REJ086	RCJ498	23SVE005W	Field Sample
TMW15042023D	23D301-04	1	NA	05/08/2312:32	05/03/2317:30	REJ087	RCJ498	23SVE005W	Field Sample
FW31042023	23D301-05	1	NA	05/08/2312:51	05/03/2317:30	REJ088	RCJ498	23SVE005W	Field Sample
TMW06042023	23D301-06	1	NA	05/08/2313:09	05/03/2317:30	REJ089	RCJ498	23SVE005W	Field Sample
TMW49042023	23D301-07	1	NA	05/08/2313:28	05/03/2317:30	REJ090	RCJ498	23SVE005W	Field Sample
TMW35042023	23D301-08	1	NA	05/08/2313:46	05/03/2317:30	REJ091	RCJ498	23SVE005W	Field Sample
TMW64042023	23D301-09	1	NA	05/08/2314:05	05/03/2317:30	REJ092	RCJ498	23SVE005W	Field Sample
MW20042023	23D301-10	1	NA	05/08/2314:24	05/03/2317:30	REJ093	RCJ498	23SVE005W	Field Sample
QC26042023EB05	23D301-13	1	NA	05/08/2314:42	05/03/2317:30	REJ094	RCJ498	23SVE005W	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. : 23D301
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	SVE005WB	1	NA	05/08/2309:45	05/03/2317:30	REJ078	RCJ025	23SVE005W	Method Blank
LCS1W	CLE005WL	1	NA	05/08/2310:41	05/03/2317:30	REJ081	RCJ025	23SVE005W	Lab Control Sample (LCS)
LCD1W	CLE005WC	1	NA	05/08/2310:59	05/03/2317:30	REJ082	RCJ025	23SVE005W	LCS Duplicate
MW30042023	23D301-01	1	NA	05/08/2311:37	05/03/2317:30	REJ084	RCJ025	23SVE005W	Field Sample
TMW15042023	23D301-02	1	NA	05/08/2311:55	05/03/2317:30	REJ085	RCJ025	23SVE005W	Field Sample
MW31042023	23D301-03	1	NA	05/08/2312:14	05/03/2317:30	REJ086	RCJ025	23SVE005W	Field Sample
TMW15042023D	23D301-04	1	NA	05/08/2312:32	05/03/2317:30	REJ087	RCJ025	23SVE005W	Field Sample
FW31042023	23D301-05	1	NA	05/08/2312:51	05/03/2317:30	REJ088	RCJ025	23SVE005W	Field Sample
TMW06042023	23D301-06	1	NA	05/08/2313:09	05/03/2317:30	REJ089	RCJ025	23SVE005W	Field Sample
TMW49042023	23D301-07	1	NA	05/08/2313:28	05/03/2317:30	REJ090	RCJ025	23SVE005W	Field Sample
TMW35042023	23D301-08	1	NA	05/08/2313:46	05/03/2317:30	REJ091	RCJ025	23SVE005W	Field Sample
TMW64042023	23D301-09	1	NA	05/08/2314:05	05/03/2317:30	REJ092	RCJ025	23SVE005W	Field Sample
MW20042023	23D301-10	1	NA	05/08/2314:24	05/03/2317:30	REJ093	RCJ025	23SVE005W	Field Sample
QC26042023EB05	23D301-13	1	NA	05/08/2314:42	05/03/2317:30	REJ094	RCJ025	23SVE005W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:15
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW30042023	Date Analyzed:	05/08/23 11:37
Lab Samp ID:	23D301-01	Dilution Factor:	1
Lab File ID:	REJ084	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	36.7	64.8	57	43-140
2-Fluorobiphenyl	16.8	21.6	78	44-119
2-Fluorophenol	25.2	64.8	39	19-119
Nitrobenzene-d5	15.2	21.6	71	44-120
Phenol-d5	36.2	64.8	56	40-130
Terphenyl-d14	17.1	21.6	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: RCJ025 DCC Ref: REJ076

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:	04/26/23 07:15
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW30042023	Date Analyzed:	05/08/23 11:37
Lab Samp ID:	23D301-01	Dilution Factor:	1
Lab File ID:	REJ084	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/26/23 07:15
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW30042023	Date Analyzed:	05/08/23 11:37
Lab Samp ID:	23D301-01	Dilution Factor:	1
Lab File ID:	REJ084	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/26/23 07:50
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW15042023	Date Analyzed:	05/08/23 11:55
Lab Samp ID:	23D301-02	Dilution Factor:	1
Lab File ID:	REJ085	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	47.1	68.4	69	43-140
2-Fluorobiphenyl	17.9	22.8	78	44-119
2-Fluorophenol	36.6	68.4	53	19-119
Nitrobenzene-d5	17.1	22.8	75	44-120
Phenol-d5	46.8	68.4	68	40-130
Terphenyl-d14	20.3	22.8	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: RCJ025 DCC Ref: REJ076

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:	04/26/23 07:50
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW15042023	Date Analyzed:	05/08/23 11:55
Lab Samp ID:	23D301-02	Dilution Factor:	1
Lab File ID:	REJ085	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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 : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:50
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW15042023	Date Analyzed:	05/08/23 11:55
Lab Samp ID:	23D301-02	Dilution Factor:	1
Lab File ID:	REJ085	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW31042023	Date Analyzed:	05/08/23 12:14
Lab Samp ID:	23D301-03	Dilution Factor:	1
Lab File ID:	REJ086	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	39.6	63.0	63	43-140
2-Fluorobiphenyl	16.7	21.0	80	44-119
2-Fluorophenol	32.9	63.0	52	19-119
Nitrobenzene-d5	15.5	21.0	74	44-120
Phenol-d5	42.9	63.0	68	40-130
Terphenyl-d14	15.3	21.0	73	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: RCJ025 DCC Ref: REJ076

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:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW31042023	Date Analyzed:	05/08/23 12:14
Lab Samp ID:	23D301-03	Dilution Factor:	1
Lab File ID:	REJ086	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW31042023	Date Analyzed:	05/08/23 12:14
Lab Samp ID:	23D301-03	Dilution Factor:	1
Lab File ID:	REJ086	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW15042023D	Date Analyzed:	05/08/23 12:32
Lab Samp ID:	23D301-04	Dilution Factor:	1
Lab File ID:	REJ087	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	48.2	67.2	72	43-140
2-Fluorobiphenyl	17.8	22.4	80	44-119
2-Fluorophenol	33.2	67.2	49	19-119
Nitrobenzene-d5	16.3	22.4	73	44-120
Phenol-d5	45.5	67.2	68	40-130
Terphenyl-d14	21.7	22.4	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: RCJ025 DCC Ref: REJ076

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:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW15042023D	Date Analyzed:	05/08/23 12:32
Lab Samp ID:	23D301-04	Dilution Factor:	1
Lab File ID:	REJ087	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW15042023D	Date Analyzed:	05/08/23 12:32
Lab Samp ID:	23D301-04	Dilution Factor:	1
Lab File ID:	REJ087	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/26/23 09:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: FW31042023	Date Analyzed:	05/08/23 12:51
Lab Samp ID:	23D301-05	Dilution Factor:	1
Lab File ID:	REJ088	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	45.4	60.6	75	43-140
2-Fluorobiphenyl	17.8	20.2	88	44-119
2-Fluorophenol	36.6	60.6	60	19-119
Nitrobenzene-d5	17.2	20.2	85	44-120
Phenol-d5	46.8	60.6	77	40-130
Terphenyl-d14	20.2	20.2	100	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: RCJ025 DCC Ref: REJ076

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:	04/26/23 09:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: FW31042023	Date Analyzed:	05/08/23 12:51
Lab Samp ID:	23D301-05	Dilution Factor:	1
Lab File ID:	REJ088	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: FW31042023	Date Analyzed:	05/08/23 12:51
Lab Samp ID:	23D301-05	Dilution Factor:	1
Lab File ID:	REJ088	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW06042023	Date Analyzed:	05/08/23 13:09
Lab Samp ID:	23D301-06	Dilution Factor:	1
Lab File ID:	REJ089	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	38.4	62.4	62	43-140
2-Fluorobiphenyl	12.2	20.8	59	44-119
2-Fluorophenol	20.9	62.4	33	19-119
Nitrobenzene-d5	11.5	20.8	55	44-120
Phenol-d5	32.5	62.4	52	40-130
Terphenyl-d14	16.5	20.8	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: RCJ025 DCC Ref: REJ076

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:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW06042023	Date Analyzed:	05/08/23 13:09
Lab Samp ID:	23D301-06	Dilution Factor:	1
Lab File ID:	REJ089	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: POreto	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW06042023	Date Analyzed:	05/08/23 13:09
Lab Samp ID:	23D301-06	Dilution Factor:	1
Lab File ID:	REJ089	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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 : POreto Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 08:25
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW49042023	Date Analyzed:	05/08/23 13:28
Lab Samp ID:	23D301-07	Dilution Factor:	1
Lab File ID:	REJ090	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	38.4	61.8	62	43-140
2-Fluorobiphenyl	15.6	20.6	76	44-119
2-Fluorophenol	20.6	61.8	33	19-119
Nitrobenzene-d5	13.2	20.6	64	44-120
Phenol-d5	34.8	61.8	56	40-130
Terphenyl-d14	19.5	20.6	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: RCJ025 DCC Ref: REJ076

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 970ml	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:	04/26/23 08:25
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW49042023	Date Analyzed:	05/08/23 13:28
Lab Samp ID:	23D301-07	Dilution Factor:	1
Lab File ID:	REJ090	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	: POreto	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 08:25
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW49042023	Date Analyzed:	05/08/23 13:28
Lab Samp ID:	23D301-07	Dilution Factor:	1
Lab File ID:	REJ090	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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 : POreto Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW35042023	Date Analyzed:	05/08/23 13:46
Lab Samp ID:	23D301-08	Dilution Factor:	1
Lab File ID:	REJ091	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	41.8	60.6	69	43-140
2-Fluorobiphenyl	14.4	20.2	72	44-119
2-Fluorophenol	31.6	60.6	52	19-119
Nitrobenzene-d5	15.4	20.2	76	44-120
Phenol-d5	41.4	60.6	68	40-130
Terphenyl-d14	18.6	20.2	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: RCJ025 DCC Ref: REJ076

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:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW35042023	Date Analyzed:	05/08/23 13:46
Lab Samp ID:	23D301-08	Dilution Factor:	1
Lab File ID:	REJ091	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW35042023	Date Analyzed:	05/08/23 13:46
Lab Samp ID:	23D301-08	Dilution Factor:	1
Lab File ID:	REJ091	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/26/23 11:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW64042023	Date Analyzed:	05/08/23 14:05
Lab Samp ID:	23D301-09	Dilution Factor:	1
Lab File ID:	REJ092	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	50.2	72.0	70	43-140
2-Fluorobiphenyl	17.8	24.0	74	44-119
2-Fluorophenol	36.9	72.0	51	19-119
Nitrobenzene-d5	17.4	24.0	73	44-120
Phenol-d5	47.1	72.0	65	40-130
Terphenyl-d14	20.4	24.0	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: RCJ025 DCC Ref: REJ076

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:	04/26/23 11:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW64042023	Date Analyzed:	05/08/23 14:05
Lab Samp ID:	23D301-09	Dilution Factor:	1
Lab File ID:	REJ092	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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 : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: TMW64042023	Date Analyzed:	05/08/23 14:05
Lab Samp ID:	23D301-09	Dilution Factor:	1
Lab File ID:	REJ092	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/26/23 12:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW20042023	Date Analyzed:	05/08/23 14:24
Lab Samp ID:	23D301-10	Dilution Factor:	1
Lab File ID:	REJ093	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	41.5	73.8	56	43-140
2-Fluorobiphenyl	17.1	24.6	69	44-119
2-Fluorophenol	26.5	73.8	36	19-119
Nitrobenzene-d5	17.2	24.6	70	44-120
Phenol-d5	37.5	73.8	51	40-130
Terphenyl-d14	20.9	24.6	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: RCJ025 DCC Ref: REJ076

Detection limits are reported relative to sample result significant figures.
Sample Amount : 810ml 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:	04/26/23 12:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW20042023	Date Analyzed:	05/08/23 14:24
Lab Samp ID:	23D301-10	Dilution Factor:	1
Lab File ID:	REJ093	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	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:	04/26/23 12:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: MW20042023	Date Analyzed:	05/08/23 14:24
Lab Samp ID:	23D301-10	Dilution Factor:	1
Lab File ID:	REJ093	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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
Prepared by : POreto
Final Volume : 2ml
Analyzed by : KVu

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

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301
Sample ID : QC26042023EB05
Lab Samp ID: 23D301-13
Lab File ID: REJ094
Ext Btch ID: 23SVE005W
Calib. Ref.: RCJ011

Date Collected: 04/26/23 14:00
Date Received: 04/27/23
Date Extracted: 05/03/23 17:30
Date Analyzed: 05/08/23 14:42
Dilution Factor: 1
Matrix: WATER
% Moisture: NA
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	47.2	63.0	75	43-140
2-Fluorobiphenyl	17.2	21.0	82	44-119
2-Fluorophenol	36.6	63.0	58	19-119
Nitrobenzene-d5	16.7	21.0	80	44-120
Phenol-d5	46.0	63.0	73	40-130
Terphenyl-d14	20.1	21.0	96	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: RCJ025 DCC Ref: REJ076

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

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 14:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: QC26042023EB05	Date Analyzed:	05/08/23 14:42
Lab Samp ID:	23D301-13	Dilution Factor:	1
Lab File ID:	REJ094	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/26/23 14:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/03/23 17:30
Sample ID	: QC26042023EB05	Date Analyzed:	05/08/23 14:42
Lab Samp ID:	23D301-13	Dilution Factor:	1
Lab File ID:	REJ094	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

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

A total of ten(10) water samples were received on 04/27/23 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. VGH7D14B - 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. VGH7D14L/VGH7D14C 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 D301-09M/D301-09S. 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
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D301
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	VGH7D14B	1	NA	04/28/2301:54	04/28/2301:54	AD27016A	AD27015A	23VGH7D14	Method Blank
LCS1W	VGH7D14L	1	NA	04/28/2302:31	04/28/2302:31	AD27017A	AD27015A	23VGH7D14	Lab Control Sample (LCS)
LCD1W	VGH7D14C	1	NA	04/28/2303:08	04/28/2303:08	AD27018A	AD27015A	23VGH7D14	LCS Duplicate
MW30042023	D301-01	1	NA	04/28/2303:45	04/28/2303:45	AD27019A	AD27015A	23VGH7D14	Field Sample
MW31042023	D301-03	1	NA	04/28/2304:22	04/28/2304:22	AD27020A	AD27015A	23VGH7D14	Field Sample
TMW06042023	D301-06	1	NA	04/28/2305:00	04/28/2305:00	AD27021A	AD27015A	23VGH7D14	Field Sample
TMW35042023	D301-08	1	NA	04/28/2305:37	04/28/2305:37	AD27022A	AD27015A	23VGH7D14	Field Sample
TMW64042023	D301-09	1	NA	04/28/2306:14	04/28/2306:14	AD27023A	AD27015A	23VGH7D14	Field Sample
TMW64042023MS	D301-09M	1	NA	04/28/2306:51	04/28/2306:51	AD27024A	AD27015A	23VGH7D14	Matrix Spike Sample (MS)
TMW64042023MSD	D301-09S	1	NA	04/28/2307:28	04/28/2307:28	AD27025A	AD27015A	23VGH7D14	MS Duplicate (MSD)
MW20042023	D301-10	1	NA	04/28/2308:43	04/28/2308:43	AD27027A	AD27026A	23VGH7D14	Field Sample
MW18D042023	D301-11	1	NA	04/28/2309:20	04/28/2309:20	AD27028A	AD27026A	23VGH7D14	Field Sample
TMW34042023	D301-12	1	NA	04/28/2309:57	04/28/2309:57	AD27029A	AD27026A	23VGH7D14	Field Sample
QC26042023EB05	D301-13	1	NA	04/28/2310:34	04/28/2310:34	AD27030A	AD27026A	23VGH7D14	Field Sample
QC26042023TB08	D301-15	1	NA	04/28/2311:12	04/28/2311:12	AD27031A	AD27026A	23VGH7D14	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: 04/26/23 07:15
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 04/28/23 03:45
Sample ID : MW30042023	Date Analyzed: 04/28/23 03:45
Lab Samp ID: D301-01	Dilution Factor: 1
Lab File ID: AD27019A	Matrix: WATER
Ext Btch ID: 23VGH7D14	% Moisture: NA
Calib. Ref.: AD27015A	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	39.8	40.0	100	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:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 04:22
Sample ID	: MW31042023	Date Analyzed:	04/28/23 04:22
Lab Samp ID:	D301-03	Dilution Factor:	1
Lab File ID:	AD27020A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27015A	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	43.2	40.0	108	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:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 05:00
Sample ID	: TMW06042023	Date Analyzed:	04/28/23 05:00
Lab Samp ID:	D301-06	Dilution Factor:	1
Lab File ID:	AD27021A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27015A	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	39.9	40.0	100	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:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 05:37
Sample ID	: TMW35042023	Date Analyzed:	04/28/23 05:37
Lab Samp ID:	D301-08	Dilution Factor:	1
Lab File ID:	AD27022A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27015A	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	40.1	40.0	100	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:	04/26/23 11:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 06:14
Sample ID	: TMW64042023	Date Analyzed:	04/28/23 06:14
Lab Samp ID:	D301-09	Dilution Factor:	1
Lab File ID:	AD27023A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27015A	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	41.0	40.0	102	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:	04/26/23 12:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 08:43
Sample ID	: MW20042023	Date Analyzed:	04/28/23 08:43
Lab Samp ID:	D301-10	Dilution Factor:	1
Lab File ID:	AD27027A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27026A	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	40.4	40.0	101	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:	04/26/23 13:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 09:20
Sample ID	: MW18D042023	Date Analyzed:	04/28/23 09:20
Lab Samp ID:	D301-11	Dilution Factor:	1
Lab File ID:	AD27028A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27026A	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	40.7	40.0	102	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:	04/26/23 13:50
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 09:57
Sample ID	: TMW34042023	Date Analyzed:	04/28/23 09:57
Lab Samp ID:	D301-12	Dilution Factor:	1
Lab File ID:	AD27029A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27026A	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	39.2	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:	04/26/23 14:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 10:34
Sample ID	: QC26042023EB05	Date Analyzed:	04/28/23 10:34
Lab Samp ID:	D301-13	Dilution Factor:	1
Lab File ID:	AD27030A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27026A	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	38.8	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:	04/26/23 08:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 11:12
Sample ID	: QC26042023TB08	Date Analyzed:	04/28/23 11:12
Lab Samp ID:	D301-15	Dilution Factor:	1
Lab File ID:	AD27031A	Matrix:	WATER
Ext Btch ID:	23VGH7D14	% Moisture:	NA
Calib. Ref.:	AD27026A	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	39.3	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of nine(9) water samples were received on 04/27/23 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. DSE004WB - 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. DSE004WL/DSE004WC 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.
Samples D301-03, 10, -11, and -12 displayed a mixed fuel pattern.

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

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

SDG NO. : 23D301
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	DSE004WB	1	NA	05/03/2318:07	05/02/2313:30	LE02078A	LE02076A	23DSE004W	Method Blank
LCS1W	DSE004WL	1	NA	05/03/2318:26	05/02/2313:30	LE02079A	LE02076A	23DSE004W	Lab Control Sample (LCS)
LCD1W	DSE004WC	1	NA	05/03/2318:44	05/02/2313:30	LE02080A	LE02076A	23DSE004W	LCS Duplicate
MW30042023	D301-01	1	NA	05/03/2321:32	05/02/2313:30	LE02089A	LE02076A	23DSE004W	Field Sample
MW31042023	D301-03	1	NA	05/03/2321:50	05/02/2313:30	LE02090A	LE02076A	23DSE004W	Field Sample
TMW06042023	D301-06	1	NA	05/03/2322:09	05/02/2313:30	LE02091A	LE02076A	23DSE004W	Field Sample
TMW35042023	D301-08	1	NA	05/03/2322:27	05/02/2313:30	LE02092A	LE02076A	23DSE004W	Field Sample
TMW64042023	D301-09	1	NA	05/03/2323:23	05/02/2313:30	LE02095A	LE02093A	23DSE004W	Field Sample
MW20042023	D301-10	1	NA	05/03/2323:41	05/02/2313:30	LE02096A	LE02093A	23DSE004W	Field Sample
MW18D042023	D301-11	1	NA	05/04/2300:00	05/02/2313:30	LE02097A	LE02093A	23DSE004W	Field Sample
TMW34042023	D301-12	1	NA	05/04/2300:19	05/02/2313:30	LE02098A	LE02093A	23DSE004W	Field Sample
QC26042023EB05	D301-13	1	NA	05/04/2300:37	05/02/2313:30	LE02099A	LE02093A	23DSE004W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:15
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: MW30042023	Date Analyzed:	05/03/23 21:32
Lab Samp ID:	23D301-01	Dilution Factor:	1
Lab File ID:	LE02089A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02076A	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	0.840	1.03	82	60-130
Hexacosane	0.274	0.257	106	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:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: MW31042023	Date Analyzed:	05/03/23 21:50
Lab Samp ID:	23D301-03	Dilution Factor:	1
Lab File ID:	LE02090A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02076A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.13J	0.50	0.050	0.10

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.828	1.00	83	60-130
Hexacosane	0.300	0.250	120	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:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: TMW06042023	Date Analyzed:	05/03/23 22:09
Lab Samp ID:	23D301-06	Dilution Factor:	1
Lab File ID:	LE02091A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02076A	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	0.899	1.06	85	60-130
Hexacosane	0.288	0.265	109	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:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: TMW35042023	Date Analyzed:	05/03/23 22:27
Lab Samp ID:	23D301-08	Dilution Factor:	1
Lab File ID:	LE02092A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02076A	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	0.809	1.00	81	60-130
Hexacosane	0.285	0.250	114	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:	04/26/23 11:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: TMW64042023	Date Analyzed:	05/03/23 23:23
Lab Samp ID:	23D301-09	Dilution Factor:	1
Lab File ID:	LE02095A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02093A	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	0.985	1.11	89	60-130
Hexacosane	0.337	0.278	121	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:	04/26/23 12:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: MW20042023	Date Analyzed:	05/03/23 23:41
Lab Samp ID:	23D301-10	Dilution Factor:	1
Lab File ID:	LE02096A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02093A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.24J	0.53	0.053	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.890	1.06	84	60-130
Hexacosane	0.305	0.265	115	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:	04/26/23 13:20
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: MW18D042023	Date Analyzed:	05/04/23 00:00
Lab Samp ID:	23D301-11	Dilution Factor:	1
Lab File ID:	LE02097A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02093A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.075J	0.59	0.059	0.12

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	1.03	1.18	87	60-130
Hexacosane	0.336	0.295	114	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:	04/26/23 13:50
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: TMW34042023	Date Analyzed:	05/04/23 00:19
Lab Samp ID:	23D301-12	Dilution Factor:	1
Lab File ID:	LE02098A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02093A	Instrument ID:	D5

PARAMETER	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
TPH-Diesel	0.084J	0.55	0.055	0.11

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.971	1.09	89	60-130
Hexacosane	0.333	0.273	122	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:	04/26/23 14:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:30
Sample ID	: QC26042023EB05	Date Analyzed:	05/04/23 00:37
Lab Samp ID:	23D301-13	Dilution Factor:	1
Lab File ID:	LE02099A	Matrix:	WATER
Ext Btch ID:	23DSE004W	% Moisture:	NA
Calib. Ref.:	LE02093A	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	0.976	1.08	90	60-130
Hexacosane	0.322	0.270	119	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8081B
PESTICIDES

SDG#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW3520C/8081B
PESTICIDES

A total of eight(8) water samples were received on 04/27/23 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. CPE002WB - 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. CPE002WL/CPE002WC 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.

MB, LCS/LCSD and D301-09 extracts were subjected to cleanup method SW3660B to reduce matrix interference.

LAB CHRONICLE
PESTICIDES

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

SDG NO. : 23D301
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
MW30042023	D301-01	1	NA	05/05/2300:37	05/02/2313:15	RE04029	RE04027	23CPE002W	Field Sample
MW31042023	D301-03	1	NA	05/05/2300:58	05/02/2313:15	RE04030	RE04027	23CPE002W	Field Sample
FW31042023	D301-05	1	NA	05/05/2301:18	05/02/2313:15	RE04031	RE04027	23CPE002W	Field Sample
TMW49042023	D301-07	1	NA	05/05/2301:39	05/02/2313:15	RE04032	RE04027	23CPE002W	Field Sample
TMW35042023	D301-08	1	NA	05/05/2302:00	05/02/2313:15	RE04033	RE04027	23CPE002W	Field Sample
MW20042023	D301-10	1	NA	05/05/2302:41	05/02/2313:15	RE04035	RE04027	23CPE002W	Field Sample
QC26042023EB05	D301-13	1	NA	05/05/2303:01	05/02/2313:15	RE04036	RE04027	23CPE002W	Field Sample
MBLK1W	CPE002WB	1	NA	05/11/2316:59	05/02/2313:15	RE11009	RE11003	23CPE002W	Method Blank
LCS1W	CPE002WL	1	NA	05/11/2317:19	05/02/2313:15	RE11010	RE11003	23CPE002W	Lab Control Sample (LCS)
LCD1W	CPE002WC	1	NA	05/11/2317:40	05/02/2313:15	RE11011	RE11003	23CPE002W	LCS Duplicate
TMW64042023	D301-09	1	NA	05/11/2318:00	05/02/2313:15	RE11012	RE11003	23CPE002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 07:15
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID : MW30042023	Date Analyzed: 05/05/23 00:37
Lab Samp ID: D301-01	Dilution Factor: 1
Lab File ID: RE04029	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04027	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	0.292 | (0.310)	0.392	79	44-124
Decachlorobiphenyl	0.288 | (0.290)	0.392	74	30-135

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

Sample Amount : 1020ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04028	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 07:55
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID : MW31042023	Date Analyzed: 05/05/23 00:58
Lab Samp ID: D301-03	Dilution Factor: 1
Lab File ID: RE04030	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04027	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	0.272 | (0.282)	0.400	71	44-124
Decachlorobiphenyl	0.303 | (0.309)	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 : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04028	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:00
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	05/02/23 13:15
Sample ID	: FW31042023	Date Analyzed:	05/05/23 01:18
Lab Samp ID:	D301-05	Dilution Factor:	1
Lab File ID:	RE04031	Matrix:	WATER
Ext Btch ID:	23CPE002W	% Moisture:	NA
Calib. Ref.:	RE04027	Instrument ID:	F9

PARAMETER	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
alpha-BHC	(ND) | ND	0.11	0.023	0.046
gamma-BHC (Lindane)	(ND) | ND	0.11	0.023	0.046
beta-BHC	(ND) | ND	0.11	0.023	0.046
Heptachlor	(ND) | ND	0.11	0.023	0.046
delta-BHC	(ND) | ND	0.11	0.023	0.046
Aldrin	(ND) | ND	0.11	0.023	0.046
Heptachlor Epoxide	(ND) | ND	0.11	0.023	0.046
gamma-Chlordane	(ND) | ND	0.11	0.023	0.046
alpha-Chlordane	(ND) | ND	0.11	0.023	0.046
Endosulfan I	(ND) | ND	0.11	0.023	0.046
4,4'-DDE	(ND) | ND	0.11	0.023	0.046
Dieldrin	(ND) | ND	0.11	0.023	0.046
Endrin	(ND) | ND	0.11	0.023	0.046
4,4'-DDD	(ND) | ND	0.11	0.023	0.046
Endosulfan II	(ND) | ND	0.11	0.023	0.046
4,4'-DDT	(ND) | ND	0.11	0.023	0.046
Endrin Aldehyde	(ND) | ND	0.11	0.023	0.046
Endosulfan Sulfate	(ND) | ND	0.11	0.023	0.046
Methoxychlor	(ND) | ND	1.1	0.11	0.23
Toxaphene	(ND) | ND	2.3	0.28	0.57
Endrin Ketone	(ND) | ND	0.11	0.023	0.046

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.318 | (0.334)	0.455	73	44-124
Decachlorobiphenyl	0.334 | (0.337)	0.455	74	30-135

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

Sample Amount	: 880ml	Final Volume	: 10ml
Prepared by	: POreto	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RE04028		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 08:25
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID : TMW49042023	Date Analyzed: 05/05/23 01:39
Lab Samp ID: D301-07	Dilution Factor: 1
Lab File ID: RE04032	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04027	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	0.276 | (0.305)	0.421	72	44-124
Decachlorobiphenyl	0.302 | (0.307)	0.421	73	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.: RE04028	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 11:00
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID : TMW35042023	Date Analyzed: 05/05/23 02:00
Lab Samp ID: D301-08	Dilution Factor: 1
Lab File ID: RE04033	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04027	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	0.294 | (0.303)	0.449	67	44-124
Decachlorobiphenyl	0.323 | (0.324)	0.449	72	30-135

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

Sample Amount : 890ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04028	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 11:20
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID : TMW64042023	Date Analyzed: 05/11/23 18:00
Lab Samp ID: D301-09	Dilution Factor: 1
Lab File ID: RE11012	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE11003	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	0.041J | (ND)	0.10	0.020	0.041
Heptachlor	(ND) | ND	0.10	0.020	0.041
delta-BHC	(ND) | 0.14	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	0.13 | (ND)	0.10	0.020	0.041

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
TCMX	0.243 | (0.266)	0.408	65	44-124
Decachlorobiphenyl	0.355 | (0.370)	0.408	91	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.: RE11004

Note: Endrin Aldehyde results were reported from analysis run file data ID RE04034 associated with calibration data ID RE04027.

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 12:20
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID : MW20042023	Date Analyzed: 05/05/23 02:41
Lab Samp ID: D301-10	Dilution Factor: 1
Lab File ID: RE04035	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04027	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	0.283 | (0.286)	0.435	66	44-124
Decachlorobiphenyl	0.298 | (0.297)	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 : POreto	Analyzed by : EKim
Result Quantified : First column | Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04028	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 14:00
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID : QC26042023EB05	Date Analyzed: 05/05/23 03:01
Lab Samp ID: D301-13	Dilution Factor: 1
Lab File ID: RE04036	Matrix: WATER
Ext Btch ID: 23CPE002W	% Moisture: NA
Calib. Ref.: RE04027	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	0.302 | (0.318)	0.440	72	44-124
Decachlorobiphenyl	0.325 | (0.320)	0.440	73	30-135

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

Sample Amount : 910ml	Final Volume : 10ml
Prepared by : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE04028	

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW3520C/8082A
PCBS

A total of four(4) water samples were received on 04/27/23 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. CPE002WB - 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. 60E002WL/60E002WC 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. : 23D301
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	CPE002WB	1	NA	05/03/2318:13	05/02/2313:15	KE03004A	KE03002A	CPE002W	Method Blank
LCS1W	60E002WL	1	NA	05/03/2318:33	05/02/2313:15	KE03005A	KE03002A	CPE002W	Lab Control Sample (LCS)
LCD1W	60E002WC	1	NA	05/03/2318:53	05/02/2313:15	KE03006A	KE03002A	CPE002W	LCS Duplicate
MW30042023	D301-01	0.98	NA	05/03/2320:33	05/02/2313:15	KE03011A	KE03002A	CPE002W	Field Sample
MW31042023	D301-03	1	NA	05/03/2320:53	05/02/2313:15	KE03012A	KE03002A	CPE002W	Field Sample
TMW64042023	D301-09	1.02	NA	05/03/2321:13	05/02/2313:15	KE03013A	KE03002A	CPE002W	Field Sample
QC26042023EB05	D301-13	1.10	NA	05/03/2321:33	05/02/2313:15	KE03014A	KE03002A	CPE002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID: MW30042023	Date Analyzed: 05/03/23 20:33
Lab Samp ID: D301-01	Dilution Factor: 0.98
Lab File ID: KE03011A	Matrix : WATER
Ext Btch ID: CPE002W	% Moisture : NA
Calib. Ref.: KE03002A	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	(0.5035)|0.4691	0.3920	(128)|120	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID: MW31042023	Date Analyzed: 05/03/23 20:53
Lab Samp ID: D301-03	Dilution Factor: 1
Lab File ID: KE03012A	Matrix : WATER
Ext Btch ID: CPE002W	% Moisture : NA
Calib. Ref.: KE03002A	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	(0.5183)|0.4615	0.4000	(130)|115	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID: TMW64042023	Date Analyzed: 05/03/23 21:13
Lab Samp ID: D301-09	Dilution Factor: 1.02
Lab File ID: KE03013A	Matrix : WATER
Ext Btch ID: CPE002W	% Moisture : NA
Calib. Ref.: KE03002A	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	(0.5202)|0.4787	0.4080	(128)|117	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 13:15
Sample ID: QC26042023EB05	Date Analyzed: 05/03/23 21:33
Lab Samp ID: D301-13	Dilution Factor: 1.10
Lab File ID: KE03014A	Matrix : WATER
Ext Btch ID: CPE002W	% Moisture : NA
Calib. Ref.: KE03002A	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	(0.5741)|0.5324	0.4400	(130)|121	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#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD 8151A
HERBICIDES

A total of four(4) water samples were received on 04/27/23 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. HED009WB - 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. HED009WL/HED009WC 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.

Sample D301-01 was initially analyzed at dilution to minimize suspected matrix interference exhibited by the color of its extract.

Dalapon results were reported from channel A due to contamination observed in channel B.

LAB CHRONICLE
HERBICIDES

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

SDG NO. : 23D301
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	HED009WB	1	NA	05/04/2318:28	04/28/2311:00	WE04003A	WE04002A	HED009W	Method Blank
LCS1W	HED009WL	1	NA	05/04/2318:56	04/28/2311:00	WE04004A	WE04002A	HED009W	Lab Control Sample (LCS)
LCD1W	HED009WC	1	NA	05/04/2319:24	04/28/2311:00	WE04005A	WE04002A	HED009W	LCS Duplicate
MW30042023	D301-01I	2	NA	05/04/2323:11	04/28/2311:00	WE04013A	WE04012A	HED009W	Diluted Sample
MW31042023	D301-03	1	NA	05/04/2323:40	04/28/2311:00	WE04014A	WE04012A	HED009W	Field Sample
TMW64042023	D301-09	1	NA	05/05/2300:08	04/28/2311:00	WE04015A	WE04012A	HED009W	Field Sample
QC26042023EB05	D301-13	1	NA	05/05/2300:36	04/28/2311:00	WE04016A	WE04012A	HED009W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 04/28/23 11:00
Sample ID: MW30042023	Date Analyzed: 05/04/23 23:11
Lab Samp ID: D301-01I	Dilution Factor: 2
Lab File ID: WE04013A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04012A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	2.0	0.20	0.40
2,4-DB	(ND) | ND	2.0	0.20	0.40
2,4,5-T	(ND) | ND	2.0	0.20	0.40
2,4,5-TP (SILVEX)	(ND) | ND	2.0	0.20	0.40
DALAPON	(ND) | 3.0	2.0	0.20	0.40
DICAMBA	(ND) | ND	2.0	0.20	0.40
DICHLOROPROP	(ND) | ND	2.0	0.20	0.40
DINOSEB	ND | (ND)	2.0	0.20	0.40
MCPA	(ND) | ND	80	20	40

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	11.61 | (11.70)	10.00	116 | (117)	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 04/28/23 11:00
Sample ID: MW31042023	Date Analyzed: 05/04/23 23:40
Lab Samp ID: D301-03	Dilution Factor: 1
Lab File ID: WE04014A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04012A	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	(0.15J) | 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) | 3.3	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	(9.562) | 9.320	10.00	(95.6) | 93.2	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:	04/26/23
Project	: USACE WINGATE	Date Received:	04/27/23
Batch No.	: 23D301	Date Extracted:	04/28/23 11:00
Sample ID:	TMW64042023	Date Analyzed:	05/05/23 00:08
Lab Samp ID:	D301-09	Dilution Factor:	1
Lab File ID:	WE04015A	Matrix :	WATER
Ext Btch ID:	HED009W	% Moisture :	NA
Calib. Ref.:	WE04012A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	0.77J | (ND)	1.0	0.10	0.20
2,4-DB	(ND) | 0.63J	1.0	0.10	0.20
2,4,5-T	(ND) | ND	1.0	0.10	0.20
2,4,5-TP (SILVEX)	0.15J | (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) | 0.37J	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	9.976 | (10.21)	10.00	99.8 | (102)	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 04/28/23 11:00
Sample ID: QC26042023EB05	Date Analyzed: 05/05/23 00:36
Lab Samp ID: D301-13	Dilution Factor: 1
Lab File ID: WE04016A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04012A	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	(ND)|ND	40	10	20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(10.07)|9.860	10.00	(101)|98.6	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#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW8330B
EXPLOSIVES

A total of eleven(11) water samples were received on 04/27/23 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. EXE004WB - 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. EXE004WL/EXE004WC 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 : 23D301

METHOD SW8330B
EXPLOSIVES

A total of eleven(11) water samples were received on 04/27/23 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. EXE004WB - 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. 35E004WL/35E004WC 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. : 23D301
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	EXE004WB	1	NA	05/24/2316:09	05/02/2310:43	XE22062A	XE22054A	EXE004W	Method Blank
LCS1W	EXE004WL	1	NA	05/24/2316:57	05/02/2310:43	XE22063A	XE22054A	EXE004W	Lab Control Sample (LCS)
LCD1W	EXE004WC	1	NA	05/24/2317:54	05/02/2310:43	XE22064A	XE22054A	EXE004W	LCS Duplicate
MW30042023	D301-01	1	NA	05/24/2320:27	05/02/2310:43	XE22067A	XE22054A	EXE004W	Field Sample
TMW15042023	D301-02	1	NA	05/24/2323:08	05/02/2310:43	XE22070A	XE22068A	EXE004W	Field Sample
MW31042023	D301-03	1	NA	05/24/2323:56	05/02/2310:43	XE22071A	XE22068A	EXE004W	Field Sample
TMW15042023D	D301-04	1	NA	05/25/2300:52	05/02/2310:43	XE22072A	XE22068A	EXE004W	Field Sample
FW31042023	D301-05	1	NA	05/27/2323:31	05/02/2310:43	XE22153A	XE22148A	EXE004W	Field Sample
TMW06042023	D301-06	1	NA	05/25/2302:37	05/02/2310:43	XE22074A	XE22068A	EXE004W	Field Sample
TMW49042023	D301-07	1	NA	05/25/2303:25	05/02/2310:43	XE22075A	XE22068A	EXE004W	Field Sample
TMW64042023	D301-09	1	NA	05/28/2300:27	05/02/2310:43	XE22154A	XE22148A	EXE004W	Field Sample
MW20042023	D301-10	1	NA	05/25/2305:10	05/02/2310:43	XE22077A	XE22068A	EXE004W	Field Sample
MW18D042023	D301-11	1	NA	05/25/2306:07	05/02/2310:43	XE22078A	XE22068A	EXE004W	Field Sample
QC26042023EB05	D301-13	1	NA	05/25/2306:55	05/02/2310:43	XE22079A	XE22068A	EXE004W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D301
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	EXE004WB	1	NA	05/24/2316:09	05/02/2310:43	XE22062A	XE22055A	EXE004W	Method Blank
LCS1W	35E004WL	1	NA	05/24/2318:42	05/02/2310:43	XE22065A	XE22055A	EXE004W	Lab Control Sample (LCS)
LCD1W	35E004WC	1	NA	05/24/2319:38	05/02/2310:43	XE22066A	XE22055A	EXE004W	LCS Duplicate
MW30042023	D301-01	1	NA	05/24/2320:27	05/02/2310:43	XE22067A	XE22055A	EXE004W	Field Sample
TMW15042023	D301-02	1	NA	05/24/2323:08	05/02/2310:43	XE22070A	XE22069A	EXE004W	Field Sample
MW31042023	D301-03	1	NA	05/24/2323:56	05/02/2310:43	XE22071A	XE22069A	EXE004W	Field Sample
TMW15042023D	D301-04	1	NA	05/25/2300:52	05/02/2310:43	XE22072A	XE22069A	EXE004W	Field Sample
FW31042023	D301-05	1	NA	05/27/2323:31	05/02/2310:43	XE22153A	XE22149A	EXE004W	Field Sample
TMW06042023	D301-06	1	NA	05/25/2302:37	05/02/2310:43	XE22074A	XE22069A	EXE004W	Field Sample
TMW49042023	D301-07	1	NA	05/25/2303:25	05/02/2310:43	XE22075A	XE22069A	EXE004W	Field Sample
TMW64042023	D301-09	1	NA	05/28/2300:27	05/02/2310:43	XE22154A	XE22149A	EXE004W	Field Sample
MW20042023	D301-10	1	NA	05/25/2305:10	05/02/2310:43	XE22077A	XE22069A	EXE004W	Field Sample
MW18D042023	D301-11	1	NA	05/25/2306:07	05/02/2310:43	XE22078A	XE22069A	EXE004W	Field Sample
QC26042023EB05	D301-13	1	NA	05/25/2306:55	05/02/2310:43	XE22079A	XE22069A	EXE004W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: MW30042023	Date Analyzed: 05/24/23 20:27
Lab Samp ID: D301-01	Dilution Factor: 1
Lab File ID: XE22067A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22054A	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	3.43	4.000	85.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: MW30042023	Date Analyzed: 05/24/23 20:27
Lab Samp ID: D301-01	Dilution Factor: 1
Lab File ID: XE22067A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22055A	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	3.43	4.000	85.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW15042023	Date Analyzed: 05/24/23 23:08
Lab Samp ID: D301-02	Dilution Factor: 1
Lab File ID: XE22070A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22068A	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	3.24	4.000	81.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW15042023	Date Analyzed: 05/24/23 23:08
Lab Samp ID: D301-02	Dilution Factor: 1
Lab File ID: XE22070A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22069A	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	3.24	4.000	81.1	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: MW31042023	Date Analyzed: 05/24/23 23:56
Lab Samp ID: D301-03	Dilution Factor: 1
Lab File ID: XE22071A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22068A	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	3.32	4.000	83.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: MW31042023	Date Analyzed: 05/24/23 23:56
Lab Samp ID: D301-03	Dilution Factor: 1
Lab File ID: XE22071A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22069A	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	3.32	4.000	83.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW15042023D	Date Analyzed: 05/25/23 00:52
Lab Samp ID: D301-04	Dilution Factor: 1
Lab File ID: XE22072A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22068A	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	3.52	4.000	87.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW15042023D	Date Analyzed: 05/25/23 00:52
Lab Samp ID: D301-04	Dilution Factor: 1
Lab File ID: XE22072A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22069A	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	3.52	4.000	87.9	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: FW31042023	Date Analyzed: 05/27/23 23:31
Lab Samp ID: D301-05	Dilution Factor: 1
Lab File ID: XE22153A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22148A	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	3.41	4.000	85.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: FW31042023	Date Analyzed: 05/27/23 23:31
Lab Samp ID: D301-05	Dilution Factor: 1
Lab File ID: XE22153A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22149A	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	3.41	4.000	85.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW06042023	Date Analyzed: 05/25/23 02:37
Lab Samp ID: D301-06	Dilution Factor: 1
Lab File ID: XE22074A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22068A	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	3.44	4.000	86.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW06042023	Date Analyzed: 05/25/23 02:37
Lab Samp ID: D301-06	Dilution Factor: 1
Lab File ID: XE22074A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22069A	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	3.44	4.000	86.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW49042023	Date Analyzed: 05/25/23 03:25
Lab Samp ID: D301-07	Dilution Factor: 1
Lab File ID: XE22075A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22068A	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	1.0	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	3.43	4.000	85.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW49042023	Date Analyzed: 05/25/23 03:25
Lab Samp ID: D301-07	Dilution Factor: 1
Lab File ID: XE22075A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22069A	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	3.43	4.000	85.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW64042023	Date Analyzed: 05/28/23 00:27
Lab Samp ID: D301-09	Dilution Factor: 1
Lab File ID: XE22154A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22148A	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	3.46	4.000	86.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: TMW64042023	Date Analyzed: 05/28/23 00:27
Lab Samp ID: D301-09	Dilution Factor: 1
Lab File ID: XE22154A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22149A	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	3.46	4.000	86.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: MW20042023	Date Analyzed: 05/25/23 05:10
Lab Samp ID: D301-10	Dilution Factor: 1
Lab File ID: XE22077A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22068A	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	88.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: MW20042023	Date Analyzed: 05/25/23 05:10
Lab Samp ID: D301-10	Dilution Factor: 1
Lab File ID: XE22077A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22069A	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	88.8	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: MW18D042023	Date Analyzed: 05/25/23 06:07
Lab Samp ID: D301-11	Dilution Factor: 1
Lab File ID: XE22078A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22068A	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	3.42	4.000	85.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: MW18D042023	Date Analyzed: 05/25/23 06:07
Lab Samp ID: D301-11	Dilution Factor: 1
Lab File ID: XE22078A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22069A	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	3.42	4.000	85.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: QC26042023EB05	Date Analyzed: 05/25/23 06:55
Lab Samp ID: D301-13	Dilution Factor: 1
Lab File ID: XE22079A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22068A	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	3.38	4.000	84.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:43
Sample ID: QC26042023EB05	Date Analyzed: 05/25/23 06:55
Lab Samp ID: D301-13	Dilution Factor: 1
Lab File ID: XE22079A	Matrix : WATER
Ext Btch ID: EXE004W	% Moisture : NA
Calib. Ref.: XE22069A	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	3.38	4.000	84.4	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#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW8332
NITROGLYCERIN AND PETN

A total of eleven(11) water samples were received on 04/27/23 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. EXE003WB - 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. EXE003WL/EXE003WC 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 : 23D301

METHOD SW8332
NITROGLYCERIN AND PETN

A total of eleven(11) water samples were received on 04/27/23 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. EXE003WB - 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. EXE003WL/EXE003WC 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. : 23D301
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	EXE003WB	1	NA	05/16/2309:04	05/02/2310:39	NE15134A	NE15131A	EXE003W	Method Blank
LCS1W	EXE003WL	1	NA	05/16/2309:13	05/02/2310:39	NE15135A	NE15131A	EXE003W	Lab Control Sample (LCS)
LCD1W	EXE003WC	1	NA	05/16/2309:22	05/02/2310:39	NE15136A	NE15131A	EXE003W	LCS Duplicate
MW30042023	D301-01	1	NA	05/16/2309:32	05/02/2310:39	NE15137A	NE15131A	EXE003W	Field Sample
TMW15042023	D301-02	1	NA	05/16/2309:41	05/02/2310:39	NE15138A	NE15131A	EXE003W	Field Sample
MW31042023	D301-03	1	NA	05/16/2313:27	05/02/2310:39	NE15163A	NE15159A	EXE003W	Field Sample
TMW15042023D	D301-04	1	NA	05/16/2309:59	05/02/2310:39	NE15140A	NE15131A	EXE003W	Field Sample
FW31042023	D301-05	1	NA	05/16/2310:08	05/02/2310:39	NE15141A	NE15131A	EXE003W	Field Sample
TMW06042023	D301-06	1	NA	05/16/2310:17	05/02/2310:39	NE15142A	NE15131A	EXE003W	Field Sample
TMW49042023	D301-07	1	NA	05/16/2310:26	05/02/2310:39	NE15143A	NE15131A	EXE003W	Field Sample
TMW64042023	D301-09	1	NA	05/16/2310:35	05/02/2310:39	NE15144A	NE15131A	EXE003W	Field Sample
MW20042023	D301-10	1	NA	05/16/2310:53	05/02/2310:39	NE15146A	NE15145A	EXE003W	Field Sample
MW18D042023	D301-11	1	NA	05/16/2311:02	05/02/2310:39	NE15147A	NE15145A	EXE003W	Field Sample
QC26042023EB05	D301-13	1	NA	05/16/2311:11	05/02/2310:39	NE15148A	NE15145A	EXE003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: MW30042023	Date Analyzed: 05/16/23 09:32
Lab Samp ID: D301-01	Dilution Factor: 1
Lab File ID: NE15137A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15131A	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: TMW15042023	Date Analyzed: 05/16/23 09:41
Lab Samp ID: D301-02	Dilution Factor: 1
Lab File ID: NE15138A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15131A	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	540	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: MW31042023	Date Analyzed: 05/16/23 13:27
Lab Samp ID: D301-03	Dilution Factor: 1
Lab File ID: NE15163A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15159A	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	514	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: TMW15042023D	Date Analyzed: 05/16/23 09:59
Lab Samp ID: D301-04	Dilution Factor: 1
Lab File ID: NE15140A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15131A	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: FW31042023	Date Analyzed: 05/16/23 10:08
Lab Samp ID: D301-05	Dilution Factor: 1
Lab File ID: NE15141A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15131A	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: TMW06042023	Date Analyzed: 05/16/23 10:17
Lab Samp ID: D301-06	Dilution Factor: 1
Lab File ID: NE15142A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15131A	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: TMW49042023	Date Analyzed: 05/16/23 10:26
Lab Samp ID: D301-07	Dilution Factor: 1
Lab File ID: NE15143A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15131A	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: TMW64042023	Date Analyzed: 05/16/23 10:35
Lab Samp ID: D301-09	Dilution Factor: 1
Lab File ID: NE15144A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15131A	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: MW20042023	Date Analyzed: 05/16/23 10:53
Lab Samp ID: D301-10	Dilution Factor: 1
Lab File ID: NE15146A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15145A	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: MW18D042023	Date Analyzed: 05/16/23 11:02
Lab Samp ID: D301-11	Dilution Factor: 1
Lab File ID: NE15147A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15145A	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: 04/26/23
Project : USACE WINGATE	Date Received: 04/27/23
Batch No. : 23D301	Date Extracted: 05/02/23 10:39
Sample ID: QC26042023EB05	Date Analyzed: 05/16/23 11:11
Lab Samp ID: D301-13	Dilution Factor: 1
Lab File ID: NE15148A	Matrix : WATER
Ext Btch ID: EXE003W	% Moisture : NA
Calib. Ref.: NE15145A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW6020A
METALS BY ICP-MS

A total of fourteen(14) water samples were received on 04/27/23 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(0.14J <1/2 LOQ) and Copper(0.74J <1/2 LOQ) were detected at trace level in IME007WB. 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. IME007WL/IME007WC 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: D301-14M/D301-14S - Percent recovery for Sodium(185X) was not within MS/MSD QC limits. Percent recovery for Calcium(9X) 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. : 23D301
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	IME007WB	1	NA	07/11/2317:42	05/04/2312:37	H6G08019	H6G08017	IME007W	Method Blank
LCS1W	IME007WL	1	NA	07/11/2317:50	05/04/2312:37	H6G08020	H6G08017	IME007W	Lab Control Sample (LCS)
LCD1W	IME007WC	1	NA	07/11/2317:58	05/04/2312:37	H6G08021	H6G08017	IME007W	LCS Duplicate
MW30042023	D301-01G	5	NA	07/11/2318:09	05/04/2312:37	H6G08022	H6G08017	IME007W	Diluted Sample
TMW15042023	D301-02G	5	NA	07/11/2318:12	05/04/2312:37	H6G08023	H6G08017	IME007W	Diluted Sample
MW31042023	D301-03I	10	NA	07/11/2318:15	05/04/2312:37	H6G08024	H6G08017	IME007W	Diluted Sample
TMW15042023D	D301-04G	5	NA	07/11/2318:18	05/04/2312:37	H6G08025	H6G08017	IME007W	Diluted Sample
FW31042023	D301-05G	5	NA	07/11/2318:21	05/04/2312:37	H6G08026	H6G08017	IME007W	Diluted Sample
TMW06042023	D301-06G	5	NA	07/11/2318:24	05/04/2312:37	H6G08027	H6G08017	IME007W	Diluted Sample
TMW49042023	D301-07G	5	NA	07/11/2318:26	05/04/2312:37	H6G08028	H6G08017	IME007W	Diluted Sample
TMW35042023	D301-08G	5	NA	07/11/2318:35	05/04/2312:37	H6G08031	H6G08029	IME007W	Diluted Sample
TMW64042023	D301-09G	5	NA	07/11/2318:38	05/04/2312:37	H6G08032	H6G08029	IME007W	Diluted Sample
MW20042023	D301-10K	20	NA	07/11/2318:41	05/04/2312:37	H6G08033	H6G08029	IME007W	Diluted Sample
MW18D042023	D301-11K	20	NA	07/11/2318:44	05/04/2312:37	H6G08034	H6G08029	IME007W	Diluted Sample
TMW34042023	D301-12I	10	NA	07/11/2318:47	05/04/2312:37	H6G08035	H6G08029	IME007W	Diluted Sample
QC26042023EB05	D301-13	1	NA	07/11/2318:50	05/04/2312:37	H6G08036	H6G08029	IME007W	Field Sample
TMW13042023	D301-14A	5	NA	07/11/2318:53	05/04/2312:37	H6G08037	H6G08029	IME007W	Analytical Spike Sample
TMW13042023	D301-14G	5	NA	07/11/2318:56	05/04/2312:37	H6G08038	H6G08029	IME007W	Diluted Sample
TMW13042023	D301-14J	25	NA	07/11/2318:59	05/04/2312:37	H6G08039	H6G08029	IME007W	Diluted Sample
TMW13042023MS	D301-14M	5	NA	07/11/2319:02	05/04/2312:37	H6G08040	H6G08029	IME007W	Matrix Spike Sample (MS)
TMW13042023MSD	D301-14S	5	NA	07/11/2319:10	05/04/2312:37	H6G08043	H6G08041	IME007W	MS Duplicate (MSD)
MW30042023	D301-01T	50	NA	07/11/2319:13	05/04/2312:37	H6G08044	H6G08041	IME007W	Diluted Sample
TMW15042023	D301-02T	50	NA	07/11/2319:16	05/04/2312:37	H6G08045	H6G08041	IME007W	Diluted Sample
MW31042023	D301-03T	50	NA	07/11/2319:19	05/04/2312:37	H6G08046	H6G08041	IME007W	Diluted Sample
TMW15042023D	D301-04T	50	NA	07/11/2319:22	05/04/2312:37	H6G08047	H6G08041	IME007W	Diluted Sample
FW31042023	D301-05T	50	NA	07/11/2319:25	05/04/2312:37	H6G08048	H6G08041	IME007W	Diluted Sample
TMW06042023	D301-06T	50	NA	07/11/2319:28	05/04/2312:37	H6G08049	H6G08041	IME007W	Diluted Sample
TMW49042023	D301-07T	50	NA	07/11/2319:31	05/04/2312:37	H6G08050	H6G08041	IME007W	Diluted Sample
TMW35042023	D301-08T	50	NA	07/11/2319:34	05/04/2312:37	H6G08051	H6G08041	IME007W	Diluted Sample
TMW64042023	D301-09T	50	NA	07/11/2319:37	05/04/2312:37	H6G08052	H6G08041	IME007W	Diluted Sample
MW20042023	D301-10T	200	NA	07/11/2319:46	05/04/2312:37	H6G08055	H6G08053	IME007W	Diluted Sample
MW18D042023	D301-11T	200	NA	07/11/2319:49	05/04/2312:37	H6G08056	H6G08053	IME007W	Diluted Sample
TMW34042023	D301-12T	50	NA	07/11/2319:51	05/04/2312:37	H6G08057	H6G08053	IME007W	Diluted Sample
TMW13042023	D301-14A	50	NA	07/11/2319:54	05/04/2312:37	H6G08058	H6G08053	IME007W	Analytical Spike Sample
TMW13042023	D301-14T	50	NA	07/11/2319:57	05/04/2312:37	H6G08059	H6G08053	IME007W	Diluted Sample
TMW13042023	D301-14J	250	NA	07/11/2320:00	05/04/2312:37	H6G08060	H6G08053	IME007W	Diluted Sample
TMW13042023MS	D301-14M	50	NA	07/11/2320:03	05/04/2312:37	H6G08061	H6G08053	IME007W	Matrix Spike Sample (MS)
TMW13042023MSD	D301-14S	50	NA	07/11/2320:06	05/04/2312:37	H6G08062	H6G08053	IME007W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MW30042023
Lab Samp ID: D301-01G
Lab File ID: H6G08022
Ext Btch ID: IME007W
Calib. Ref.: H6G08017

Date Collected: 04/26/23 07:15
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 18:09
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	310J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	38	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	12	10	2.5	5.0
Iron	200J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5500	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	1.4J	5.0	1.2	2.5
Potassium	550J	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: MW30042023
Lab Samp ID: D301-01T
Lab File ID: H6G08044
Ext Btch ID: IME007W
Calib. Ref.: H6G08041

Date Analyzed: 07/11/23 19:13
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	940000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:15
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW30042023	Date Analyzed:	07/11/23 18:09
Lab Samp ID:	D301-01G	Dilution Factor:	5
Lab File ID:	H6G08022	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	310J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	2.0J	5.0	0.62	1.2
Barium	38	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	12	10	2.5	5.0
Iron	200J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	5500	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	1.4J	5.0	1.2	2.5
Potassium	550J	1000	250	500
Selenium	ND	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	900000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:15
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW30042023	Date Analyzed:	07/11/23 19:13
Lab Samp ID:	D301-01T	Dilution Factor:	50
Lab File ID:	H6G08044	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08041	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	47J	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	120	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	940000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 07:50
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: TMW15042023	Date Analyzed: 07/11/23 18:12
Lab Samp ID: D301-02G	Dilution Factor: 5
Lab File ID: H6G08023	Matrix: WATER
Ext Btch ID: IME007W	% Moisture: NA
Calib. Ref.: H6G08017	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	120J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	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	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	4.2J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	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	2.7J	5.0	1.2	2.5
Zinc	190	100	25	50

Sample ID: TMW15042023	Date Analyzed: 07/11/23 19:16
Lab Samp ID: D301-02T	Dilution Factor: 50
Lab File ID: H6G08045	Matrix: WATER
Ext Btch ID: IME007W	% Moisture: NA
Calib. Ref.: H6G08041	Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	540000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:50
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW15042023	Date Analyzed:	07/11/23 18:12
Lab Samp ID:	D301-02G	Dilution Factor:	5
Lab File ID:	H6G08023	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	120J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	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	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	4.2J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	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	2.7J	5.0	1.2	2.5
Zinc	190	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW15042023
Lab Samp ID: D301-02T
Lab File ID: H6G08045
Ext Btch ID: IME007W
Calib. Ref.: H6G08041

Date Collected: 04/26/23 07:50
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 19:16
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	29J	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	3500J	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MW31042023
Lab Samp ID: D301-03I
Lab File ID: H6G08024
Ext Btch ID: IME007W
Calib. Ref.: H6G08017

Date Collected: 04/26/23 07:55
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 18:15
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	17	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	11J	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	31000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	550J	2000	500	1000
Selenium	28	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	51J	200	50	100

Sample ID: MW31042023
Lab Samp ID: D301-03T
Lab File ID: H6G08046
Ext Btch ID: IME007W
Calib. Ref.: H6G08041

Date Analyzed: 07/11/23 19:19
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1900000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 07:55
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: MW31042023	Date Analyzed: 07/11/23 18:15
Lab Samp ID: D301-03I	Dilution Factor: 10
Lab File ID: H6G08024	Matrix: WATER
Ext Btch ID: IME007W	% Moisture: NA
Calib. Ref.: H6G08017	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	17	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	11J	20	5.0	10
Iron	ND	2000	250	500
Lead	ND	10	0.50	1.0
Magnesium	31000	1000	200	500
Manganese	140	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	550J	2000	500	1000
Selenium	28	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1800000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	ND	10	2.5	5.0
Zinc	51J	200	50	100

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 07:55
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: MW31042023	Date Analyzed: 07/11/23 19:19
Lab Samp ID: D301-03T	Dilution Factor: 50
Lab File ID: H6G08046	Matrix: WATER
Ext Btch ID: IME007W	% Moisture: NA
Calib. Ref.: H6G08041	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	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	140	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	28J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW15042023D
Lab Samp ID: D301-04G
Lab File ID: H6G08025
Ext Btch ID: IME007W
Calib. Ref.: H6G08017

Date Collected: 04/26/23 07:55
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 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	240J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	ND	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	18000	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	170J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	3400	500	100	250
Manganese	5.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	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	3.6J	5.0	1.2	2.5
Zinc	56J	100	25	50

Sample ID: TMW15042023D
Lab Samp ID: D301-04T
Lab File ID: H6G08047
Ext Btch ID: IME007W
Calib. Ref.: H6G08041

Date Analyzed: 07/11/23 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	550000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW15042023D	Date Analyzed:	07/11/23 18:18
Lab Samp ID:	D301-04G	Dilution Factor:	5
Lab File ID:	H6G08025	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08017	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	26	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	1.9J	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	3400	500	100	250
Manganese	5.2	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	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	3.6J	5.0	1.2	2.5
Zinc	56J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW15042023D	Date Analyzed:	07/11/23 19:22
Lab Samp ID:	D301-04T	Dilution Factor:	50
Lab File ID:	H6G08047	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08041	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	30J	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	3500J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: FW31042023
Lab Samp ID: D301-05G
Lab File ID: H6G08026
Ext Btch ID: IME007W
Calib. Ref.: H6G08017

Date Collected: 04/26/23 09:00
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 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	310J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.2	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	6900	1000	250	500
Chromium	0.62J	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	37	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	12	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FW31042023
Lab Samp ID: D301-05T
Lab File ID: H6G08048
Ext Btch ID: IME007W
Calib. Ref.: H6G08041

Date Analyzed: 07/11/23 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	510000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:00
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	FW31042023	Date Analyzed:	07/11/23 18:21
Lab Samp ID:	D301-05G	Dilution Factor:	5
Lab File ID:	H6G08026	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08017	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	310J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	6.2	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	6900	1000	250	500
Chromium	0.62J	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	37	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	510000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:00
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	FW31042023	Date Analyzed:	07/11/23 19:25
Lab Samp ID:	D301-05T	Dilution Factor:	50
Lab File ID:	H6G08048	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08041	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	7100J	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	38J	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	510000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW06042023
Lab Samp ID: D301-06G
Lab File ID: H6G08027
Ext Btch ID: IME007W
Calib. Ref.: H6G08017

Date Collected: 04/26/23 09:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 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	0.83J	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	36000	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	7900	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	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	4.8J	5.0	1.2	2.5
Zinc	720	100	25	50

Sample ID: TMW06042023
Lab Samp ID: D301-06T
Lab File ID: H6G08049
Ext Btch ID: IME007W
Calib. Ref.: H6G08041

Date Analyzed: 07/11/23 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	930000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW06042023	Date Analyzed:	07/11/23 18:24
Lab Samp ID:	D301-06G	Dilution Factor:	5
Lab File ID:	H6G08027	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08017	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	17	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	2.6J	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7900	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	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	910000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	4.8J	5.0	1.2	2.5
Zinc	720	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW06042023	Date Analyzed:	07/11/23 19:28
Lab Samp ID:	D301-06T	Dilution Factor:	50
Lab File ID:	H6G08049	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08041	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	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	8000	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	930000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	340J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW49042023
Lab Samp ID: D301-07G
Lab File ID: H6G08028
Ext Btch ID: IME007W
Calib. Ref.: H6G08017

Date Collected: 04/26/23 08:25
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 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	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	85000	1000	250	500
Chromium	0.63J	5.0	0.50	1.0
Cobalt	0.61J	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	15000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	6.2	5.0	1.2	2.5
Potassium	1800	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	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW49042023
Lab Samp ID: D301-07T
Lab File ID: H6G08050
Ext Btch ID: IME007W
Calib. Ref.: H6G08041

Date Analyzed: 07/11/23 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	940000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 08:25
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW49042023	Date Analyzed:	07/11/23 18:26
Lab Samp ID:	D301-07G	Dilution Factor:	5
Lab File ID:	H6G08028	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08017	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	85000	1000	250	500
Chromium	0.63J	5.0	0.50	1.0
Cobalt	0.61J	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	15000	500	100	250
Manganese	110	5.0	1.2	2.5
Nickel	6.2	5.0	1.2	2.5
Potassium	1800	1000	250	500
Selenium	11	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 08:25
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW49042023	Date Analyzed:	07/11/23 19:31
Lab Samp ID:	D301-07T	Dilution Factor:	50
Lab File ID:	H6G08050	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08041	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	21J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	83000	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	120	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	940000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW35042023	Date Analyzed:	07/11/23 18:35
Lab Samp ID:	D301-08G	Dilution Factor:	5
Lab File ID:	H6G08031	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	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	71000	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	14000	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	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	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW35042023	Date Analyzed:	07/11/23 19:34
Lab Samp ID:	D301-08T	Dilution Factor:	50
Lab File ID:	H6G08051	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08041	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW35042023	Date Analyzed:	07/11/23 18:35
Lab Samp ID:	D301-08G	Dilution Factor:	5
Lab File ID:	H6G08031	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	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	71000	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	14000	500	100	250
Manganese	28	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	2.1J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:00
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW35042023	Date Analyzed:	07/11/23 19:34
Lab Samp ID:	D301-08T	Dilution Factor:	50
Lab File ID:	H6G08051	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08041	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	71000	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	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW64042023
Lab Samp ID: D301-09G
Lab File ID: H6G08032
Ext Btch ID: IME007W
Calib. Ref.: H6G08029

Date Collected: 04/26/23 11:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 18:38
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3500	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.66J	5.0	0.62	1.2
Barium	58	5.0	1.2	2.5
Beryllium	1.0J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	30	5.0	0.50	1.0
Cobalt	2.6J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	5100	1000	120	250
Lead	5.3	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	520	5.0	1.2	2.5
Nickel	24	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	23	5.0	1.2	2.5
Zinc	45J	100	25	50

Sample ID: TMW64042023
Lab Samp ID: D301-09T
Lab File ID: H6G08052
Ext Btch ID: IME007W
Calib. Ref.: H6G08041

Date Analyzed: 07/11/23 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	640000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW64042023	Date Analyzed:	07/11/23 18:38
Lab Samp ID:	D301-09G	Dilution Factor:	5
Lab File ID:	H6G08032	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3500	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.66J	5.0	0.62	1.2
Barium	58	5.0	1.2	2.5
Beryllium	1.0J	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	36000	1000	250	500
Chromium	30	5.0	0.50	1.0
Cobalt	2.6J	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	5100	1000	120	250
Lead	5.3	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	520	5.0	1.2	2.5
Nickel	24	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	650000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	23	5.0	1.2	2.5
Zinc	45J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW64042023	Date Analyzed:	07/11/23 19:37
Lab Samp ID:	D301-09T	Dilution Factor:	50
Lab File ID:	H6G08052	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08041	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	3700J	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	34000	10000	2500	5000
Chromium	28J	50	5.0	10
Cobalt	ND	37	5.0	10
Copper	ND	100	25	50
Iron	5100J	10000	1200	2500
Lead	5.4J	50	2.5	5.0
Magnesium	2800J	5000	1000	2500
Manganese	530	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	640000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MW20042023
Lab Samp ID: D301-10K
Lab File ID: H6G08033
Ext Btch ID: IME007W
Calib. Ref.: H6G08029

Date Collected: 04/26/23 12:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 18:41
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	21	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	240000	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	55000	2000	400	1000
Manganese	1600	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	81	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	130J	400	100	200

Sample ID: MW20042023
Lab Samp ID: D301-10T
Lab File ID: H6G08055
Ext Btch ID: IME007W
Calib. Ref.: H6G08053

Date Analyzed: 07/11/23 19:46
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2900000	40000	10000	20000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 12:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW20042023	Date Analyzed:	07/11/23 18:41
Lab Samp ID:	D301-10K	Dilution Factor:	20
Lab File ID:	H6G08033	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	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	21	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	240000	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	55000	2000	400	1000
Manganese	1600	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	81	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	ND	20	5.0	10
Zinc	130J	400	100	200

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 12:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW20042023	Date Analyzed:	07/11/23 19:46
Lab Samp ID:	D301-10T	Dilution Factor:	200
Lab File ID:	H6G08055	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08053	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	240000	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	56000	20000	4000	10000
Manganese	1600	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	89J	200	30	60
Silver	ND	200	20	40
Sodium	2900000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 13:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW18D042023	Date Analyzed:	07/11/23 18:44
Lab Samp ID:	D301-11K	Dilution Factor:	20
Lab File ID:	H6G08034	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	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	24	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	95000	4000	1000	2000
Chromium	ND	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	780J	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	22000	2000	400	1000
Manganese	820	20	5.0	10
Nickel	ND	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	ND	20	5.0	10
Zinc	150J	400	100	200

Sample ID:	MW18D042023	Date Analyzed:	07/11/23 19:49
Lab Samp ID:	D301-11T	Dilution Factor:	200
Lab File ID:	H6G08056	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08053	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2200000	40000	10000	20000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 13:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW18D042023	Date Analyzed:	07/11/23 18:44
Lab Samp ID:	D301-11K	Dilution Factor:	20
Lab File ID:	H6G08034	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	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	24	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	95000	4000	1000	2000
Chromium	ND	20	2.0	4.0
Cobalt	ND	15	2.0	4.0
Copper	ND	40	10	20
Iron	780J	4000	500	1000
Lead	ND	20	1.0	2.0
Magnesium	22000	2000	400	1000
Manganese	820	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	ND	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	2300000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	150J	400	100	200

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 13:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW18D042023	Date Analyzed:	07/11/23 19:49
Lab Samp ID:	D301-11T	Dilution Factor:	200
Lab File ID:	H6G08056	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08053	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	57J	200	50	100
Beryllium	ND	100	20	40
Cadmium	ND	200	20	40
Calcium	89000	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	22000	20000	4000	10000
Manganese	850	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	ND	200	30	60
Silver	ND	200	20	40
Sodium	2200000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW34042023
Lab Samp ID: D301-12I
Lab File ID: H6G08035
Ext Btch ID: IME007W
Calib. Ref.: H6G08029

Date Collected: 04/26/23 13:50
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 18:47
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	23	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	27000	1000	200	500
Manganese	160	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	630J	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: TMW34042023
Lab Samp ID: D301-12T
Lab File ID: H6G08057
Ext Btch ID: IME007W
Calib. Ref.: H6G08053

Date Analyzed: 07/11/23 19:51
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 13:50
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW34042023	Date Analyzed:	07/11/23 18:47
Lab Samp ID:	D301-12I	Dilution Factor:	10
Lab File ID:	H6G08035	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	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	23	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	27000	1000	200	500
Manganese	160	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	630J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 13:50
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW34042023	Date Analyzed:	07/11/23 19:51
Lab Samp ID:	D301-12T	Dilution Factor:	50
Lab File ID:	H6G08057	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08053	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	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	28000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 14:00
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	QC26042023EB05	Date Analyzed:	07/11/23 18:50
Lab Samp ID:	D301-13	Dilution Factor:	1
Lab File ID:	H6G08036	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	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	68J	200	50	100
Chromium	0.22J	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	74J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:05
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW13042023	Date Analyzed:	07/11/23 18:56
Lab Samp ID:	D301-14G	Dilution Factor:	5
Lab File ID:	H6G08038	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08029	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	27000	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	5200	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	8.6	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:	TMW13042023	Date Analyzed:	07/11/23 19:57
Lab Samp ID:	D301-14T	Dilution Factor:	50
Lab File ID:	H6G08059	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08053	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW13042023
Lab Samp ID: D301-14G
Lab File ID: H6G08038
Ext Btch ID: IME007W
Calib. Ref.: H6G08029

Date Collected: 04/26/23 11:05
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 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	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	27000	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	5200	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	8.6	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:05
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW13042023	Date Analyzed:	07/11/23 19:57
Lab Samp ID:	D301-14T	Dilution Factor:	50
Lab File ID:	H6G08059	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08053	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	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	5400	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	7.6J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MBLK1W	Date Analyzed:	07/11/23 17:42
Lab Samp ID:	IME007WB	Dilution Factor:	1
Lab File ID:	H6G08019	Matrix:	WATER
Ext Btch ID:	IME007W	% Moisture:	NA
Calib. Ref.:	H6G08017	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	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	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of fourteen(14) water samples were received on 04/27/23 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. IME008WB - 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. IME008WL/IME008WC 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: D301-14M/D301-14S - Percent recovery for Sodium(187X) was not within MS/MSD QC limits. Percent recovery for Calcium(9X) 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.

Samples D301-04, -05, -06, -10, -11, -12, 13, and -14 were reported from re-analysis due to internal-standard deficiencies at initial analytical run.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
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	IME008WB	1	NA	07/11/2320:15	05/04/2312:37	H6G08065	H6G08063	IME008W	Method Blank
LCS1W	IME008WL	1	NA	07/11/2320:18	05/04/2312:37	H6G08066	H6G08063	IME008W	Lab Control Sample (LCS)
LCD1W	IME008WC	1	NA	07/11/2320:21	05/04/2312:37	H6G08067	H6G08063	IME008W	LCS Duplicate
MW30042023	D301-01G	5	NA	07/11/2320:24	05/04/2312:37	H6G08068	H6G08063	IME008W	Diluted Sample
TMW15042023	D301-02G	5	NA	07/11/2320:27	05/04/2312:37	H6G08069	H6G08063	IME008W	Diluted Sample
MW31042023	D301-03I	10	NA	07/11/2320:30	05/04/2312:37	H6G08070	H6G08063	IME008W	Diluted Sample
TMW49042023	D301-07G	5	NA	07/11/2320:41	05/04/2312:37	H6G08074	H6G08063	IME008W	Diluted Sample
TMW35042023	D301-08G	5	NA	07/11/2320:50	05/04/2312:37	H6G08077	H6G08075	IME008W	Diluted Sample
TMW64042023	D301-09G	5	NA	07/11/2320:53	05/04/2312:37	H6G08078	H5G08075	IME008W	Diluted Sample
MW30042023	D301-01T	50	NA	07/11/2321:28	05/04/2312:37	H6G08090	H6G08087	IME008W	Diluted Sample
TMW15042023	D301-02T	50	NA	07/11/2321:31	05/04/2312:37	H6G08091	H6G08087	IME008W	Diluted Sample
MW31042023	D301-03T	50	NA	07/11/2321:34	05/04/2312:37	H6G08092	H6G08087	IME008W	Diluted Sample
TMW15042023D	D301-04T	50	NA	07/11/2321:37	05/04/2312:37	H6G08093	H6G08087	IME008W	Diluted Sample
FW31042023	D301-05T	50	NA	07/11/2321:40	05/04/2312:37	H6G08094	H6G08087	IME008W	Diluted Sample
TMW06042023	D301-06T	50	NA	07/11/2321:43	05/04/2312:37	H6G08095	H6G08087	IME008W	Diluted Sample
TMW35042023	D301-08T	50	NA	07/11/2321:49	05/04/2312:37	H6G08097	H6G08087	IME008W	Diluted Sample
TMW64042023	D301-09T	50	NA	07/11/2321:52	05/04/2312:37	H6G08098	H6G08087	IME008W	Diluted Sample
MW20042023	D301-10T	200	NA	07/11/2322:01	05/04/2312:37	H6G08101	H6G08099	IME008W	Diluted Sample
MW18D042023	D301-11T	200	NA	07/11/2322:04	05/04/2312:37	H6G08102	H6G08099	IME008W	Diluted Sample
TMW34042023	D301-12T	50	NA	07/11/2322:06	05/04/2312:37	H6G08103	H6G08099	IME008W	Diluted Sample
TMW13042023	D301-14A	50	NA	07/11/2322:09	05/04/2312:37	H6G08104	H6G08099	IME008W	Analytical Spike Sample
TMW13042023	D301-14T	50	NA	07/11/2322:12	05/04/2312:37	H6G08105	H6G08099	IME008W	Diluted Sample
TMW13042023	D301-14J	250	NA	07/11/2322:15	05/04/2312:37	H6G08106	H6G08099	IME008W	Diluted Sample
TMW13042023MS	D301-14M	50	NA	07/11/2322:18	05/04/2312:37	H6G08107	H6G08099	IME008W	Matrix Spike Sample (MS)
TMW13042023MSD	D301-14S	50	NA	07/11/2322:21	05/04/2312:37	H6G08108	H6G08099	IME008W	MS Duplicate (MSD)
TMW15042023D	D301-04G	5	NA	07/12/2313:07	05/04/2312:37	H6G09019	H6G09017	IME008W	Diluted Sample
FW31042023	D301-05G	5	NA	07/12/2313:10	05/04/2312:37	H6G09020	H6G09017	IME008W	Diluted Sample
TMW06042023	D301-06G	5	NA	07/12/2313:13	05/04/2312:37	H6G09021	H6G09017	IME008W	Diluted Sample
MW18D042023	D301-11K	20	NA	07/12/2313:19	05/04/2312:37	H6G09023	H6G09017	IME008W	Diluted Sample
TMW34042023	D301-12I	10	NA	07/12/2313:22	05/04/2312:37	H6G09024	H6G09017	IME008W	Diluted Sample
TMW13042023	D301-14A	5	NA	07/12/2313:30	05/04/2312:37	H6G09027	H6G09025	IME008W	Analytical Spike Sample
TMW13042023	D301-14G	5	NA	07/12/2313:33	05/04/2312:37	H6G09028	H6G09025	IME008W	Diluted Sample
TMW13042023	D301-14J	25	NA	07/12/2313:36	05/04/2312:37	H6G09029	H6G09025	IME008W	Diluted Sample
TMW13042023MS	D301-14M	5	NA	07/12/2313:39	05/04/2312:37	H6G09030	H6G09025	IME008W	Matrix Spike Sample (MS)
TMW13042023MSD	D301-14S	5	NA	07/12/2313:42	05/04/2312:37	H6G09031	H6G09025	IME008W	MS Duplicate (MSD)
TMW49042023	D301-07T	50	NA	07/12/2313:45	05/04/2312:37	H6G09032	H6G09025	IME008W	Diluted Sample
MW20042023	D301-10K	20	NA	07/12/2313:53	05/04/2312:37	H6G09033	H6G09025	IME008W	Diluted Sample
QC26042023EB05	D301-13N	1	NA	07/13/2314:48	05/04/2312:37	H6G10089	H6G10079	IME008W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 07:15
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: MW30042023	Date Analyzed: 07/11/23 20:24
Lab Samp ID: D301-01G	Dilution Factor: 5
Lab File ID: H6G08068	Matrix: WATER
Ext Btch ID: IME008W	% Moisture: NA
Calib. Ref.: H6G08063	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	32	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	26000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	13	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6000	500	100	250
Manganese	2.7J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	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	5.4	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW30042023	Date Analyzed: 07/11/23 21:28
Lab Samp ID: D301-01T	Dilution Factor: 50
Lab File ID: H6G08090	Matrix: WATER
Ext Btch ID: IME008W	% Moisture: NA
Calib. Ref.: H6G08087	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 07:15
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: MW30042023	Date Analyzed: 07/11/23 20:24
Lab Samp ID: D301-01G	Dilution Factor: 5
Lab File ID: H6G08068	Matrix: WATER
Ext Btch ID: IME008W	% Moisture: NA
Calib. Ref.: H6G08063	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	32	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	26000	1000	250	500
Chromium	ND	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	13	10	2.5	5.0
Iron	ND	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	6000	500	100	250
Manganese	2.7J	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	420J	1000	250	500
Selenium	ND	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MW30042023
Lab Samp ID: D301-01T
Lab File ID: H6G08090
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Collected: 04/26/23 07:15
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 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)
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	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	6100	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	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW15042023
Lab Samp ID: D301-02G
Lab File ID: H6G08069
Ext Btch ID: IME008W
Calib. Ref.: H6G08063

Date Collected: 04/26/23 07:50
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 20:27
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	23	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	0.98J	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	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	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	1.8J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW15042023
Lab Samp ID: D301-02T
Lab File ID: H6G08091
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Analyzed: 07/11/23 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	550000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW15042023
Lab Samp ID: D301-02G
Lab File ID: H6G08069
Ext Btch ID: IME008W
Calib. Ref.: H6G08063

Date Collected: 04/26/23 07:50
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 20:27
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	23	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	0.98J	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	ND	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	13	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	1.8J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW15042023
Lab Samp ID: D301-02T
Lab File ID: H6G08091
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Collected: 04/26/23 07:50
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 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)
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	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	3400J	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	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MW31042023
Lab Samp ID: D301-03I
Lab File ID: H6G08070
Ext Btch ID: IME008W
Calib. Ref.: H6G08063

Date Collected: 04/26/23 07:55
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 20:30
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	16	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	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	ND	10	0.50	1.0
Magnesium	31000	1000	200	500
Manganese	120	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	27	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: MW31042023
Lab Samp ID: D301-03T
Lab File ID: H6G08092
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Analyzed: 07/11/23 21:34
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1800000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW31042023	Date Analyzed:	07/11/23 20:30
Lab Samp ID:	D301-03I	Dilution Factor:	10
Lab File ID:	H6G08070	Matrix:	WATER
Ext Btch ID:	IME008W	% Moisture:	NA
Calib. Ref.:	H6G08063	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	140000	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	ND	10	0.50	1.0
Magnesium	31000	1000	200	500
Manganese	120	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	27	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	1800000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 07:55
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW31042023	Date Analyzed:	07/11/23 21:34
Lab Samp ID:	D301-03T	Dilution Factor:	50
Lab File ID:	H6G08092	Matrix:	WATER
Ext Btch ID:	IME008W	% Moisture:	NA
Calib. Ref.:	H6G08087	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	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	32000	5000	1000	2500
Manganese	130	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	25J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW15042023D
Lab Samp ID: D301-04G
Lab File ID: H6G09019
Ext Btch ID: IME008W
Calib. Ref.: H6G09017

Date Collected: 04/26/23 07:55
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:07
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	22	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	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	3300	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	13	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: TMW15042023D
Lab Samp ID: D301-04T
Lab File ID: H6G08093
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Analyzed: 07/11/23 21:37
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW15042023D
Lab Samp ID: D301-04G
Lab File ID: H6G09019
Ext Btch ID: IME008W
Calib. Ref.: H6G09017

Date Collected: 04/26/23 07:55
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:07
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	22	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	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	3300	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	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW15042023D
Lab Samp ID: D301-04T
Lab File ID: H6G08093
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Collected: 04/26/23 07:55
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 21:37
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	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	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	3600J	5000	1000	2500
Manganese	ND	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	12J	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: FW31042023
Lab Samp ID: D301-05G
Lab File ID: H6G09020
Ext Btch ID: IME008W
Calib. Ref.: H6G09017

Date Collected: 04/26/23 09:00
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:10
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	6.5	5.0	0.62	1.2
Barium	9.5	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	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	2500	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	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: FW31042023
Lab Samp ID: D301-05T
Lab File ID: H6G08094
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Analyzed: 07/11/23 21:40
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	510000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: FW31042023
Lab Samp ID: D301-05G
Lab File ID: H6G09020
Ext Btch ID: IME008W
Calib. Ref.: H6G09017

Date Collected: 04/26/23 09:00
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:10
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	6.5	5.0	0.62	1.2
Barium	9.5	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	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	2500	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: FW31042023
Lab Samp ID: D301-05T
Lab File ID: H6G08094
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Collected: 04/26/23 09:00
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 21:40
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	14J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	7100J	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	510000	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW06042023
Lab Samp ID: D301-06G
Lab File ID: H6G09021
Ext Btch ID: IME008W
Calib. Ref.: H6G09017

Date Collected: 04/26/23 09:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 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	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.2J	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	36000	1000	250	500
Chromium	0.65J	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	7800	500	100	250
Manganese	26	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	290J	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	4.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW06042023
Lab Samp ID: D301-06T
Lab File ID: H6G08095
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Analyzed: 07/11/23 21:43
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 09:20
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: TMW06042023	Date Analyzed: 07/12/23 13:13
Lab Samp ID: D301-06G	Dilution Factor: 5
Lab File ID: H6G09021	Matrix: WATER
Ext Btch ID: IME008W	% Moisture: NA
Calib. Ref.: H6G09017	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	1.2J	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	36000	1000	250	500
Chromium	0.65J	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	7800	500	100	250
Manganese	26	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	290J	1000	250	500
Selenium	1.1J	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 09:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW06042023	Date Analyzed:	07/11/23 21:43
Lab Samp ID:	D301-06T	Dilution Factor:	50
Lab File ID:	H6G08095	Matrix:	WATER
Ext Btch ID:	IME008W	% Moisture:	NA
Calib. Ref.:	H6G08087	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	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	7900	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW49042023
Lab Samp ID: D301-07G
Lab File ID: H6G08074
Ext Btch ID: IME008W
Calib. Ref.: H6G08063

Date Collected: 04/26/23 08:25
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 20:41
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	11	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	ND	5.0	0.50	1.0
Cobalt	0.50J	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	95	5.0	1.2	2.5
Nickel	5.6	5.0	1.2	2.5
Potassium	1700	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	11	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW49042023
Lab Samp ID: D301-07T
Lab File ID: H6G09032
Ext Btch ID: IME008W
Calib. Ref.: H6G09025

Date Analyzed: 07/12/23 13:45
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	940000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW49042023
Lab Samp ID: D301-07G
Lab File ID: H6G08074
Ext Btch ID: IME008W
Calib. Ref.: H6G08063

Date Collected: 04/26/23 08:25
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 20:41
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	11	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	ND	5.0	0.50	1.0
Cobalt	0.50J	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	95	5.0	1.2	2.5
Nickel	5.6	5.0	1.2	2.5
Potassium	1700	1000	250	500
Selenium	11	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	900000E	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 08:25
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW49042023	Date Analyzed:	07/12/23 13:45
Lab Samp ID:	D301-07T	Dilution Factor:	50
Lab File ID:	H6G09032	Matrix:	WATER
Ext Btch ID:	IME008W	% Moisture:	NA
Calib. Ref.:	H6G09025	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	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	15000	5000	1000	2500
Manganese	99	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	940000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW35042023
Lab Samp ID: D301-08G
Lab File ID: H6G08077
Ext Btch ID: IME008W
Calib. Ref.: H6G08075

Date Collected: 04/26/23 11:00
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 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	11	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	70000	1000	250	500
Chromium	26	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.5J	10	2.5	5.0
Iron	660J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	1.9J	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: TMW35042023
Lab Samp ID: D301-08T
Lab File ID: H6G08097
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Analyzed: 07/11/23 21:49
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 11:00
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: TMW35042023	Date Analyzed: 07/11/23 20:50
Lab Samp ID: D301-08G	Dilution Factor: 5
Lab File ID: H6G08077	Matrix: WATER
Ext Btch ID: IME008W	% Moisture: NA
Calib. Ref.: H6G08075	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	70000	1000	250	500
Chromium	26	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	3.5J	10	2.5	5.0
Iron	660J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	14000	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	ND	1000	250	500
Selenium	1.9J	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW35042023
Lab Samp ID: D301-08T
Lab File ID: H6G08097
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Collected: 04/26/23 11:00
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 21:49
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	15J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	72000	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	23J	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW64042023
Lab Samp ID: D301-09G
Lab File ID: H6G08078
Ext Btch ID: IME008W
Calib. Ref.: H6G08075

Date Collected: 04/26/23 11:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 20:53
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	23	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	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	1300	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	730J	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: TMW64042023
Lab Samp ID: D301-09T
Lab File ID: H6G08098
Ext Btch ID: IME008W
Calib. Ref.: H6G08087

Date Analyzed: 07/11/23 21:52
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	630000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW64042023
Lab Samp ID: D301-09G
Lab File ID: H6G08078
Ext Btch ID: IME008W
Calib. Ref.: H6G08075

Date Collected: 04/26/23 11:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 20:53
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	23	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	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	1300	500	100	250
Manganese	36	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	730J	1000	250	500
Selenium	ND	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 11:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	TMW64042023	Date Analyzed:	07/11/23 21:52
Lab Samp ID:	D301-09T	Dilution Factor:	50
Lab File ID:	H6G08098	Matrix:	WATER
Ext Btch ID:	IME008W	% Moisture:	NA
Calib. Ref.:	H6G08087	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	28J	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	1400J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 12:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW20042023	Date Analyzed:	07/12/23 13:53
Lab Samp ID:	D301-10K	Dilution Factor:	20
Lab File ID:	H6G09033	Matrix:	WATER
Ext Btch ID:	IME008W	% Moisture:	NA
Calib. Ref.:	H6G09025	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	15J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	240000	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	53000	2000	400	1000
Manganese	1600	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	85	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	120J	400	100	200

Sample ID:	MW20042023	Date Analyzed:	07/11/23 22:01
Lab Samp ID:	D301-10T	Dilution Factor:	200
Lab File ID:	H6G08101	Matrix:	WATER
Ext Btch ID:	IME008W	% Moisture:	NA
Calib. Ref.:	H6G08099	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2900000	40000	10000	20000

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MW20042023
Lab Samp ID: D301-10K
Lab File ID: H6G09033
Ext Btch ID: IME008W
Calib. Ref.: H6G09025

Date Collected: 04/26/23 12:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:53
Dilution Factor: 20
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	2000	400	1000
Antimony	ND	20	5.0	10
Arsenic	ND	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	240000	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	53000	2000	400	1000
Manganese	1600	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	ND	4000	1000	2000
Selenium	85	20	3.0	6.0
Silver	ND	20	2.0	4.0
Sodium	2700000E	4000	1000	2000
Thallium	ND	10	2.0	4.0
Vanadium	ND	20	5.0	10
Zinc	120J	400	100	200

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MW20042023
Lab Samp ID: D301-10T
Lab File ID: H6G08101
Ext Btch ID: IME008W
Calib. Ref.: H6G08099

Date Collected: 04/26/23 12:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 22:01
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
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	250000	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	55000	20000	4000	10000
Manganese	1700	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	94J	200	30	60
Silver	ND	200	20	40
Sodium	2900000	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MW18D042023
Lab Samp ID: D301-11K
Lab File ID: H6G09023
Ext Btch ID: IME008W
Calib. Ref.: H6G09017

Date Collected: 04/26/23 13:20
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:19
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	17J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	71000	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	20000	2000	400	1000
Manganese	820	20	5.0	10
Nickel	ND	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	ND	20	5.0	10
Zinc	ND	400	100	200

Sample ID: MW18D042023
Lab Samp ID: D301-11T
Lab File ID: H6G08102
Ext Btch ID: IME008W
Calib. Ref.: H6G08099

Date Analyzed: 07/11/23 22:04
Dilution Factor: 200
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2100000	40000	10000	20000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/26/23 13:20
Project	: USACE WINGATE	Date Received:	04/27/23
SDG NO.	: 23D301	Date Extracted:	05/04/23 12:37
Sample ID:	MW18D042023	Date Analyzed:	07/12/23 13:19
Lab Samp ID:	D301-11K	Dilution Factor:	20
Lab File ID:	H6G09023	Matrix:	WATER
Ext Btch ID:	IME008W	% Moisture:	NA
Calib. Ref.:	H6G09017	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	17J	20	5.0	10
Beryllium	ND	10	2.0	4.0
Cadmium	ND	20	2.0	4.0
Calcium	71000	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	20000	2000	400	1000
Manganese	820	20	5.0	10
Nickel	ND	20	5.0	10
Potassium	ND	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 13:20
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: MW18D042023	Date Analyzed: 07/11/23 22:04
Lab Samp ID: D301-11T	Dilution Factor: 200
Lab File ID: H6G08102	Matrix: WATER
Ext Btch ID: IME008W	% Moisture: NA
Calib. Ref.: H6G08099	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	76000	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	21000	20000	4000	10000
Manganese	860	200	50	100
Nickel	ND	200	50	100
Potassium	ND	40000	10000	20000
Selenium	ND	200	30	60
Silver	ND	200	20	40
Sodium	2100000	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW34042023
Lab Samp ID: D301-12I
Lab File ID: H6G09024
Ext Btch ID: IME008W
Calib. Ref.: H6G09017

Date Collected: 04/26/23 13:50
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:22
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	27000	1000	200	500
Manganese	150	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	650J	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: TMW34042023
Lab Samp ID: D301-12T
Lab File ID: H6G08103
Ext Btch ID: IME008W
Calib. Ref.: H6G08099

Date Analyzed: 07/11/23 22:06
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW34042023
Lab Samp ID: D301-12I
Lab File ID: H6G09024
Ext Btch ID: IME008W
Calib. Ref.: H6G09017

Date Collected: 04/26/23 13:50
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:22
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	27000	1000	200	500
Manganese	150	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	650J	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 : CKaing
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/26/23 13:50
Project : USACE WINGATE	Date Received: 04/27/23
SDG NO. : 23D301	Date Extracted: 05/04/23 12:37
Sample ID: TMW34042023	Date Analyzed: 07/11/23 22:06
Lab Samp ID: D301-12T	Dilution Factor: 50
Lab File ID: H6G08103	Matrix: WATER
Ext Btch ID: IME008W	% Moisture: NA
Calib. Ref.: H6G08099	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	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	29000	5000	1000	2500
Manganese	170	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	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: QC26042023EB05
Lab Samp ID: D301-13N
Lab File ID: H6G10089
Ext Btch ID: IME008W
Calib. Ref.: H6G10079

Date Collected: 04/26/23 14:00
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/13/23 14:48
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	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	0.11J	1.0	0.10	0.20
Cobalt	ND	0.75	0.10	0.20
Copper	1.7J	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	0.27J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW13042023
Lab Samp ID: D301-14G
Lab File ID: H6G09028
Ext Btch ID: IME008W
Calib. Ref.: H6G09025

Date Collected: 04/26/23 11:05
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:33
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	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	0.66J	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	390J	1000	250	500
Selenium	9.6	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: TMW13042023
Lab Samp ID: D301-14T
Lab File ID: H6G08105
Ext Btch ID: IME008W
Calib. Ref.: H6G08099

Date Analyzed: 07/11/23 22:12
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	560000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW13042023
Lab Samp ID: D301-14G
Lab File ID: H6G09028
Ext Btch ID: IME008W
Calib. Ref.: H6G09025

Date Collected: 04/26/23 11:05
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/12/23 13:33
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	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	0.66J	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	390J	1000	250	500
Selenium	9.6	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	2.8J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: TMW13042023
Lab Samp ID: D301-14T
Lab File ID: H6G08105
Ext Btch ID: IME008W
Calib. Ref.: H6G08099

Date Collected: 04/26/23 11:05
Date Received: 04/27/23
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 22:12
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	21J	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	29000	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	5300	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D301
Sample ID: MBLK1W
Lab Samp ID: IME008WB
Lab File ID: H6G08065
Ext Btch ID: IME008W
Calib. Ref.: H6G08063

Date Collected: NA
Date Received: NA
Date Extracted: 05/04/23 12:37
Date Analyzed: 07/11/23 20:15
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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of fourteen(14) water samples were received on 04/27/23 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 HGE027WB. 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. HGE027WL/HGE027WC 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 D301-14M/D301-14S. 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. : 23D301
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	HGE027WB	1	NA	05/22/2318:59	05/22/2312:36	M47E022012	M47E022	23HGE027W	Method Blank
LCS1W	HGE027WL	1	NA	05/22/2319:01	05/22/2312:36	M47E022013	M47E022	23HGE027W	Lab Control Sample (LCS)
LCD1W	HGE027WC	1	NA	05/22/2319:02	05/22/2312:36	M47E022014	M47E022	23HGE027W	LCS Duplicate
MW30042023	D301-01	1	NA	05/22/2319:04	05/22/2312:36	M47E022015	M47E022	23HGE027W	Field Sample
TMW15042023	D301-02	1	NA	05/22/2319:06	05/22/2312:36	M47E022016	M47E022	23HGE027W	Field Sample
MW31042023	D301-03	1	NA	05/22/2319:08	05/22/2312:36	M47E022017	M47E022	23HGE027W	Field Sample
TMW15042023D	D301-04	1	NA	05/22/2319:09	05/22/2312:36	M47E022018	M47E022	23HGE027W	Field Sample
FW31042023	D301-05	1	NA	05/22/2319:11	05/22/2312:36	M47E022019	M47E022	23HGE027W	Field Sample
TMW06042023	D301-06	1	NA	05/22/2319:13	05/22/2312:36	M47E022020	M47E022	23HGE027W	Field Sample
TMW49042023	D301-07	1	NA	05/22/2319:15	05/22/2312:36	M47E022021	M47E022	23HGE027W	Field Sample
TMW35042023	D301-08	1	NA	05/22/2319:21	05/22/2312:36	M47E022024	M47E022	23HGE027W	Field Sample
TMW64042023	D301-09	1	NA	05/22/2319:23	05/22/2312:36	M47E022025	M47E022	23HGE027W	Field Sample
MW20042023	D301-10	1	NA	05/22/2319:25	05/22/2312:36	M47E022026	M47E022	23HGE027W	Field Sample
MW18D042023	D301-11	1	NA	05/22/2319:27	05/22/2312:36	M47E022027	M47E022	23HGE027W	Field Sample
TMW34042023	D301-12	1	NA	05/22/2319:29	05/22/2312:36	M47E022028	M47E022	23HGE027W	Field Sample
QC26042023EB05	D301-13	1	NA	05/22/2319:30	05/22/2312:36	M47E022029	M47E022	23HGE027W	Field Sample
TMW13042023MS	D301-14M	1	NA	05/22/2319:32	05/22/2312:36	M47E022030	M47E022	23HGE027W	Matrix Spike Sample (MS)
TMW13042023MSD	D301-14S	1	NA	05/22/2319:34	05/22/2312:36	M47E022031	M47E022	23HGE027W	MS Duplicate (MSD)
TMW13042023	D301-14	1	NA	05/22/2319:38	05/22/2312:36	M47E022033	M47E022	23HGE027W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301

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	HGE027WB	ND	1	NA	0.50	0.10	0.20	05/22/2318:59	05/22/2312:36	M47E022012	M47E022	23HGE027W	NA	NA
LCS1W	HGE027WL	2.6	1	NA	0.50	0.10	0.20	05/22/2319:01	05/22/2312:36	M47E022013	M47E022	23HGE027W	NA	NA
LCD1W	HGE027WC	2.5	1	NA	0.50	0.10	0.20	05/22/2319:02	05/22/2312:36	M47E022014	M47E022	23HGE027W	NA	NA
MW30042023	D301-01	ND	1	NA	0.50	0.10	0.20	05/22/2319:04	05/22/2312:36	M47E022015	M47E022	23HGE027W	04/26/2307:15	04/27/23
TMW15042023	D301-02	ND	1	NA	0.50	0.10	0.20	05/22/2319:06	05/22/2312:36	M47E022016	M47E022	23HGE027W	04/26/2307:50	04/27/23
MW31042023	D301-03	ND	1	NA	0.50	0.10	0.20	05/22/2319:08	05/22/2312:36	M47E022017	M47E022	23HGE027W	04/26/2307:55	04/27/23
TMW15042023D	D301-04	ND	1	NA	0.50	0.10	0.20	05/22/2319:09	05/22/2312:36	M47E022018	M47E022	23HGE027W	04/26/2307:55	04/27/23
FW31042023	D301-05	ND	1	NA	0.50	0.10	0.20	05/22/2319:11	05/22/2312:36	M47E022019	M47E022	23HGE027W	04/26/2309:00	04/27/23
TMW06042023	D301-06	ND	1	NA	0.50	0.10	0.20	05/22/2319:13	05/22/2312:36	M47E022020	M47E022	23HGE027W	04/26/2309:20	04/27/23
TMW49042023	D301-07	ND	1	NA	0.50	0.10	0.20	05/22/2319:15	05/22/2312:36	M47E022021	M47E022	23HGE027W	04/26/2308:25	04/27/23
TMW35042023	D301-08	ND	1	NA	0.50	0.10	0.20	05/22/2319:21	05/22/2312:36	M47E022024	M47E022	23HGE027W	04/26/2311:00	04/27/23
TMW64042023	D301-09	ND	1	NA	0.50	0.10	0.20	05/22/2319:23	05/22/2312:36	M47E022025	M47E022	23HGE027W	04/26/2311:20	04/27/23
MW20042023	D301-10	ND	1	NA	0.50	0.10	0.20	05/22/2319:25	05/22/2312:36	M47E022026	M47E022	23HGE027W	04/26/2312:20	04/27/23
MW18D042023	D301-11	ND	1	NA	0.50	0.10	0.20	05/22/2319:27	05/22/2312:36	M47E022027	M47E022	23HGE027W	04/26/2313:20	04/27/23
TMW34042023	D301-12	ND	1	NA	0.50	0.10	0.20	05/22/2319:29	05/22/2312:36	M47E022028	M47E022	23HGE027W	04/26/2313:50	04/27/23
QC26042023EB05	D301-13	ND	1	NA	0.50	0.10	0.20	05/22/2319:30	05/22/2312:36	M47E022029	M47E022	23HGE027W	04/26/2314:00	04/27/23
TMW13042023MS	D301-14M	2.7	1	NA	0.50	0.10	0.20	05/22/2319:32	05/22/2312:36	M47E022030	M47E022	23HGE027W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14S	2.7	1	NA	0.50	0.10	0.20	05/22/2319:34	05/22/2312:36	M47E022031	M47E022	23HGE027W	04/26/2311:05	04/27/23
TMW13042023	D301-14	ND	1	NA	0.50	0.10	0.20	05/22/2319:38	05/22/2312:36	M47E022033	M47E022	23HGE027W	04/26/2311:05	04/27/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of fourteen(14) water samples were received on 04/27/23 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 HGE028WB. 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. HGE028WL/HGE028WC 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 D301-14M/D301-14S. 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. : 23D301
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	HGE028WB	1	NA	05/22/2319:59	05/22/2313:32	M47E022044	M47E022	23HGE028W	Method Blank
LCS1W	HGE028WL	1	NA	05/22/2320:01	05/22/2313:32	M47E022045	M47E022	23HGE028W	Lab Control Sample (LCS)
LCD1W	HGE028WC	1	NA	05/22/2320:06	05/22/2313:32	M47E022048	M47E022	23HGE028W	LCS Duplicate
MW30042023	D301-01	1	NA	05/22/2320:09	05/22/2313:32	M47E022049	M47E022	23HGE028W	Field Sample
TMW15042023	D301-02	1	NA	05/22/2320:10	05/22/2313:32	M47E022050	M47E022	23HGE028W	Field Sample
MW31042023	D301-03	1	NA	05/22/2320:13	05/22/2313:32	M47E022051	M47E022	23HGE028W	Field Sample
TMW15042023D	D301-04	1	NA	05/22/2320:14	05/22/2313:32	M47E022052	M47E022	23HGE028W	Field Sample
FW31042023	D301-05	1	NA	05/22/2320:16	05/22/2313:32	M47E022053	M47E022	23HGE028W	Field Sample
TMW06042023	D301-06	1	NA	05/22/2320:19	05/22/2313:32	M47E022054	M47E022	23HGE028W	Field Sample
TMW49042023	D301-07	1	NA	05/22/2320:20	05/22/2313:32	M47E022055	M47E022	23HGE028W	Field Sample
TMW35042023	D301-08	1	NA	05/22/2320:22	05/22/2313:32	M47E022056	M47E022	23HGE028W	Field Sample
TMW64042023	D301-09	1	NA	05/22/2320:24	05/22/2313:32	M47E022057	M47E022	23HGE028W	Field Sample
MW20042023	D301-10	1	NA	05/22/2320:30	05/22/2313:32	M47E022060	M47E022	23HGE028W	Field Sample
MW18D042023	D301-11	1	NA	05/22/2320:32	05/22/2313:32	M47E022061	M47E022	23HGE028W	Field Sample
TMW34042023	D301-12	1	NA	05/22/2320:34	05/22/2313:32	M47E022062	M47E022	23HGE028W	Field Sample
QC26042023EB05	D301-13	1	NA	05/22/2320:36	05/22/2313:32	M47E022063	M47E022	23HGE028W	Field Sample
TMW13042023MS	D301-14M	1	NA	05/22/2320:38	05/22/2313:32	M47E022064	M47E022	23HGE028W	Matrix Spike Sample (MS)
TMW13042023MSD	D301-14S	1	NA	05/22/2320:40	05/22/2313:32	M47E022065	M47E022	23HGE028W	MS Duplicate (MSD)
TMW13042023	D301-14	1	NA	05/22/2320:43	05/22/2313:32	M47E022067	M47E022	23HGE028W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301

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	HGE028WB	ND	1	NA	0.50	0.10	0.20	05/22/2319:59	05/22/2313:32	M47E022044	M47E022	23HGE028W	NA	NA
LCS1W	HGE028WL	2.5	1	NA	0.50	0.10	0.20	05/22/2320:01	05/22/2313:32	M47E022045	M47E022	23HGE028W	NA	NA
LCD1W	HGE028WC	2.5	1	NA	0.50	0.10	0.20	05/22/2320:06	05/22/2313:32	M47E022048	M47E022	23HGE028W	NA	NA
MW30042023	D301-01	ND	1	NA	0.50	0.10	0.20	05/22/2320:09	05/22/2313:32	M47E022049	M47E022	23HGE028W	04/26/2307:15	04/27/23
TMW15042023	D301-02	ND	1	NA	0.50	0.10	0.20	05/22/2320:10	05/22/2313:32	M47E022050	M47E022	23HGE028W	04/26/2307:50	04/27/23
MW31042023	D301-03	ND	1	NA	0.50	0.10	0.20	05/22/2320:13	05/22/2313:32	M47E022051	M47E022	23HGE028W	04/26/2307:55	04/27/23
TMW15042023D	D301-04	ND	1	NA	0.50	0.10	0.20	05/22/2320:14	05/22/2313:32	M47E022052	M47E022	23HGE028W	04/26/2307:55	04/27/23
FW31042023	D301-05	ND	1	NA	0.50	0.10	0.20	05/22/2320:16	05/22/2313:32	M47E022053	M47E022	23HGE028W	04/26/2309:00	04/27/23
TMW06042023	D301-06	0.12J	1	NA	0.50	0.10	0.20	05/22/2320:19	05/22/2313:32	M47E022054	M47E022	23HGE028W	04/26/2309:20	04/27/23
TMW49042023	D301-07	ND	1	NA	0.50	0.10	0.20	05/22/2320:20	05/22/2313:32	M47E022055	M47E022	23HGE028W	04/26/2308:25	04/27/23
TMW35042023	D301-08	ND	1	NA	0.50	0.10	0.20	05/22/2320:22	05/22/2313:32	M47E022056	M47E022	23HGE028W	04/26/2311:00	04/27/23
TMW64042023	D301-09	ND	1	NA	0.50	0.10	0.20	05/22/2320:24	05/22/2313:32	M47E022057	M47E022	23HGE028W	04/26/2311:20	04/27/23
MW20042023	D301-10	ND	1	NA	0.50	0.10	0.20	05/22/2320:30	05/22/2313:32	M47E022060	M47E022	23HGE028W	04/26/2312:20	04/27/23
MW18D042023	D301-11	ND	1	NA	0.50	0.10	0.20	05/22/2320:32	05/22/2313:32	M47E022061	M47E022	23HGE028W	04/26/2313:20	04/27/23
TMW34042023	D301-12	0.11J	1	NA	0.50	0.10	0.20	05/22/2320:34	05/22/2313:32	M47E022062	M47E022	23HGE028W	04/26/2313:50	04/27/23
QC26042023EB05	D301-13	0.14J	1	NA	0.50	0.10	0.20	05/22/2320:36	05/22/2313:32	M47E022063	M47E022	23HGE028W	04/26/2314:00	04/27/23
TMW13042023MS	D301-14M	2.7	1	NA	0.50	0.10	0.20	05/22/2320:38	05/22/2313:32	M47E022064	M47E022	23HGE028W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14S	2.7	1	NA	0.50	0.10	0.20	05/22/2320:40	05/22/2313:32	M47E022065	M47E022	23HGE028W	04/26/2311:05	04/27/23
TMW13042023	D301-14	0.12J	1	NA	0.50	0.10	0.20	05/22/2320:43	05/22/2313:32	M47E022067	M47E022	23HGE028W	04/26/2311:05	04/27/23

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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23D301

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of twelve(12) water samples were received on 04/27/23 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, five(5) method blanks were analyzed.

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. PLE006WL/PLE006WC, PLE007WL/PLE007WC, PLE008WL/PLE008WC and PLE009WL/PLE009WC 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 D301-14M/D301-14S. 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 D301-01I, -02I, -03I, -04I, -08I, -14I and -11J 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. : 23D301

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	PLE006WB	ND	1	NA	0.20	0.050	0.10	05/12/2311:24	NA	23ME12007	ME12004	PLE006W	NA	NA
LCS1W	PLE006WL	0.19J	1	NA	0.20	0.050	0.10	05/12/2311:57	NA	23ME12008	ME12004	PLE006W	NA	NA
LCD1W	PLE006WC	0.19J	1	NA	0.20	0.050	0.10	05/12/2312:52	NA	23ME12009	ME12004	PLE006W	NA	NA
QC26042023EB05	D301-13	ND	1	NA	0.20	0.050	0.10	05/12/2318:12	NA	23ME12029	ME12028	PLE006W	04/26/2314:00	04/27/23
MBLK2W	PLE007WB	ND	1	NA	0.20	0.050	0.10	05/16/2314:31	NA	23ME16007	ME16004	PLE007W	NA	NA
LCS2W	PLE007WL	0.22	1	NA	0.20	0.050	0.10	05/16/2314:46	NA	23ME16008	ME16004	PLE007W	NA	NA
LCD2W	PLE007WC	0.19J	1	NA	0.20	0.050	0.10	05/16/2315:01	NA	23ME16009	ME16004	PLE007W	NA	NA
MW30042023	D301-01I	ND	5	NA	1.0	0.25	0.50	05/16/2316:29	NA	23ME16013	ME16004	PLE007W	04/26/2307:15	04/27/23
TMW15042023	D301-02I	ND	5	NA	1.0	0.25	0.50	05/16/2316:44	NA	23ME16014	ME16004	PLE007W	04/26/2307:50	04/27/23
MW31042023	D301-03I	ND	5	NA	1.0	0.25	0.50	05/16/2316:59	NA	23ME16015	ME16004	PLE007W	04/26/2307:55	04/27/23
TMW15042023D	D301-04I	ND	5	NA	1.0	0.25	0.50	05/16/2317:14	NA	23ME16016	ME16004	PLE007W	04/26/2307:55	04/27/23
MBLK3W	PLE008WB	ND	1	NA	0.20	0.050	0.10	05/18/2312:40	NA	23ME18007	ME18004	PLE008W	NA	NA
LCS3W	PLE008WL	0.23	1	NA	0.20	0.050	0.10	05/18/2312:57	NA	23ME18008	ME18004	PLE008W	NA	NA
LCD3W	PLE008WC	0.21	1	NA	0.20	0.050	0.10	05/18/2313:15	NA	23ME18009	ME18004	PLE008W	NA	NA
TMW49042023	D301-07Q	170	200	NA	40	10	20	05/18/2314:13	NA	23ME18012	ME18004	PLE008W	04/26/2308:25	04/27/23
MBLK4W	PLE009WB	ND	1	NA	0.20	0.050	0.10	05/19/2313:16	NA	23ME19007	ME19004	PLE009W	NA	NA
LCS4W	PLE009WL	0.20J	1	NA	0.20	0.050	0.10	05/19/2313:33	NA	23ME19008	ME19004	PLE009W	NA	NA
LCD4W	PLE009WC	0.20	1	NA	0.20	0.050	0.10	05/19/2313:50	NA	23ME19009	ME19004	PLE009W	NA	NA
TMW64042023	D301-09K	45	20	NA	4.0	1.0	2.0	05/19/2314:16	NA	23ME19010	ME19004	PLE009W	04/26/2311:20	04/27/23
TMW35042023	D301-08I	ND	5	NA	1.0	0.25	0.50	05/19/2314:32	NA	23ME19011	ME19004	PLE009W	04/26/2311:00	04/27/23
MW20042023	D301-10I	0.56J	5	NA	1.0	0.25	0.50	05/19/2314:46	NA	23ME19012	ME19004	PLE009W	04/26/2312:20	04/27/23
TMW34042023	D301-12I	0.28J	5	NA	1.0	0.25	0.50	05/19/2315:01	NA	23ME19013	ME19004	PLE009W	04/26/2313:50	04/27/23
TMW13042023	D301-14I	ND	5	NA	1.0	0.25	0.50	05/19/2315:16	NA	23ME19014	ME19004	PLE009W	04/26/2311:05	04/27/23
TMW13042023MS	D301-14M	1.1	5	NA	1.0	0.25	0.50	05/19/2315:30	NA	23ME19015	ME19004	PLE009W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14S	0.97J	5	NA	1.0	0.25	0.50	05/19/2315:45	NA	23ME19016	ME19004	PLE009W	04/26/2311:05	04/27/23
MW18D042023	D301-11J	ND	10	NA	2.0	0.50	1.0	05/19/2316:30	NA	23ME19018	ME19017	PLE009W	04/26/2313:20	04/27/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD 9056A
BROMIDE

A total of fourteen(14) water samples were received on 04/27/23 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 ICD030WB. 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. ICD030WL/ICD030WC 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: D301-14M/D301-14S - 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.

Sample D301-11I was reported at 5X dilution factor due to high conductivity and brown color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD 9056A
CHLORIDE-CL

A total of fourteen(14) water samples were received on 04/27/23 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 ICD030WB. 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. ICD030WL/ICD030WC 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. Chloride-CL was within MS QC limits in D301-14JM/D301-14JS. 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 : 23D301

METHOD 9056A
FLUORIDE

A total of fourteen(14) water samples were received on 04/27/23 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 ICD030WB. 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. ICD030WL/ICD030WC 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 D301-14M/D301-14S. 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 : 23D301

METHOD SW9056A
NITRATE-N

A total of fourteen(14) water samples were received on 04/27/23 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 ICD030WB. 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. ICD030WL/ICD030WC 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 D301-14IM/D301-14IS. 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 D301-11I was reported at 5X dilution factor due to high conductivity and brown color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD SW9056A
NITRITE-N

A total of fourteen(14) water samples were received on 04/27/23 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 ICD030WB. 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. ICD030WL/ICD030WC 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: D301-14M/D301-14S - Percent recovery for Nitrite(0X) 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 D301-03I and D301-12I were reported at 2X dilution factor due to high conductivity. Sample D301-10I and D301-11I were reported at a 5X dilution factor due to high conductivity and color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD 9056A
ORTHOPHOSPHATE-P

A total of fourteen(14) water samples were received on 04/27/23 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 ICD030WB. 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. ICD030WL/ICD030WC 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 D301-14M/D301-14S. 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 D301-03I and D301-12I were reported at 2X dilution factor due to high conductivity. Sample D301-10I and D301-11I were reported at a 5X dilution factor due to high conductivity and color. Refer to sample result form for details.

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D301

METHOD 9056A
SULFATE

A total of fourteen(14) water samples were received on 04/27/23 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 ICD030WB. 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. ICD030WL/ICD030WC 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 D301-14JM/D301-14JS. 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. : 23D301

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	ICD030WB	ND	1	NA	0.5	0.13	0.25	04/27/2309:14	NA	AD28-03	AD28-01	ICD030W	NA	NA
LCS1W	ICD030WL	0.97	1	NA	0.5	0.13	0.25	04/27/2309:34	NA	AD28-04	AD28-01	ICD030W	NA	NA
LCD1W	ICD030WC	0.97	1	NA	0.5	0.13	0.25	04/27/2309:55	NA	AD28-05	AD28-01	ICD030W	NA	NA
MW30042023	D301-01	0.92	1	NA	0.5	0.13	0.25	04/27/2310:21	NA	AD28-06	AD28-01	ICD030W	04/26/2307:15	04/27/23
TMW15042023	D301-02	0.68	1	NA	0.5	0.13	0.25	04/27/2310:41	NA	AD28-07	AD28-01	ICD030W	04/26/2307:50	04/27/23
MW31042023	D301-03I	2.0	2	NA	1	0.26	0.5	04/27/2311:01	NA	AD28-08	AD28-01	ICD030W	04/26/2307:55	04/27/23
TMW15042023D	D301-04	0.68	1	NA	0.5	0.13	0.25	04/27/2311:22	NA	AD28-09	AD28-01	ICD030W	04/26/2307:55	04/27/23
FW31042023	D301-05	0.19J	1	NA	0.5	0.13	0.25	04/27/2311:42	NA	AD28-10	AD28-01	ICD030W	04/26/2309:00	04/27/23
TMW06042023	D301-06	0.65	1	NA	0.5	0.13	0.25	04/27/2312:02	NA	AD28-11	AD28-01	ICD030W	04/26/2309:20	04/27/23
TMW49042023	D301-07	0.95	1	NA	0.5	0.13	0.25	04/27/2312:22	NA	AD28-12	AD28-01	ICD030W	04/26/2308:25	04/27/23
QC26042023EB05	D301-13	ND	1	NA	0.5	0.13	0.25	04/27/2313:23	NA	AD28-15	AD28-13	ICD030W	04/26/2314:00	04/27/23
TMW35042023	D301-08	0.61	1	NA	0.5	0.13	0.25	04/27/2313:44	NA	AD28-16	AD28-13	ICD030W	04/26/2311:00	04/27/23
TMW64042023	D301-09	0.99	1	NA	0.5	0.13	0.25	04/27/2314:04	NA	AD28-17	AD28-13	ICD030W	04/26/2311:20	04/27/23
MW20042023	D301-10I	3.4	5	NA	2.5	0.65	1.2	04/27/2314:24	NA	AD28-18	AD28-13	ICD030W	04/26/2312:20	04/27/23
MW18D042023	D301-11I	2.3J	5	NA	2.5	0.65	1.2	04/27/2314:44	NA	AD28-19	AD28-13	ICD030W	04/26/2313:20	04/27/23
TMW34042023	D301-12I	1.3	2	NA	1	0.26	0.5	04/27/2315:05	NA	AD28-20	AD28-13	ICD030W	04/26/2313:50	04/27/23
TMW13042023	D301-14	0.77	1	NA	0.5	0.13	0.25	04/27/2315:25	NA	AD28-21	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023DUP	D301-14D	0.77	1	NA	0.5	0.13	0.25	04/27/2315:45	NA	AD28-22	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023MS	D301-14M	1.7	1	NA	0.5	0.13	0.25	04/27/2316:06	NA	AD28-23	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14S	1.7	1	NA	0.5	0.13	0.25	04/27/2316:26	NA	AD28-24	AD28-13	ICD030W	04/26/2311:05	04/27/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301

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	ICD030WB	ND	1	NA	0.2	0.05	0.1	04/27/2309:14	NA	AD28-03	AD28-01	ICD030W	NA	NA
LCS1W	ICD030WL	1.9	1	NA	0.2	0.05	0.1	04/27/2309:34	NA	AD28-04	AD28-01	ICD030W	NA	NA
LCD1W	ICD030WC	1.9	1	NA	0.2	0.05	0.1	04/27/2309:55	NA	AD28-05	AD28-01	ICD030W	NA	NA
FW31042023	D301-05	6.7	1	NA	0.2	0.05	0.1	04/27/2311:42	NA	AD28-10	AD28-01	ICD030W	04/26/2309:00	04/27/23
QC26042023EB05	D301-13	0.14J	1	NA	0.2	0.05	0.1	04/27/2313:23	NA	AD28-15	AD28-13	ICD030W	04/26/2314:00	04/27/23
TMW34042023	D301-12J	220	100	NA	20	5	10	04/27/2321:51	NA	AD28-40	AD28-37	ICD030W	04/26/2313:50	04/27/23
MW30042023	D301-01J	290	50	NA	10	2.5	5	04/27/2322:11	NA	AD28-41	AD28-37	ICD030W	04/26/2307:15	04/27/23
TMW15042023	D301-02I	64	25	NA	5	1.2	2.5	04/27/2322:31	NA	AD28-42	AD28-37	ICD030W	04/26/2307:50	04/27/23
MW31042023	D301-03K	700	200	NA	40	10	20	04/27/2322:51	NA	AD28-43	AD28-37	ICD030W	04/26/2307:55	04/27/23
TMW15042023D	D301-04I	63	25	NA	5	1.2	2.5	04/27/2323:12	NA	AD28-44	AD28-37	ICD030W	04/26/2307:55	04/27/23
TMW06042023	D301-06J	120	25	NA	5	1.2	2.5	04/27/2323:52	NA	AD28-46	AD28-37	ICD030W	04/26/2309:20	04/27/23
TMW49042023	D301-07J	350	40	NA	8	2	4	04/28/2300:33	NA	AD28-48	AD28-37	ICD030W	04/26/2308:25	04/27/23
TMW35042023	D301-08J	270	40	NA	8	2	4	04/28/2301:54	NA	AD28-52	AD28-49	ICD030W	04/26/2311:00	04/27/23
TMW64042023	D301-09I	130	25	NA	5	1.2	2.5	04/28/2302:35	NA	AD28-54	AD28-49	ICD030W	04/26/2311:20	04/27/23
MW20042023	D301-10K	1300	400	NA	80	20	40	04/28/2303:15	NA	AD28-56	AD28-49	ICD030W	04/26/2312:20	04/27/23
MW18D042023	D301-11J	810	200	NA	40	10	20	04/28/2303:36	NA	AD28-57	AD28-49	ICD030W	04/26/2313:20	04/27/23
TMW13042023	D301-14J	79	50	NA	10	2.5	5	04/28/2304:16	NA	AD28-59	AD28-49	ICD030W	04/26/2311:05	04/27/23
TMW13042023DUP	D301-14JD	79	50	NA	10	2.5	5	04/28/2304:36	NA	AD28-60	AD28-49	ICD030W	04/26/2311:05	04/27/23
TMW13042023MS	D301-14JM	180	50	NA	10	2.5	5	04/28/2305:37	NA	AD28-63	AD28-61	ICD030W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14JS	180	50	NA	10	2.5	5	04/28/2305:58	NA	AD28-64	AD28-61	ICD030W	04/26/2311:05	04/27/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301

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	ICD030WB	ND	1	NA	0.1	0.025	0.05	04/27/2309:14	NA	AD28-03	AD28-01	ICD030W	NA	NA
LCS1W	ICD030WL	0.97	1	NA	0.1	0.025	0.05	04/27/2309:34	NA	AD28-04	AD28-01	ICD030W	NA	NA
LCD1W	ICD030WC	0.97	1	NA	0.1	0.025	0.05	04/27/2309:55	NA	AD28-05	AD28-01	ICD030W	NA	NA
MW30042023	D301-01	0.90	1	NA	0.1	0.025	0.05	04/27/2310:21	NA	AD28-06	AD28-01	ICD030W	04/26/2307:15	04/27/23
TMW15042023	D301-02	1.9	1	NA	0.1	0.025	0.05	04/27/2310:41	NA	AD28-07	AD28-01	ICD030W	04/26/2307:50	04/27/23
MW31042023	D301-03I	0.46	2	NA	0.2	0.05	0.1	04/27/2311:01	NA	AD28-08	AD28-01	ICD030W	04/26/2307:55	04/27/23
TMW15042023D	D301-04	1.9	1	NA	0.1	0.025	0.05	04/27/2311:22	NA	AD28-09	AD28-01	ICD030W	04/26/2307:55	04/27/23
FW31042023	D301-05	3.2	1	NA	0.1	0.025	0.05	04/27/2311:42	NA	AD28-10	AD28-01	ICD030W	04/26/2309:00	04/27/23
TMW06042023	D301-06	0.94	1	NA	0.1	0.025	0.05	04/27/2312:02	NA	AD28-11	AD28-01	ICD030W	04/26/2309:20	04/27/23
TMW49042023	D301-07	0.52	1	NA	0.1	0.025	0.05	04/27/2312:22	NA	AD28-12	AD28-01	ICD030W	04/26/2308:25	04/27/23
QC26042023EB05	D301-13	ND	1	NA	0.1	0.025	0.05	04/27/2313:23	NA	AD28-15	AD28-13	ICD030W	04/26/2314:00	04/27/23
TMW35042023	D301-08	0.66	1	NA	0.1	0.025	0.05	04/27/2313:44	NA	AD28-16	AD28-13	ICD030W	04/26/2311:00	04/27/23
TMW64042023	D301-09	0.26	1	NA	0.1	0.025	0.05	04/27/2314:04	NA	AD28-17	AD28-13	ICD030W	04/26/2311:20	04/27/23
MW20042023	D301-10I	0.52	5	NA	0.5	0.12	0.25	04/27/2314:24	NA	AD28-18	AD28-13	ICD030W	04/26/2312:20	04/27/23
MW18D042023	D301-11I	0.72	5	NA	0.5	0.12	0.25	04/27/2314:44	NA	AD28-19	AD28-13	ICD030W	04/26/2313:20	04/27/23
TMW34042023	D301-12I	0.41	2	NA	0.2	0.05	0.1	04/27/2315:05	NA	AD28-20	AD28-13	ICD030W	04/26/2313:50	04/27/23
TMW13042023	D301-14	1.7	1	NA	0.1	0.025	0.05	04/27/2315:25	NA	AD28-21	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023DUP	D301-14D	1.7	1	NA	0.1	0.025	0.05	04/27/2315:45	NA	AD28-22	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023MS	D301-14M	2.7	1	NA	0.1	0.025	0.05	04/27/2316:06	NA	AD28-23	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14S	2.7	1	NA	0.1	0.025	0.05	04/27/2316:26	NA	AD28-24	AD28-13	ICD030W	04/26/2311:05	04/27/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301

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	ICD030WB	ND	1	NA	0.1	0.03	0.06	04/27/2309:14	NA	AD28-03	AD28-01	ICD030W	NA	NA
LCS1W	ICD030WL	1.0	1	NA	0.1	0.03	0.06	04/27/2309:34	NA	AD28-04	AD28-01	ICD030W	NA	NA
LCD1W	ICD030WC	1.0	1	NA	0.1	0.03	0.06	04/27/2309:55	NA	AD28-05	AD28-01	ICD030W	NA	NA
MW30042023	D301-01	0.061J	1	NA	0.1	0.03	0.06	04/27/2310:21	NA	AD28-06	AD28-01	ICD030W	04/26/2307:15	04/27/23
TMW15042023	D301-02	1.8	1	NA	0.1	0.03	0.06	04/27/2310:41	NA	AD28-07	AD28-01	ICD030W	04/26/2307:50	04/27/23
TMW15042023D	D301-04	1.8	1	NA	0.1	0.03	0.06	04/27/2311:22	NA	AD28-09	AD28-01	ICD030W	04/26/2307:55	04/27/23
FW31042023	D301-05	0.088J	1	NA	0.1	0.03	0.06	04/27/2311:42	NA	AD28-10	AD28-01	ICD030W	04/26/2309:00	04/27/23
QC26042023EB05	D301-13	0.064J	1	NA	0.1	0.03	0.06	04/27/2313:23	NA	AD28-15	AD28-13	ICD030W	04/26/2314:00	04/27/23
TMW64042023	D301-09	0.38	1	NA	0.1	0.03	0.06	04/27/2314:04	NA	AD28-17	AD28-13	ICD030W	04/26/2311:20	04/27/23
MW18D042023	D301-11I	ND	5	NA	0.5	0.15	0.3	04/27/2314:44	NA	AD28-19	AD28-13	ICD030W	04/26/2313:20	04/27/23
MW31042023	D301-03J	15	20	NA	2	0.6	1.2	04/27/2318:07	NA	AD28-29	AD28-25	ICD030W	04/26/2307:55	04/27/23
TMW06042023	D301-06I	13	10	NA	1	0.3	0.6	04/27/2318:28	NA	AD28-30	AD28-25	ICD030W	04/26/2309:20	04/27/23
TMW49042023	D301-07I	1.9	2	NA	0.2	0.06	0.12	04/27/2318:48	NA	AD28-31	AD28-25	ICD030W	04/26/2308:25	04/27/23
TMW35042023	D301-08I	6.1	5	NA	0.5	0.15	0.3	04/27/2319:08	NA	AD28-32	AD28-25	ICD030W	04/26/2311:00	04/27/23
TMW13042023	D301-14I	4.1	10	NA	1	0.3	0.6	04/27/2319:29	NA	AD28-33	AD28-25	ICD030W	04/26/2311:05	04/27/23
TMW13042023DUP	D301-14ID	4.1	10	NA	1	0.3	0.6	04/27/2319:49	NA	AD28-34	AD28-25	ICD030W	04/26/2311:05	04/27/23
TMW13042023MS	D301-14IM	15	10	NA	1	0.3	0.6	04/27/2320:09	NA	AD28-35	AD28-25	ICD030W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14IS	15	10	NA	1	0.3	0.6	04/27/2320:29	NA	AD28-36	AD28-25	ICD030W	04/26/2311:05	04/27/23
MW20042023	D301-10J	18	20	NA	2	0.6	1.2	04/27/2321:30	NA	AD28-39	AD28-37	ICD030W	04/26/2312:20	04/27/23
TMW34042023	D301-12J	71	100	NA	10	3	6	04/27/2321:51	NA	AD28-40	AD28-37	ICD030W	04/26/2313:50	04/27/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301

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	ICD030WB	ND	1	NA	0.1	0.03	0.06	04/27/2309:14	NA	AD28-03	AD28-01	ICD030W	NA	NA
LCS1W	ICD030WL	2.1	1	NA	0.1	0.03	0.06	04/27/2309:34	NA	AD28-04	AD28-01	ICD030W	NA	NA
LCD1W	ICD030WC	2.1	1	NA	0.1	0.03	0.06	04/27/2309:55	NA	AD28-05	AD28-01	ICD030W	NA	NA
TMW15042023	D301-02	ND	1	NA	0.1	0.03	0.06	04/27/2310:41	NA	AD28-07	AD28-01	ICD030W	04/26/2307:50	04/27/23
MW31042023	D301-03I	ND	2	NA	0.2	0.06	0.12	04/27/2311:01	NA	AD28-08	AD28-01	ICD030W	04/26/2307:55	04/27/23
TMW15042023D	D301-04	ND	1	NA	0.1	0.03	0.06	04/27/2311:22	NA	AD28-09	AD28-01	ICD030W	04/26/2307:55	04/27/23
FW31042023	D301-05	ND	1	NA	0.1	0.03	0.06	04/27/2311:42	NA	AD28-10	AD28-01	ICD030W	04/26/2309:00	04/27/23
TMW06042023	D301-06	ND	1	NA	0.1	0.03	0.06	04/27/2312:02	NA	AD28-11	AD28-01	ICD030W	04/26/2309:20	04/27/23
QC26042023EB05	D301-13	ND	1	NA	0.1	0.03	0.06	04/27/2313:23	NA	AD28-15	AD28-13	ICD030W	04/26/2314:00	04/27/23
TMW35042023	D301-08	ND	1	NA	0.1	0.03	0.06	04/27/2313:44	NA	AD28-16	AD28-13	ICD030W	04/26/2311:00	04/27/23
TMW64042023	D301-09	ND	1	NA	0.1	0.03	0.06	04/27/2314:04	NA	AD28-17	AD28-13	ICD030W	04/26/2311:20	04/27/23
MW20042023	D301-10I	0.47J	5	NA	0.5	0.15	0.3	04/27/2314:24	NA	AD28-18	AD28-13	ICD030W	04/26/2312:20	04/27/23
MW18D042023	D301-11I	ND	5	NA	0.5	0.15	0.3	04/27/2314:44	NA	AD28-19	AD28-13	ICD030W	04/26/2313:20	04/27/23
TMW34042023	D301-12I	0.14J	2	NA	0.2	0.06	0.12	04/27/2315:05	NA	AD28-20	AD28-13	ICD030W	04/26/2313:50	04/27/23
TMW13042023	D301-14	ND	1	NA	0.1	0.03	0.06	04/27/2315:25	NA	AD28-21	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023DUP	D301-14D	ND	1	NA	0.1	0.03	0.06	04/27/2315:45	NA	AD28-22	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023MS	D301-14M	1.4	1	NA	0.1	0.03	0.06	04/27/2316:06	NA	AD28-23	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14S	1.5	1	NA	0.1	0.03	0.06	04/27/2316:26	NA	AD28-24	AD28-13	ICD030W	04/26/2311:05	04/27/23
MW30042023	D301-01I	ND	2	NA	0.2	0.06	0.12	04/27/2317:27	NA	AD28-27	AD28-25	ICD030W	04/26/2307:15	04/27/23
TMW49042023	D301-07I	ND	2	NA	0.2	0.06	0.12	04/27/2318:48	NA	AD28-31	AD28-25	ICD030W	04/26/2308:25	04/27/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301

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	ICD030WB	ND	1	NA	0.5	0.12	0.25	04/27/2309:14	NA	AD28-03	AD28-01	ICD030W	NA	NA
LCS1W	ICD030WL	1.9	1	NA	0.5	0.12	0.25	04/27/2309:34	NA	AD28-04	AD28-01	ICD030W	NA	NA
LCD1W	ICD030WC	1.9	1	NA	0.5	0.12	0.25	04/27/2309:55	NA	AD28-05	AD28-01	ICD030W	NA	NA
MW30042023	D301-01	0.13J	1	NA	0.5	0.12	0.25	04/27/2310:21	NA	AD28-06	AD28-01	ICD030W	04/26/2307:15	04/27/23
TMW15042023	D301-02	ND	1	NA	0.5	0.12	0.25	04/27/2310:41	NA	AD28-07	AD28-01	ICD030W	04/26/2307:50	04/27/23
MW31042023	D301-03I	ND	2	NA	1	0.25	0.5	04/27/2311:01	NA	AD28-08	AD28-01	ICD030W	04/26/2307:55	04/27/23
TMW15042023D	D301-04	ND	1	NA	0.5	0.12	0.25	04/27/2311:22	NA	AD28-09	AD28-01	ICD030W	04/26/2307:55	04/27/23
FW31042023	D301-05	ND	1	NA	0.5	0.12	0.25	04/27/2311:42	NA	AD28-10	AD28-01	ICD030W	04/26/2309:00	04/27/23
TMW06042023	D301-06	ND	1	NA	0.5	0.12	0.25	04/27/2312:02	NA	AD28-11	AD28-01	ICD030W	04/26/2309:20	04/27/23
TMW49042023	D301-07	ND	1	NA	0.5	0.12	0.25	04/27/2312:22	NA	AD28-12	AD28-01	ICD030W	04/26/2308:25	04/27/23
QC26042023EB05	D301-13	ND	1	NA	0.5	0.12	0.25	04/27/2313:23	NA	AD28-15	AD28-13	ICD030W	04/26/2314:00	04/27/23
TMW35042023	D301-08	ND	1	NA	0.5	0.12	0.25	04/27/2313:44	NA	AD28-16	AD28-13	ICD030W	04/26/2311:00	04/27/23
TMW64042023	D301-09	ND	1	NA	0.5	0.12	0.25	04/27/2314:04	NA	AD28-17	AD28-13	ICD030W	04/26/2311:20	04/27/23
MW20042023	D301-10I	ND	5	NA	2.5	0.62	1.2	04/27/2314:24	NA	AD28-18	AD28-13	ICD030W	04/26/2312:20	04/27/23
MW18D042023	D301-11I	ND	5	NA	2.5	0.62	1.2	04/27/2314:44	NA	AD28-19	AD28-13	ICD030W	04/26/2313:20	04/27/23
TMW34042023	D301-12I	ND	2	NA	1	0.25	0.5	04/27/2315:05	NA	AD28-20	AD28-13	ICD030W	04/26/2313:50	04/27/23
TMW13042023	D301-14	ND	1	NA	0.5	0.12	0.25	04/27/2315:25	NA	AD28-21	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023DUP	D301-14D	ND	1	NA	0.5	0.12	0.25	04/27/2315:45	NA	AD28-22	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023MS	D301-14M	1.7	1	NA	0.5	0.12	0.25	04/27/2316:06	NA	AD28-23	AD28-13	ICD030W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14S	1.8	1	NA	0.5	0.12	0.25	04/27/2316:26	NA	AD28-24	AD28-13	ICD030W	04/26/2311:05	04/27/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D301

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	ICD030WB	ND	1	NA	0.5	0.13	0.25	04/27/2309:14	NA	AD28-03	AD28-01	ICD030W	NA	NA
LCS1W	ICD030WL	4.8	1	NA	0.5	0.13	0.25	04/27/2309:34	NA	AD28-04	AD28-01	ICD030W	NA	NA
LCD1W	ICD030WC	4.8	1	NA	0.5	0.13	0.25	04/27/2309:55	NA	AD28-05	AD28-01	ICD030W	NA	NA
QC26042023EB05	D301-13	0.21J	1	NA	0.5	0.13	0.25	04/27/2313:23	NA	AD28-15	AD28-13	ICD030W	04/26/2314:00	04/27/23
MW30042023	D301-01J	480	50	NA	25	6.5	12	04/27/2322:11	NA	AD28-41	AD28-37	ICD030W	04/26/2307:15	04/27/23
TMW15042023	D301-02I	240	25	NA	12	3.3	6.2	04/27/2322:31	NA	AD28-42	AD28-37	ICD030W	04/26/2307:50	04/27/23
MW31042023	D301-03K	2400	200	NA	100	26	50	04/27/2322:51	NA	AD28-43	AD28-37	ICD030W	04/26/2307:55	04/27/23
TMW15042023D	D301-04I	230	25	NA	12	3.3	6.2	04/27/2323:12	NA	AD28-44	AD28-37	ICD030W	04/26/2307:55	04/27/23
FW31042023	D301-05I	670	100	NA	50	13	25	04/27/2323:32	NA	AD28-45	AD28-37	ICD030W	04/26/2309:00	04/27/23
TMW06042023	D301-06K	860	100	NA	50	13	25	04/28/2300:13	NA	AD28-47	AD28-37	ICD030W	04/26/2309:20	04/27/23
TMW49042023	D301-07K	1400	200	NA	100	26	50	04/28/2301:34	NA	AD28-51	AD28-49	ICD030W	04/26/2308:25	04/27/23
TMW35042023	D301-08K	1200	200	NA	100	26	50	04/28/2302:14	NA	AD28-53	AD28-49	ICD030W	04/26/2311:00	04/27/23
TMW64042023	D301-09J	860	100	NA	50	13	25	04/28/2302:55	NA	AD28-55	AD28-49	ICD030W	04/26/2311:20	04/27/23
MW20042023	D301-10K	3600	400	NA	200	52	100	04/28/2303:15	NA	AD28-56	AD28-49	ICD030W	04/26/2312:20	04/27/23
MW18D042023	D301-11J	2200	200	NA	100	26	50	04/28/2303:36	NA	AD28-57	AD28-49	ICD030W	04/26/2313:20	04/27/23
TMW34042023	D301-12K	1600	200	NA	100	26	50	04/28/2303:56	NA	AD28-58	AD28-49	ICD030W	04/26/2313:50	04/27/23
TMW13042023	D301-14J	330	50	NA	25	6.5	12	04/28/2304:16	NA	AD28-59	AD28-49	ICD030W	04/26/2311:05	04/27/23
TMW13042023DUP	D301-14JD	330	50	NA	25	6.5	12	04/28/2304:36	NA	AD28-60	AD28-49	ICD030W	04/26/2311:05	04/27/23
TMW13042023MS	D301-14JM	590	50	NA	25	6.5	12	04/28/2305:37	NA	AD28-63	AD28-61	ICD030W	04/26/2311:05	04/27/23
TMW13042023MSD	D301-14JS	590	50	NA	25	6.5	12	04/28/2305:58	NA	AD28-64	AD28-61	ICD030W	04/26/2311:05	04/27/23

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

Date: 07-05-2023
EMAX Batch No.: 23D322

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 04/28/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
MW39042023	D322-01	04/27/23	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
TMW25042023	D322-02	04/27/23	WATER	VOCS BY 8260C
				NITROGLYCERINE AND PETN
				NITROAROMATICS & NITRAMINES
				DISSOLVED METALS BY ICP-MS
				DISSOLVED MERCURY
				MERCURY
				TOTAL METALS BY ICP-MS
MW38042023	D322-03	04/27/23	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
TMW32042023	D322-04	04/27/23	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
TMW38042023	D322-05	04/27/23	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
TMW47042023	D322-06	04/27/23	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
TMW21042023	D322-07	04/27/23	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
MW22D042023	D322-08	04/27/23	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
QC27042023TB09	D322-09	04/27/23	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,

Gaspar 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 CA002912022-24
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#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

A total of nine(9) water samples were received on 04/28/23 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: REY067, and REY093) associated with this SDG. 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, one(1) method blank was analyzed. VOF5E03B - 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. VOF5E03L/VOF5E03C 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. : 23D322
Instrument ID : F5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	VOF5E03L	1	NA	05/04/2309:29	05/04/2309:29	REY068	RDY818	VOF5E03	Lab Control Sample (LCS)
LCD1W	VOF5E03C	1	NA	05/04/2309:54	05/04/2309:54	REY069	RDY818	VOF5E03	LCS Duplicate
MBLK1W	VOF5E03B	1	NA	05/04/2310:44	05/04/2310:44	REY071	RDY818	VOF5E03	Method Blank
QC27042023TB09	23D322-09	1	NA	05/04/2311:34	05/04/2311:34	REY073	RDY818	VOF5E03	Field Sample
MW39042023	23D322-01	1	NA	05/04/2314:04	05/04/2314:04	REY079	RDY818	VOF5E03	Field Sample
TMW25042023	23D322-02	1	NA	05/04/2314:29	05/04/2314:29	REY080	RDY818	VOF5E03	Field Sample
MW38042023	23D322-03	1	NA	05/04/2314:54	05/04/2314:54	REY081	RDY818	VOF5E03	Field Sample
TMW32042023	23D322-04	1	NA	05/04/2315:19	05/04/2315:19	REY082	RDY818	VOF5E03	Field Sample
TMW38042023	23D322-05	1	NA	05/04/2315:45	05/04/2315:45	REY083	RDY818	VOF5E03	Field Sample
TMW47042023	23D322-06	1	NA	05/04/2316:10	05/04/2316:10	REY084	RDY818	VOF5E03	Field Sample
TMW21042023	23D322-07	1	NA	05/04/2316:35	05/04/2316:35	REY085	RDY818	VOF5E03	Field Sample
MW22D042023	23D322-08	1	NA	05/04/2317:50	05/04/2317:50	REY088	RDY818	VOF5E03	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 14:04
Sample ID	: MW39042023	Date Analyzed:	05/04/23 14:04
Lab Samp ID:	23D322-01	Dilution Factor:	1
Lab File ID:	REY079	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	8.81	10.0	88	81-118
4-Bromofluorobenzene	8.96	10.0	90	85-114
Toluene-d8	9.54	10.0	95	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:45
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 14:29
Sample ID	: TMW25042023	Date Analyzed:	05/04/23 14:29
Lab Samp ID:	23D322-02	Dilution Factor:	1
Lab File ID:	REY080	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	8.99	10.0	90	81-118
4-Bromofluorobenzene	8.81	10.0	88	85-114
Toluene-d8	9.48	10.0	95	89-112
Dibromofluoromethane	9.99	10.0	100	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:50
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 14:54
Sample ID	: MW38042023	Date Analyzed:	05/04/23 14:54
Lab Samp ID:	23D322-03	Dilution Factor:	1
Lab File ID:	REY081	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	8.92	10.0	89	81-118
4-Bromofluorobenzene	8.73	10.0	87	85-114
Toluene-d8	9.66	10.0	97	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:55
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 15:19
Sample ID	: TMW32042023	Date Analyzed:	05/04/23 15:19
Lab Samp ID:	23D322-04	Dilution Factor:	1
Lab File ID:	REY082	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	9.00	10.0	90	81-118
4-Bromofluorobenzene	8.64	10.0	86	85-114
Toluene-d8	9.58	10.0	96	89-112
Dibromofluoromethane	10.2	10.0	102	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:05
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 15:45
Sample ID	: TMW38042023	Date Analyzed:	05/04/23 15:45
Lab Samp ID:	23D322-05	Dilution Factor:	1
Lab File ID:	REY083	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	0.33J	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	8.93	10.0	89	85-114
Toluene-d8	9.42	10.0	94	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 16:10
Sample ID	: TMW47042023	Date Analyzed:	05/04/23 16:10
Lab Samp ID:	23D322-06	Dilution Factor:	1
Lab File ID:	REY084	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	1.4	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	9.26	10.0	93	81-118
4-Bromofluorobenzene	8.81	10.0	88	85-114
Toluene-d8	9.57	10.0	96	89-112
Dibromofluoromethane	10.5	10.0	105	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:55
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 16:35
Sample ID	: TMW21042023	Date Analyzed:	05/04/23 16:35
Lab Samp ID:	23D322-07	Dilution Factor:	1
Lab File ID:	REY085	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	8.96	10.0	90	81-118
4-Bromofluorobenzene	8.66	10.0	87	85-114
Toluene-d8	9.42	10.0	94	89-112
Dibromofluoromethane	10.1	10.0	101	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 17:50
Sample ID	: MW22D042023	Date Analyzed:	05/04/23 17:50
Lab Samp ID:	23D322-08	Dilution Factor:	1
Lab File ID:	REY088	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	0.29J	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	9.26	10.0	93	81-118
4-Bromofluorobenzene	8.73	10.0	87	85-114
Toluene-d8	9.43	10.0	94	89-112
Dibromofluoromethane	10.4	10.0	104	80-119

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

METHOD SW5030B/8260C
VOLATILE ORGANICS BY GC/MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 08:00
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/04/23 11:34
Sample ID	: QC27042023TB09	Date Analyzed:	05/04/23 11:34
Lab Samp ID:	23D322-09	Dilution Factor:	1
Lab File ID:	REY073	Matrix:	WATER
Ext Btch ID:	VOF5E03	% Moisture:	NA
Calib. Ref.:	RDY818	Instrument ID:	F5

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	0.52J	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	8.82	10.0	88	81-118
4-Bromofluorobenzene	8.76	10.0	88	85-114
Toluene-d8	9.56	10.0	96	89-112
Dibromofluoromethane	9.68	10.0	97	80-119

Notes:
Sample Amount : 25ml
Prepared by : ODinh
Final Volume : 25ml
Analyzed by : ODinh
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#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

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

A total of six(6) water samples were received on 04/28/23 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)42)CCVs (Data file IDs: REJ075, REJ076, REJ103 and REJ104) 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. SVE005WB - 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. SVE005WL/SVE005WC 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 2,4,6-Tribromophenol, 2-Fluorophenol and Phenol-D5 in D322-03; most likely due to matrix interference and client was informed. 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 : 23D322

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

A total of six(6) water samples were received on 04/28/23 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: REJ077 and REJ102) 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. SVE005WB - 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. CLE005WL/CLE005WC 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 : 23D322

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

A total of six(6) water samples were received on 04/28/23 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: REJ076 and REJ103) 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. SVE005WB - 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. CLE005WL/CLE005WC 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. : 23D322
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	SVE005WB	1	NA	05/08/2309:45	05/03/2317:30	REJ078	RCJ011	23SVE005W	Method Blank
LCS1W	SVE005WL	1	NA	05/08/2310:04	05/03/2317:30	REJ079	RCJ011	23SVE005W	Lab Control Sample (LCS)
LCD1W	SVE005WC	1	NA	05/08/2310:22	05/03/2317:30	REJ080	RCJ011	23SVE005W	LCS Duplicate
MW39042023	23D322-01	1	NA	05/08/2315:19	05/03/2317:30	REJ096	RCJ011	23SVE005W	Field Sample
MW38042023	23D322-03	1	NA	05/08/2315:38	05/03/2317:30	REJ097	RCJ011	23SVE005W	Field Sample
TMW32042023	23D322-04	1	NA	05/08/2315:57	05/03/2317:30	REJ098	RCJ011	23SVE005W	Field Sample
TMW38042023	23D322-05	1	NA	05/08/2316:15	05/03/2317:30	REJ099	RCJ011	23SVE005W	Field Sample
TMW47042023	23D322-06	1	NA	05/08/2316:34	05/03/2317:30	REJ100	RCJ011	23SVE005W	Field Sample
MW22D042023	23D322-08	1	NA	05/08/2316:53	05/03/2317:30	REJ101	RCJ011	23SVE005W	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. : 23D322
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	SVE005WB	1	NA	05/08/2309:45	05/03/2317:30	REJ078	RCJ498	23SVE005W	Method Blank
LCS1W	CLE005WL	1	NA	05/08/2310:41	05/03/2317:30	REJ081	RCJ498	23SVE005W	Lab Control Sample (LCS)
LCD1W	CLE005WC	1	NA	05/08/2310:59	05/03/2317:30	REJ082	RCJ498	23SVE005W	LCS Duplicate
MW39042023	23D322-01	1	NA	05/08/2315:19	05/03/2317:30	REJ096	RCJ498	23SVE005W	Field Sample
MW38042023	23D322-03	1	NA	05/08/2315:38	05/03/2317:30	REJ097	RCJ498	23SVE005W	Field Sample
TMW32042023	23D322-04	1	NA	05/08/2315:57	05/03/2317:30	REJ098	RCJ498	23SVE005W	Field Sample
TMW38042023	23D322-05	1	NA	05/08/2316:15	05/03/2317:30	REJ099	RCJ498	23SVE005W	Field Sample
TMW47042023	23D322-06	1	NA	05/08/2316:34	05/03/2317:30	REJ100	RCJ498	23SVE005W	Field Sample
MW22D042023	23D322-08	1	NA	05/08/2316:53	05/03/2317:30	REJ101	RCJ498	23SVE005W	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. : 23D322
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	SVE005WB	1	NA	05/08/2309:45	05/03/2317:30	REJ078	RCJ025	23SVE005W	Method Blank
LCS1W	CLE005WL	1	NA	05/08/2310:41	05/03/2317:30	REJ081	RCJ025	23SVE005W	Lab Control Sample (LCS)
LCD1W	CLE005WC	1	NA	05/08/2310:59	05/03/2317:30	REJ082	RCJ025	23SVE005W	LCS Duplicate
MW39042023	23D322-01	1	NA	05/08/2315:19	05/03/2317:30	REJ096	RCJ025	23SVE005W	Field Sample
MW38042023	23D322-03	1	NA	05/08/2315:38	05/03/2317:30	REJ097	RCJ025	23SVE005W	Field Sample
TMW32042023	23D322-04	1	NA	05/08/2315:57	05/03/2317:30	REJ098	RCJ025	23SVE005W	Field Sample
TMW38042023	23D322-05	1	NA	05/08/2316:15	05/03/2317:30	REJ099	RCJ025	23SVE005W	Field Sample
TMW47042023	23D322-06	1	NA	05/08/2316:34	05/03/2317:30	REJ100	RCJ025	23SVE005W	Field Sample
MW22D042023	23D322-08	1	NA	05/08/2316:53	05/03/2317:30	REJ101	RCJ025	23SVE005W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: MW39042023	Date Analyzed:	05/08/23 15:19
Lab Samp ID:	23D322-01	Dilution Factor:	1
Lab File ID:	REJ096	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	48.3	63.0	77	43-140
2-Fluorobiphenyl	16.5	21.0	78	44-119
2-Fluorophenol	38.2	63.0	61	19-119
Nitrobenzene-d5	16.9	21.0	80	44-120
Phenol-d5	46.3	63.0	73	40-130
Terphenyl-d14	13.1	21.0	62	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: RCJ025 DCC Ref: REJ076

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:	04/27/23 07:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: MW39042023	Date Analyzed:	05/08/23 15:19
Lab Samp ID:	23D322-01	Dilution Factor:	1
Lab File ID:	REJ096	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/27/23 07:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: MW39042023	Date Analyzed:	05/08/23 15:19
Lab Samp ID:	23D322-01	Dilution Factor:	1
Lab File ID:	REJ096	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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: 04/27/23 07:50
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 17:30
Sample ID : MW38042023	Date Analyzed: 05/08/23 15:38
Lab Samp ID: 23D322-03	Dilution Factor: 1
Lab File ID: REJ097	Matrix: WATER
Ext Btch ID: 23SVE005W	% Moisture: NA
Calib. Ref.: RCJ011	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	4.72	60.6	8*	43-140
2-Fluorobiphenyl	16.9	20.2	84	44-119
2-Fluorophenol	3.48	60.6	6*	19-119
Nitrobenzene-d5	15.8	20.2	78	44-120
Phenol-d5	3.89	60.6	6*	40-130
Terphenyl-d14	13.5	20.2	67	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: RCJ025 DCC Ref: REJ076
* 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:	04/27/23 07:50
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: MW38042023	Date Analyzed:	05/08/23 15:38
Lab Samp ID:	23D322-03	Dilution Factor:	1
Lab File ID:	REJ097	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/27/23 07:50
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: MW38042023	Date Analyzed:	05/08/23 15:38
Lab Samp ID:	23D322-03	Dilution Factor:	1
Lab File ID:	REJ097	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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: 04/27/23 07:55
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 17:30
Sample ID : TMW32042023	Date Analyzed: 05/08/23 15:57
Lab Samp ID: 23D322-04	Dilution Factor: 1
Lab File ID: REJ098	Matrix: WATER
Ext Btch ID: 23SVE005W	% Moisture: NA
Calib. Ref.: RCJ011	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	45.8	73.8	62	43-140
2-Fluorobiphenyl	14.1	24.6	57	44-119
2-Fluorophenol	28.8	73.8	39	19-119
Nitrobenzene-d5	13.2	24.6	54	44-120
Phenol-d5	37.4	73.8	51	40-130
Terphenyl-d14	21.6	24.6	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: RCJ025 DCC Ref: REJ076

Detection limits are reported relative to sample result significant figures.

Sample Amount : 810ml	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:	04/27/23 07:55
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: TMW32042023	Date Analyzed:	05/08/23 15:57
Lab Samp ID:	23D322-04	Dilution Factor:	1
Lab File ID:	REJ098	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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	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:	04/27/23 07:55
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: TMW32042023	Date Analyzed:	05/08/23 15:57
Lab Samp ID:	23D322-04	Dilution Factor:	1
Lab File ID:	REJ098	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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	: POreto	Analyzed by	: KVu

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

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:05
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: TMW38042023	Date Analyzed:	05/08/23 16:15
Lab Samp ID:	23D322-05	Dilution Factor:	1
Lab File ID:	REJ099	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	50.0	67.2	74	43-140
2-Fluorobiphenyl	16.6	22.4	74	44-119
2-Fluorophenol	39.5	67.2	59	19-119
Nitrobenzene-d5	16.1	22.4	72	44-120
Phenol-d5	47.3	67.2	70	40-130
Terphenyl-d14	20.4	22.4	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: RCJ025 DCC Ref: REJ076

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:	04/27/23 09:05
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: TMW38042023	Date Analyzed:	05/08/23 16:15
Lab Samp ID:	23D322-05	Dilution Factor:	1
Lab File ID:	REJ099	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/27/23 09:05
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: TMW38042023	Date Analyzed:	05/08/23 16:15
Lab Samp ID:	23D322-05	Dilution Factor:	1
Lab File ID:	REJ099	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/27/23 09:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: TMW47042023	Date Analyzed:	05/08/23 16:34
Lab Samp ID:	23D322-06	Dilution Factor:	1
Lab File ID:	REJ100	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	44.8	65.4	69	43-140
2-Fluorobiphenyl	15.5	21.8	71	44-119
2-Fluorophenol	35.7	65.4	55	19-119
Nitrobenzene-d5	14.9	21.8	68	44-120
Phenol-d5	43.7	65.4	67	40-130
Terphenyl-d14	20.3	21.8	93	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: RCJ025 DCC Ref: REJ076

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:	04/27/23 09:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: TMW47042023	Date Analyzed:	05/08/23 16:34
Lab Samp ID:	23D322-06	Dilution Factor:	1
Lab File ID:	REJ100	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/27/23 09:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: TMW47042023	Date Analyzed:	05/08/23 16:34
Lab Samp ID:	23D322-06	Dilution Factor:	1
Lab File ID:	REJ100	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: MW22D042023	Date Analyzed:	05/08/23 16:53
Lab Samp ID:	23D322-08	Dilution Factor:	1
Lab File ID:	REJ101	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ011	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	56.0	72.0	78	43-140
2-Fluorobiphenyl	20.4	24.0	85	44-119
2-Fluorophenol	45.2	72.0	63	19-119
Nitrobenzene-d5	18.7	24.0	78	44-120
Phenol-d5	55.8	72.0	78	40-130
Terphenyl-d14	22.8	24.0	95	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: RCJ025 DCC Ref: REJ076

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:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: MW22D042023	Date Analyzed:	05/08/23 16:53
Lab Samp ID:	23D322-08	Dilution Factor:	1
Lab File ID:	REJ101	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ498	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:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 17:30
Sample ID	: MW22D042023	Date Analyzed:	05/08/23 16:53
Lab Samp ID:	23D322-08	Dilution Factor:	1
Lab File ID:	REJ101	Matrix:	WATER
Ext Btch ID:	23SVE005W	% Moisture:	NA
Calib. Ref.:	RCJ025	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

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

SDG#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

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

A total of five(5) water samples were received on 04/28/23 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. VG39E01B - 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. VG39E01L/VG39E01C 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
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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

SDG NO. : 23D322
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	VG39E01B	1	NA	05/01/2320:38	05/01/2320:38	EE01016A	EE01015A	23VG39E01	Method Blank
LCS1W	VG39E01L	1	NA	05/01/2321:14	05/01/2321:14	EE01017A	EE01015A	23VG39E01	Lab Control Sample (LCS)
LCD1W	VG39E01C	1	NA	05/01/2321:50	05/01/2321:50	EE01018A	EE01015A	23VG39E01	LCS Duplicate
MW39042023	D322-01	1	NA	05/01/2322:26	05/01/2322:26	EE01019A	EE01015A	23VG39E01	Field Sample
MW38042023	D322-03	1	NA	05/01/2323:03	05/01/2323:03	EE01020A	EE01015A	23VG39E01	Field Sample
TMW21042023	D322-07	1	NA	05/01/2323:39	05/01/2323:39	EE01021A	EE01015A	23VG39E01	Field Sample
MW22D042023	D322-08	1	NA	05/02/2300:15	05/02/2300:15	EE01022A	EE01015A	23VG39E01	Field Sample
QC27042023TB09	D322-09	1	NA	05/02/2300:51	05/02/2300:51	EE01023A	EE01015A	23VG39E01	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:	04/27/23 07:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/01/23 22:26
Sample ID	: MW39042023	Date Analyzed:	05/01/23 22:26
Lab Samp ID:	D322-01	Dilution Factor:	1
Lab File ID:	EE01019A	Matrix:	WATER
Ext Btch ID:	23VG39E01	% Moisture:	NA
Calib. Ref.:	EE01015A	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:	04/27/23 07:50
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/01/23 23:03
Sample ID	: MW38042023	Date Analyzed:	05/01/23 23:03
Lab Samp ID:	D322-03	Dilution Factor:	1
Lab File ID:	EE01020A	Matrix:	WATER
Ext Btch ID:	23VG39E01	% Moisture:	NA
Calib. Ref.:	EE01015A	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	30.9	40.0	77	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:	04/27/23 09:55
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/01/23 23:39
Sample ID	: TMW21042023	Date Analyzed:	05/01/23 23:39
Lab Samp ID:	D322-07	Dilution Factor:	1
Lab File ID:	EE01021A	Matrix:	WATER
Ext Btch ID:	23VG39E01	% Moisture:	NA
Calib. Ref.:	EE01015A	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	30.8	40.0	77	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:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/02/23 00:15
Sample ID	: MW22D042023	Date Analyzed:	05/02/23 00:15
Lab Samp ID:	D322-08	Dilution Factor:	1
Lab File ID:	EE01022A	Matrix:	WATER
Ext Btch ID:	23VG39E01	% Moisture:	NA
Calib. Ref.:	EE01015A	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	30.4	40.0	76	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:	04/27/23 08:00
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/02/23 00:51
Sample ID	: QC27042023TB09	Date Analyzed:	05/02/23 00:51
Lab Samp ID:	D322-09	Dilution Factor:	1
Lab File ID:	EE01023A	Matrix:	WATER
Ext Btch ID:	23VG39E01	% Moisture:	NA
Calib. Ref.:	EE01015A	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	31.3	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#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 04/28/23 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. DSE006WB - 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. DSE006WL/DSE006WC 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. : 23D322
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	DSE006WB	1	NA	05/04/2318:45	05/03/2313:30	LE04026A	LE04023A	23DSE006W	Method Blank
LCS1W	DSE006WL	1	NA	05/04/2319:03	05/03/2313:30	LE04027A	LE04023A	23DSE006W	Lab Control Sample (LCS)
LCD1W	DSE006WC	1	NA	05/04/2319:22	05/03/2313:30	LE04028A	LE04023A	23DSE006W	LCS Duplicate
MW39042023	D322-01	1	NA	05/04/2322:27	05/03/2313:30	LE04038A	LE04023A	23DSE006W	Field Sample
MW38042023	D322-03	1	NA	05/04/2322:46	05/03/2313:30	LE04039A	LE04023A	23DSE006W	Field Sample
TMW21042023	D322-07	1	NA	05/04/2323:05	05/03/2313:30	LE04040A	LE04023A	23DSE006W	Field Sample
MW22D042023	D322-08	1	NA	05/05/2300:00	05/03/2313:30	LE04043A	LE04041A	23DSE006W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:15
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 13:30
Sample ID	: MW39042023	Date Analyzed:	05/04/23 22:27
Lab Samp ID:	23D322-01	Dilution Factor:	1
Lab File ID:	LE04038A	Matrix:	WATER
Ext Btch ID:	23DSE006W	% Moisture:	NA
Calib. Ref.:	LE04023A	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	0.923	1.11	83	60-130
Hexacosane	0.301	0.278	109	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:	04/27/23 07:50
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 13:30
Sample ID	: MW38042023	Date Analyzed:	05/04/23 22:46
Lab Samp ID:	23D322-03	Dilution Factor:	1
Lab File ID:	LE04039A	Matrix:	WATER
Ext Btch ID:	23DSE006W	% Moisture:	NA
Calib. Ref.:	LE04023A	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	0.902	1.04	87	60-130
Hexacosane	0.284	0.260	109	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

METHOD SW3520C/8015D
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:55
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 13:30
Sample ID	: TMW21042023	Date Analyzed:	05/04/23 23:05
Lab Samp ID:	23D322-07	Dilution Factor:	1
Lab File ID:	LE04040A	Matrix:	WATER
Ext Btch ID:	23DSE006W	% Moisture:	NA
Calib. Ref.:	LE04023A	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	0.941	1.14	83	60-130
Hexacosane	0.296	0.285	104	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:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 13:30
Sample ID	: MW22D042023	Date Analyzed:	05/05/23 00:00
Lab Samp ID:	23D322-08	Dilution Factor:	1
Lab File ID:	LE04043A	Matrix:	WATER
Ext Btch ID:	23DSE006W	% Moisture:	NA
Calib. Ref.:	LE04041A	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	0.883	1.05	84	60-130
Hexacosane	0.278	0.262	106	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#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW3520C/8081B
PESTICIDES

A total of six(6) water samples were received on 04/28/23 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. CPE004WB - 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. CPE004WL/CPE004WC 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. : 23D322
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	CPE004WB	1	NA	05/05/2314:41	05/03/2313:45	RE05005	RE05003	23CPE004W	Method Blank
LCS1W	CPE004WL	1	NA	05/05/2315:02	05/03/2313:45	RE05006	RE05003	23CPE004W	Lab Control Sample (LCS)
LCD1W	CPE004WC	1	NA	05/05/2315:22	05/03/2313:45	RE05007	RE05003	23CPE004W	LCS Duplicate
MW39042023	D322-01	1	NA	05/05/2317:45	05/03/2313:45	RE05014	RE05012	23CPE004W	Field Sample
MW38042023	D322-03	1	NA	05/05/2318:05	05/03/2313:45	RE05015	RE05012	23CPE004W	Field Sample
TMW32042023	D322-04	1	NA	05/05/2318:26	05/03/2313:45	RE05016	RE05012	23CPE004W	Field Sample
TMW38042023	D322-05	1	NA	05/05/2318:46	05/03/2313:45	RE05017	RE05012	23CPE004W	Field Sample
TMW47042023	D322-06	1	NA	05/05/2319:07	05/03/2313:45	RE05018	RE05012	23CPE004W	Field Sample
MW22D042023	D322-08	1	NA	05/05/2319:27	05/03/2313:45	RE05019	RE05012	23CPE004W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23 07:15
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 13:45
Sample ID : MW39042023	Date Analyzed: 05/05/23 17:45
Lab Samp ID: D322-01	Dilution Factor: 1
Lab File ID: RE05014	Matrix: WATER
Ext Btch ID: 23CPE004W	% Moisture: NA
Calib. Ref.: RE05012	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	0.317 | (0.336)	0.421	80	44-124
Decachlorobiphenyl	(0.298) | 0.287	0.421	71	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.: RE05013

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23 07:50
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 13:45
Sample ID : MW38042023	Date Analyzed: 05/05/23 18:05
Lab Samp ID: D322-03	Dilution Factor: 1
Lab File ID: RE05015	Matrix: WATER
Ext Btch ID: 23CPE004W	% Moisture: NA
Calib. Ref.: RE05012	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	0.388 | (0.402)	0.449	90	44-124
Decachlorobipheny1	(0.326) | 0.317	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 : POreto	Analyzed by : EKim
Result Quantified : First column | Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE05013	

METHOD SW3520C/8081B
PESTICIDES

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:55
Project	: USACE WINGATE	Date Received:	04/28/23
Batch No.	: 23D322	Date Extracted:	05/03/23 13:45
Sample ID	: TMW32042023	Date Analyzed:	05/05/23 18:26
Lab Samp ID:	D322-04	Dilution Factor:	1
Lab File ID:	RE05016	Matrix:	WATER
Ext Btch ID:	23CPE004W	% Moisture:	NA
Calib. Ref.:	RE05012	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	0.275 | (0.296)	0.426	69	44-124
Decachlorobiphenyl	(0.320) | 0.307	0.426	75	30-135

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

Sample Amount	: 940ml	Final Volume	: 10ml
Prepared by	: POreto	Analyzed by	: EKim
Result Quantified	: First column|Second column		
Reportable Result	: Bracketed (value)		
Toxaphene Calib. Ref.:	RE05013		

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23 09:05
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 13:45
Sample ID : TMW38042023	Date Analyzed: 05/05/23 18:46
Lab Samp ID: D322-05	Dilution Factor: 1
Lab File ID: RE05017	Matrix: WATER
Ext Btch ID: 23CPE004W	% Moisture: NA
Calib. Ref.: RE05012	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	0.271 | (0.308)	0.408	75	44-124
Decachlorobiphenyl	(0.300) | 0.290	0.408	74	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.: RE05013	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23 09:15
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 13:45
Sample ID : TMW47042023	Date Analyzed: 05/05/23 19:07
Lab Samp ID: D322-06	Dilution Factor: 1
Lab File ID: RE05018	Matrix: WATER
Ext Btch ID: 23CPE004W	% Moisture: NA
Calib. Ref.: RE05012	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	0.297 | (0.364)	0.421	86	44-124
Decachlorobiphenyl	(0.310) | 0.300	0.421	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 : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE05013	

METHOD SW3520C/8081B
PESTICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23 11:00
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 13:45
Sample ID : MW22D042023	Date Analyzed: 05/05/23 19:27
Lab Samp ID: D322-08	Dilution Factor: 1
Lab File ID: RE05019	Matrix: WATER
Ext Btch ID: 23CPE004W	% Moisture: NA
Calib. Ref.: RE05012	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	0.297 | (0.302)	0.426	71	44-124
Decachlorobipheny1	(0.309) | 0.303	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 : POreto	Analyzed by : EKim
Result Quantified : First column|Second column	
Reportable Result : Bracketed (value)	
Toxaphene Calib. Ref.: RE05013	

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METHOD SW3520C/8082A
PCBS

SDG#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW3520C/8082A
PCBS

A total of two(2) water samples were received on 04/28/23 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. CPE004WB - 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. 60E004WL/60E004WC 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. : 23D322
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	CPE004WB	1	NA	05/04/2317:30	05/03/2313:45	KE04004A	KE04002A	CPE004W	Method Blank
LCS1W	60E004WL	1	NA	05/04/2317:50	05/03/2313:45	KE04005A	KE04002A	CPE004W	Lab Control Sample (LCS)
LCD1W	60E004WC	1	NA	05/04/2318:10	05/03/2313:45	KE04006A	KE04002A	CPE004W	LCS Duplicate
MW39042023	D322-01	1.05	NA	05/04/2318:50	05/03/2313:45	KE04008A	KE04002A	CPE004W	Field Sample
MW38042023	D322-03	1.12	NA	05/04/2319:10	05/03/2313:45	KE04009A	KE04002A	CPE004W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW3520C/8082A
PCBs

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 13:45
Sample ID: MW39042023	Date Analyzed: 05/04/23 18:50
Lab Samp ID: D322-01	Dilution Factor: 1.05
Lab File ID: KE04008A	Matrix : WATER
Ext Btch ID: CPE004W	% Moisture : NA
Calib. Ref.: KE04002A	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	(0.5059)|0.4663	0.4200	(120)|111	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: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 13:45
Sample ID: MW38042023	Date Analyzed: 05/04/23 19:10
Lab Samp ID: D322-03	Dilution Factor: 1.12
Lab File ID: KE04009A	Matrix : WATER
Ext Btch ID: CPE004W	% Moisture : NA
Calib. Ref.: KE04002A	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	(0.5367)|0.5005	0.4480	(120)|112	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#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD 8151A
HERBICIDES

A total of two(2) water samples were received on 04/28/23 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. HED009WB - 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. HED009WL/HED009WC 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.

Samples D322-01 and D322-03 were initially analyzed at dilution to minimize suspected matrix interference exhibited by the color of their extracts.

Dalapon results were reported from channel A due to contamination observed in channel B.

LAB CHRONICLE
HERBICIDES

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

SDG NO. : 23D322
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	HED009WB	1	NA	05/04/2318:28	04/28/2311:00	WE04003A	WE04002A	HED009W	Method Blank
LCS1W	HED009WL	1	NA	05/04/2318:56	04/28/2311:00	WE04004A	WE04002A	HED009W	Lab Control Sample (LCS)
LCD1W	HED009WC	1	NA	05/04/2319:24	04/28/2311:00	WE04005A	WE04002A	HED009W	LCS Duplicate
MW39042023	D322-01I	2	NA	05/05/2301:05	04/28/2311:00	WE04017A	WE04012A	HED009W	Diluted Sample
MW38042023	D322-03I	2	NA	05/05/2301:33	04/28/2311:00	WE04018A	WE04012A	HED009W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 8151A
HERBICIDES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 04/28/23 11:00
Sample ID: MW39042023	Date Analyzed: 05/05/23 01:05
Lab Samp ID: D322-01I	Dilution Factor: 2
Lab File ID: WE04017A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04012A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	2.0	0.20	0.40
2,4-DB	(ND) | ND	2.0	0.20	0.40
2,4,5-T	(ND) | ND	2.0	0.20	0.40
2,4,5-TP (SILVEX)	(ND) | ND	2.0	0.20	0.40
DALAPON	(ND) | ND	2.0	0.20	0.40
DICAMBA	(ND) | ND	2.0	0.20	0.40
DICHLOROPROP	(ND) | ND	2.0	0.20	0.40
DINOSEB	ND | (ND)	2.0	0.20	0.40
MCPA	(ND) | ND	80	20	40

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	(12.01) | 11.96	10.00	(120) | 120	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: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 04/28/23 11:00
Sample ID: MW38042023	Date Analyzed: 05/05/23 01:33
Lab Samp ID: D322-03I	Dilution Factor: 2
Lab File ID: WE04018A	Matrix : WATER
Ext Btch ID: HED009W	% Moisture : NA
Calib. Ref.: WE04012A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND) | ND	2.0	0.20	0.40
2,4-DB	(ND) | ND	2.0	0.20	0.40
2,4,5-T	(ND) | ND	2.0	0.20	0.40
2,4,5-TP (SILVEX)	(ND) | ND	2.0	0.20	0.40
DALAPON	(ND) | ND	2.0	0.20	0.40
DICAMBA	(ND) | ND	2.0	0.20	0.40
DICHLOROPROP	(ND) | ND	2.0	0.20	0.40
DINOSEB	ND | (ND)	2.0	0.20	0.40
MCPA	(ND) | ND	80	20	40

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	10.78 | (10.96)	10.00	108 | (110)	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#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW8330B
EXPLOSIVES

A total of eight(8) water samples were received on 04/28/23 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. EXE006WB - 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. EXE006WL/EXE006WC 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 : 23D322

METHOD SW8330B
EXPLOSIVES

A total of eight(8) water samples were received on 04/28/23 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. EXE006WB - 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. 35E006WL/35E006WC 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. : 23D322
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	EXE006WB	1	NA	05/25/2310:25	05/03/2310:42	XE22083A	XE22081A	EXE006W	Method Blank
LCS1W	EXE006WL	1	NA	05/25/2311:21	05/03/2310:42	XE22084A	XE22081A	EXE006W	Lab Control Sample (LCS)
LCD1W	EXE006WC	1	NA	05/25/2312:09	05/03/2310:42	XE22085A	XE22081A	EXE006W	LCS Duplicate
MW39042023	D322-01	1	NA	05/25/2314:51	05/03/2310:42	XE22088A	XE22081A	EXE006W	Field Sample
TMW25042023	D322-02	1	NA	05/25/2315:39	05/03/2310:42	XE22089A	XE22081A	EXE006W	Field Sample
MW38042023	D322-03	1	NA	05/25/2316:35	05/03/2310:42	XE22090A	XE22081A	EXE006W	Field Sample
TMW32042023	D322-04	1	NA	05/25/2317:24	05/03/2310:42	XE22091A	XE22081A	EXE006W	Field Sample
TMW38042023	D322-05	1	NA	05/25/2318:20	05/03/2310:42	XE22092A	XE22081A	EXE006W	Field Sample
TMW47042023	D322-06	1	NA	05/25/2319:08	05/03/2310:42	XE22093A	XE22081A	EXE006W	Field Sample
TMW21042023	D322-07	1	NA	05/25/2321:50	05/03/2310:42	XE22096A	XE22094A	EXE006W	Field Sample
MW22D042023	D322-08	1	NA	05/25/2322:38	05/03/2310:42	XE22097A	XE22094A	EXE006W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
EXPLOSIVES

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

SDG NO. : 23D322
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	EXE006WB	1	NA	05/25/2310:25	05/03/2310:42	XE22083A	XE22082A	EXE006W	Method Blank
LCS1W	35E006WL	1	NA	05/25/2313:06	05/03/2310:42	XE22086A	XE22082A	EXE006W	Lab Control Sample (LCS)
LCD1W	35E006WC	1	NA	05/25/2313:54	05/03/2310:42	XE22087A	XE22082A	EXE006W	LCS Duplicate
MW39042023	D322-01	1	NA	05/25/2314:51	05/03/2310:42	XE22088A	XE22082A	EXE006W	Field Sample
TMW25042023	D322-02	1	NA	05/25/2315:39	05/03/2310:42	XE22089A	XE22082A	EXE006W	Field Sample
MW38042023	D322-03	1	NA	05/25/2316:35	05/03/2310:42	XE22090A	XE22082A	EXE006W	Field Sample
TMW32042023	D322-04	1	NA	05/25/2317:24	05/03/2310:42	XE22091A	XE22082A	EXE006W	Field Sample
TMW38042023	D322-05	1	NA	05/25/2318:20	05/03/2310:42	XE22092A	XE22082A	EXE006W	Field Sample
TMW47042023	D322-06	1	NA	05/25/2319:08	05/03/2310:42	XE22093A	XE22082A	EXE006W	Field Sample
TMW21042023	D322-07	1	NA	05/25/2321:50	05/03/2310:42	XE22096A	XE22095A	EXE006W	Field Sample
MW22D042023	D322-08	1	NA	05/25/2322:38	05/03/2310:42	XE22097A	XE22095A	EXE006W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: MW39042023	Date Analyzed: 05/25/23 14:51
Lab Samp ID: D322-01	Dilution Factor: 1
Lab File ID: XE22088A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22081A	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	3.25	4.000	81.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: MW39042023	Date Analyzed: 05/25/23 14:51
Lab Samp ID: D322-01	Dilution Factor: 1
Lab File ID: XE22088A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22082A	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	3.25	4.000	81.3	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW25042023	Date Analyzed: 05/25/23 15:39
Lab Samp ID: D322-02	Dilution Factor: 1
Lab File ID: XE22089A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22081A	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	87.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW25042023	Date Analyzed: 05/25/23 15:39
Lab Samp ID: D322-02	Dilution Factor: 1
Lab File ID: XE22089A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22082A	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	87.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: MW38042023	Date Analyzed: 05/25/23 16:35
Lab Samp ID: D322-03	Dilution Factor: 1
Lab File ID: XE22090A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22081A	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	3.41	4.000	85.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: MW38042023	Date Analyzed: 05/25/23 16:35
Lab Samp ID: D322-03	Dilution Factor: 1
Lab File ID: XE22090A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22082A	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	3.41	4.000	85.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW32042023	Date Analyzed: 05/25/23 17:24
Lab Samp ID: D322-04	Dilution Factor: 1
Lab File ID: XE22091A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22081A	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	3.10	4.000	77.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW32042023	Date Analyzed: 05/25/23 17:24
Lab Samp ID: D322-04	Dilution Factor: 1
Lab File ID: XE22091A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22082A	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	3.10	4.000	77.4	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW38042023	Date Analyzed: 05/25/23 18:20
Lab Samp ID: D322-05	Dilution Factor: 1
Lab File ID: XE22092A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22081A	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	2.5	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	3.43	4.000	85.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW38042023	Date Analyzed: 05/25/23 18:20
Lab Samp ID: D322-05	Dilution Factor: 1
Lab File ID: XE22092A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22082A	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	3.43	4.000	85.7	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW47042023	Date Analyzed: 05/25/23 19:08
Lab Samp ID: D322-06	Dilution Factor: 1
Lab File ID: XE22093A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22081A	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	0.38J	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: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW47042023	Date Analyzed: 05/25/23 19:08
Lab Samp ID: D322-06	Dilution Factor: 1
Lab File ID: XE22093A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22082A	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: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW21042023	Date Analyzed: 05/25/23 21:50
Lab Samp ID: D322-07	Dilution Factor: 1
Lab File ID: XE22096A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22094A	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	3.32	4.000	83.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: TMW21042023	Date Analyzed: 05/25/23 21:50
Lab Samp ID: D322-07	Dilution Factor: 1
Lab File ID: XE22096A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22095A	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	3.32	4.000	83.0	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: MW22D042023	Date Analyzed: 05/25/23 22:38
Lab Samp ID: D322-08	Dilution Factor: 1
Lab File ID: XE22097A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22094A	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	3.37	4.000	84.2	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8330B
EXPLOSIVES

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:42
Sample ID: MW22D042023	Date Analyzed: 05/25/23 22:38
Lab Samp ID: D322-08	Dilution Factor: 1
Lab File ID: XE22097A	Matrix : WATER
Ext Btch ID: EXE006W	% Moisture : NA
Calib. Ref.: XE22095A	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	3.37	4.000	84.2	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#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW8332
NITROGLYCERIN AND PETN

A total of eight(8) water samples were received on 04/28/23 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. EXE005WB - 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. EXE005WL/EXE005WC 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. : 23D322
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	EXE005WB	1	NA	05/16/2311:20	05/03/2310:38	NE15149A	NE15145A	EXE005W	Method Blank
LCS1W	EXE005WL	1	NA	05/16/2311:29	05/03/2310:38	NE15150A	NE15145A	EXE005W	Lab Control Sample (LCS)
LCD1W	EXE005WC	1	NA	05/16/2311:38	05/03/2310:38	NE15151A	NE15145A	EXE005W	LCS Duplicate
MW39042023	D322-01	1	NA	05/16/2311:47	05/03/2310:38	NE15152A	NE15145A	EXE005W	Field Sample
TMW25042023	D322-02	1	NA	05/16/2311:56	05/03/2310:38	NE15153A	NE15145A	EXE005W	Field Sample
MW38042023	D322-03	1	NA	05/16/2312:05	05/03/2310:38	NE15154A	NE15145A	EXE005W	Field Sample
TMW32042023	D322-04	1	NA	05/16/2312:14	05/03/2310:38	NE15155A	NE15145A	EXE005W	Field Sample
TMW38042023	D322-05	1	NA	05/16/2312:23	05/03/2310:38	NE15156A	NE15145A	EXE005W	Field Sample
TMW47042023	D322-06	1	NA	05/16/2312:33	05/03/2310:38	NE15157A	NE15145A	EXE005W	Field Sample
TMW21042023	D322-07	1	NA	05/16/2312:42	05/03/2310:38	NE15158A	NE15145A	EXE005W	Field Sample
MW22D042023	D322-08	1	NA	05/16/2313:00	05/03/2310:38	NE15160A	NE15159A	EXE005W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:38
Sample ID: MW39042023	Date Analyzed: 05/16/23 11:47
Lab Samp ID: D322-01	Dilution Factor: 1
Lab File ID: NE15152A	Matrix : WATER
Ext Btch ID: EXE005W	% Moisture : NA
Calib. Ref.: NE15145A	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	519	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: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:38
Sample ID: TMW25042023	Date Analyzed: 05/16/23 11:56
Lab Samp ID: D322-02	Dilution Factor: 1
Lab File ID: NE15153A	Matrix : WATER
Ext Btch ID: EXE005W	% Moisture : NA
Calib. Ref.: NE15145A	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: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:38
Sample ID: MW38042023	Date Analyzed: 05/16/23 12:05
Lab Samp ID: D322-03	Dilution Factor: 1
Lab File ID: NE15154A	Matrix : WATER
Ext Btch ID: EXE005W	% Moisture : NA
Calib. Ref.: NE15145A	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: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:38
Sample ID: TMW32042023	Date Analyzed: 05/16/23 12:14
Lab Samp ID: D322-04	Dilution Factor: 1
Lab File ID: NE15155A	Matrix : WATER
Ext Btch ID: EXE005W	% Moisture : NA
Calib. Ref.: NE15145A	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	517	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:38
Sample ID: TMW38042023	Date Analyzed: 05/16/23 12:23
Lab Samp ID: D322-05	Dilution Factor: 1
Lab File ID: NE15156A	Matrix : WATER
Ext Btch ID: EXE005W	% Moisture : NA
Calib. Ref.: NE15145A	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	517	500.0	103	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:38
Sample ID: TMW47042023	Date Analyzed: 05/16/23 12:33
Lab Samp ID: D322-06	Dilution Factor: 1
Lab File ID: NE15157A	Matrix : WATER
Ext Btch ID: EXE005W	% Moisture : NA
Calib. Ref.: NE15145A	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: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:38
Sample ID: TMW21042023	Date Analyzed: 05/16/23 12:42
Lab Samp ID: D322-07	Dilution Factor: 1
Lab File ID: NE15158A	Matrix : WATER
Ext Btch ID: EXE005W	% Moisture : NA
Calib. Ref.: NE15145A	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	510	500.0	102	60-140

Note: All positive results are confirmed by Biphenyl column

METHOD SW8332
NITROGLYCERIN AND PETN

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23
Project : USACE WINGATE	Date Received: 04/28/23
Batch No. : 23D322	Date Extracted: 05/03/23 10:38
Sample ID: MW22D042023	Date Analyzed: 05/16/23 13:00
Lab Samp ID: D322-08	Dilution Factor: 1
Lab File ID: NE15160A	Matrix : WATER
Ext Btch ID: EXE005W	% Moisture : NA
Calib. Ref.: NE15159A	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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

METALS / MERCURY

SDG#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW6020A
METALS BY ICP-MS

A total of eight(8) water samples were received on 04/28/23 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. IME011WB - 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. IME011WL/IME011WC 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: D322-01M/D322-01S - Percent recoveries for Aluminum(5X), Calcium(114X), Manganese(116X) and Sodium(717X) were not within MS/MSD QC limits. Percent recoveries for Iron and Magnesium(16X) were not within MS QC limit. Percent recovery for Barium 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. : 23D322
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	IME011WB	1	NA	06/26/2318:00	05/04/2315:42	H6F24079	H6F24077	IME011W	Method Blank
LCS1W	IME011WL	1	NA	06/26/2318:03	05/04/2315:42	H6F24080	H6F24077	IME011W	Lab Control Sample (LCS)
LCD1W	IME011WC	1	NA	06/26/2318:05	05/04/2315:42	H6F24081	H6F24077	IME011W	LCS Duplicate
TMW25042023	D322-02G	5	NA	06/26/2318:23	05/04/2315:42	H6F24087	H6F24077	IME011W	Diluted Sample
MW38042023	D322-03G	5	NA	06/26/2318:26	05/04/2315:42	H6F24088	H6F24077	IME011W	Diluted Sample
TMW32042023	D322-04G	5	NA	06/26/2318:35	05/04/2315:42	H6F24091	H6F24089	IME011W	Diluted Sample
TMW38042023	D322-05G	5	NA	06/26/2318:38	05/04/2315:42	H6F24092	H6F24089	IME011W	Diluted Sample
TMW47042023	D322-06G	5	NA	06/26/2318:40	05/04/2315:42	H6F24093	H6F24089	IME011W	Diluted Sample
TMW21042023	D322-07G	5	NA	06/26/2318:43	05/04/2315:42	H6F24094	H6F24089	IME011W	Diluted Sample
MW22D042023	D322-08I	10	NA	06/26/2318:46	05/04/2315:42	H6F24095	H6F24089	IME011W	Diluted Sample
MW39042023	D322-01A	50	NA	06/26/2318:49	05/04/2315:42	H6F24096	H6F24089	IME011W	Analytical Spike Sample
MW39042023	D322-01T	50	NA	06/26/2318:52	05/04/2315:42	H6F24097	H6F24089	IME011W	Diluted Sample
MW39042023	D322-01J	250	NA	06/26/2318:55	05/04/2315:42	H6F24098	H6F24089	IME011W	Diluted Sample
MW39042023MS	D322-01M	50	NA	06/26/2318:58	05/04/2315:42	H6F24099	H6F24089	IME011W	Matrix Spike Sample (MS)
MW39042023MSD	D322-01S	50	NA	06/26/2319:01	05/04/2315:42	H6F24100	H6F24089	IME011W	MS Duplicate (MSD)
TMW25042023	D322-02T	50	NA	06/26/2319:10	05/04/2315:42	H6F24103	H6F24101	IME011W	Diluted Sample
MW38042023	D322-03T	50	NA	06/26/2319:13	05/04/2315:42	H6F24104	H6F24101	IME011W	Diluted Sample
TMW32042023	D322-04T	50	NA	06/26/2319:16	05/04/2315:42	H6F24105	H6F24101	IME011W	Diluted Sample
TMW38042023	D322-05T	50	NA	06/26/2319:18	05/04/2315:42	H6F24106	H6F24101	IME011W	Diluted Sample
TMW47042023	D322-06T	50	NA	06/26/2319:21	05/04/2315:42	H6F24107	H6F24101	IME011W	Diluted Sample
TMW21042023	D322-07T	50	NA	06/26/2319:24	05/04/2315:42	H6F24108	H6F24101	IME011W	Diluted Sample
MW22D042023	D322-08T	50	NA	06/26/2319:27	05/04/2315:42	H6F24109	H6F24101	IME011W	Diluted Sample
MW39042023	D322-01A	10	NA	06/28/2312:11	05/04/2315:42	H6F26021	H6F26016	IME011W	Analytical Spike Sample
MW39042023	D322-01I	10	NA	06/28/2312:14	05/04/2315:42	H6F26022	H6F26016	IME011W	Diluted Sample
MW39042023	D322-01J	50	NA	06/28/2312:17	05/04/2315:42	H6F26023	H6F26016	IME011W	Diluted Sample
MW39042023MS	D322-01M	10	NA	06/28/2312:20	05/04/2315:42	H6F26024	H6F26016	IME011W	Matrix Spike Sample (MS)
MW39042023MSD	D322-01S	10	NA	06/28/2312:23	05/04/2315:42	H6F26025	H6F26016	IME011W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW39042023
Lab Samp ID: D322-01I
Lab File ID: H6F26022
Ext Btch ID: IME011W
Calib. Ref.: H6F26016

Date Collected: 04/27/23 07:15
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/28/23 12:14
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	15000	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	15	10	1.2	2.5
Barium	44	10	2.5	5.0
Beryllium	7.8	5.0	1.0	2.0
Cadmium	1.2J	10	1.0	2.0
Calcium	340000	2000	500	1000
Chromium	12	10	1.0	2.0
Cobalt	28	7.5	1.0	2.0
Copper	26	20	5.0	10
Iron	8400	2000	250	500
Lead	31	10	0.50	1.0
Magnesium	46000	1000	200	500
Manganese	3500	10	2.5	5.0
Nickel	28	10	2.5	5.0
Potassium	1600J	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	79	10	2.5	5.0
Zinc	280	200	50	100

Sample ID: MW39042023
Lab Samp ID: D322-01T
Lab File ID: H6F24097
Ext Btch ID: IME011W
Calib. Ref.: H6F24089

Date Analyzed: 06/26/23 18:52
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	2200000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:15
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MW39042023	Date Analyzed:	06/28/23 12:14
Lab Samp ID:	D322-01I	Dilution Factor:	10
Lab File ID:	H6F26022	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F26016	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	15000	1000	200	500
Antimony	ND	10	2.5	5.0
Arsenic	15	10	1.2	2.5
Barium	44	10	2.5	5.0
Beryllium	7.8	5.0	1.0	2.0
Cadmium	1.2J	10	1.0	2.0
Calcium	340000	2000	500	1000
Chromium	12	10	1.0	2.0
Cobalt	28	7.5	1.0	2.0
Copper	26	20	5.0	10
Iron	8400	2000	250	500
Lead	31	10	0.50	1.0
Magnesium	46000	1000	200	500
Manganese	3500	10	2.5	5.0
Nickel	28	10	2.5	5.0
Potassium	1600J	2000	500	1000
Selenium	ND	10	1.5	3.0
Silver	ND	10	1.0	2.0
Sodium	2200000E	2000	500	1000
Thallium	ND	5.0	1.0	2.0
Vanadium	79	10	2.5	5.0
Zinc	280	200	50	100

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:15
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MW39042023	Date Analyzed:	06/26/23 18:52
Lab Samp ID:	D322-01T	Dilution Factor:	50
Lab File ID:	H6F24097	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24089	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	15000	5000	1000	2500
Antimony	ND	50	12	25
Arsenic	16J	50	6.2	12
Barium	41J	50	12	25
Beryllium	6.5J	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	340000	10000	2500	5000
Chromium	12J	50	5.0	10
Cobalt	28J	37	5.0	10
Copper	ND	100	25	50
Iron	8300J	10000	1200	2500
Lead	32J	50	2.5	5.0
Magnesium	48000	5000	1000	2500
Manganese	3400	50	12	25
Nickel	28J	50	12	25
Potassium	ND	10000	2500	5000
Selenium	ND	50	7.5	15
Silver	ND	50	5.0	10
Sodium	2200000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	86	50	12	25
Zinc	330J	1000	250	500

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

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

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW25042023
Lab Samp ID: D322-02G
Lab File ID: H6F24087
Ext Btch ID: IME011W
Calib. Ref.: H6F24077

Date Collected: 04/27/23 07:45
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 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	120J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.77J	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	52000	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	320J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	380	5.0	1.2	2.5
Nickel	2.2J	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	5.6	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW25042023
Lab Samp ID: D322-02T
Lab File ID: H6F24103
Ext Btch ID: IME011W
Calib. Ref.: H6F24101

Date Analyzed: 06/26/23 19:10
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:45
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW25042023	Date Analyzed:	06/26/23 18:23
Lab Samp ID:	D322-02G	Dilution Factor:	5
Lab File ID:	H6F24087	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24077	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	120J	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.77J	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	52000	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	320J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	11000	500	100	250
Manganese	380	5.0	1.2	2.5
Nickel	2.2J	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	5.6	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:45
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW25042023	Date Analyzed:	06/26/23 19:10
Lab Samp ID:	D322-02T	Dilution Factor:	50
Lab File ID:	H6F24103	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24101	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	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	420	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW38042023
Lab Samp ID: D322-03G
Lab File ID: H6F24088
Ext Btch ID: IME011W
Calib. Ref.: H6F24077

Date Collected: 04/27/23 07:50
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 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	810	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.93J	5.0	0.62	1.2
Barium	50	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	1.3J	3.7	0.50	1.0
Copper	3.1J	10	2.5	5.0
Iron	280J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7400	500	100	250
Manganese	1600	5.0	1.2	2.5
Nickel	11	5.0	1.2	2.5
Potassium	400J	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	7.3	5.0	1.2	2.5
Zinc	53J	100	25	50

Sample ID: MW38042023
Lab Samp ID: D322-03T
Lab File ID: H6F24104
Ext Btch ID: IME011W
Calib. Ref.: H6F24101

Date Analyzed: 06/26/23 19:13
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	760000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW38042023
Lab Samp ID: D322-03G
Lab File ID: H6F24088
Ext Btch ID: IME011W
Calib. Ref.: H6F24077

Date Collected: 04/27/23 07:50
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 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	810	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.93J	5.0	0.62	1.2
Barium	50	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	1.3J	3.7	0.50	1.0
Copper	3.1J	10	2.5	5.0
Iron	280J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	7400	500	100	250
Manganese	1600	5.0	1.2	2.5
Nickel	11	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	ND	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	7.3	5.0	1.2	2.5
Zinc	53J	100	25	50

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23 07:50
Project : USACE WINGATE	Date Received: 04/28/23
SDG NO. : 23D322	Date Extracted: 05/04/23 15:42
Sample ID: MW38042023	Date Analyzed: 06/26/23 19:13
Lab Samp ID: D322-03T	Dilution Factor: 50
Lab File ID: H6F24104	Matrix: WATER
Ext Btch ID: IME011W	% Moisture: NA
Calib. Ref.: H6F24101	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	51	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	7600	5000	1000	2500
Manganese	1700	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 : CKaing	Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW32042023
Lab Samp ID: D322-04G
Lab File ID: H6F24091
Ext Btch ID: IME011W
Calib. Ref.: H6F24089

Date Collected: 04/27/23 07:55
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 18:35
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	1.2J	5.0	0.62	1.2
Barium	5.7	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	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	1400	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	950J	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: TMW32042023
Lab Samp ID: D322-04T
Lab File ID: H6F24105
Ext Btch ID: IME011W
Calib. Ref.: H6F24101

Date Analyzed: 06/26/23 19:16
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

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

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:55
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW32042023	Date Analyzed:	06/26/23 18:35
Lab Samp ID:	D322-04G	Dilution Factor:	5
Lab File ID:	H6F24091	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24089	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	1.2J	5.0	0.62	1.2
Barium	5.7	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	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	1400	500	100	250
Manganese	32	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	950J	1000	250	500
Selenium	1.7J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:55
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW32042023	Date Analyzed:	06/26/23 19:16
Lab Samp ID:	D322-04T	Dilution Factor:	50
Lab File ID:	H6F24105	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24101	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	14000	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	1500J	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW38042023
Lab Samp ID: D322-05G
Lab File ID: H6F24092
Ext Btch ID: IME011W
Calib. Ref.: H6F24089

Date Collected: 04/27/23 09:05
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 18:38
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	14	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	150J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	97	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	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	26J	100	25	50

Sample ID: TMW38042023
Lab Samp ID: D322-05T
Lab File ID: H6F24106
Ext Btch ID: IME011W
Calib. Ref.: H6F24101

Date Analyzed: 06/26/23 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	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:05
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW38042023	Date Analyzed:	06/26/23 18:38
Lab Samp ID:	D322-05G	Dilution Factor:	5
Lab File ID:	H6F24092	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24089	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	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	150J	1000	120	250
Lead	ND	5.0	0.25	0.50
Magnesium	2800	500	100	250
Manganese	97	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	1300	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	26J	100	25	50

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:05
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW38042023	Date Analyzed:	06/26/23 19:18
Lab Samp ID:	D322-05T	Dilution Factor:	50
Lab File ID:	H6F24106	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24101	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	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	2800J	5000	1000	2500
Manganese	100	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW47042023
Lab Samp ID: D322-06G
Lab File ID: H6F24093
Ext Btch ID: IME011W
Calib. Ref.: H6F24089

Date Collected: 04/27/23 09:15
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 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	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	6700	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	700	500	100	250
Manganese	35	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	ND	5.0	1.2	2.5
Zinc	26J	100	25	50

Sample ID: TMW47042023
Lab Samp ID: D322-06T
Lab File ID: H6F24107
Ext Btch ID: IME011W
Calib. Ref.: H6F24101

Date Analyzed: 06/26/23 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	580000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:15
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW47042023	Date Analyzed:	06/26/23 18:40
Lab Samp ID:	D322-06G	Dilution Factor:	5
Lab File ID:	H6F24093	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24089	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	6700	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	700	500	100	250
Manganese	35	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	570000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW47042023
Lab Samp ID: D322-06T
Lab File ID: H6F24107
Ext Btch ID: IME011W
Calib. Ref.: H6F24101

Date Collected: 04/27/23 09:15
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 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)
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	6900J	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	41J	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:55
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW21042023	Date Analyzed:	06/26/23 18:43
Lab Samp ID:	D322-07G	Dilution Factor:	5
Lab File ID:	H6F24094	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24089	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	0.75J	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	33000	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	6400	500	100	250
Manganese	1.9J	5.0	1.2	2.5
Nickel	1.7J	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	7.2	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Thallium	ND	2.5	0.50	1.0
Vanadium	2.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW21042023	Date Analyzed:	06/26/23 19:24
Lab Samp ID:	D322-07T	Dilution Factor:	50
Lab File ID:	H6F24108	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24101	Instrument ID:	H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	660000	10000	2500	5000

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:55
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW21042023	Date Analyzed:	06/26/23 18:43
Lab Samp ID:	D322-07G	Dilution Factor:	5
Lab File ID:	H6F24094	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24089	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	0.75J	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	33000	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	6400	500	100	250
Manganese	1.9J	5.0	1.2	2.5
Nickel	1.7J	5.0	1.2	2.5
Potassium	400J	1000	250	500
Selenium	7.2	5.0	0.75	1.5
Silver	ND	5.0	0.50	1.0
Sodium	640000E	1000	250	500
Thallium	ND	2.5	0.50	1.0
Vanadium	2.9J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:55
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW21042023	Date Analyzed:	06/26/23 19:24
Lab Samp ID:	D322-07T	Dilution Factor:	50
Lab File ID:	H6F24108	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24101	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	34000	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	6500	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	660000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW22D042023
Lab Samp ID: D322-08I
Lab File ID: H6F24095
Ext Btch ID: IME011W
Calib. Ref.: H6F24089

Date Collected: 04/27/23 11:00
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 18:46
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	93000	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	19000	1000	200	500
Manganese	160	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	40	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	75J	200	50	100

Sample ID: MW22D042023
Lab Samp ID: D322-08T
Lab File ID: H6F24109
Ext Btch ID: IME011W
Calib. Ref.: H6F24101

Date Analyzed: 06/26/23 19:27
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	1100000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MW22D042023	Date Analyzed:	06/26/23 18:46
Lab Samp ID:	D322-08I	Dilution Factor:	10
Lab File ID:	H6F24095	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24089	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	93000	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	19000	1000	200	500
Manganese	160	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	40	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	75J	200	50	100

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

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

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MW22D042023	Date Analyzed:	06/26/23 19:27
Lab Samp ID:	D322-08T	Dilution Factor:	50
Lab File ID:	H6F24109	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24101	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	2800J	10000	1200	2500
Lead	ND	50	2.5	5.0
Magnesium	19000	5000	1000	2500
Manganese	170	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	43J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A
METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MBLK1W	Date Analyzed:	06/26/23 18:00
Lab Samp ID:	IME011WB	Dilution Factor:	1
Lab File ID:	H6F24079	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24077	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of eight(8) water samples were received on 04/28/23 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. IME011WB - 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. IME011WL/IME011WC 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. : 23D322
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	IME011WB	1	NA	06/26/2318:00	05/04/2315:42	H6F24079	H6F24077	IME011W	Method Blank
LCS1W	IME011WL	1	NA	06/26/2318:03	05/04/2315:42	H6F24080	H6F24077	IME011W	Lab Control Sample (LCS)
LCD1W	IME011WC	1	NA	06/26/2318:05	05/04/2315:42	H6F24081	H6F24077	IME011W	LCS Duplicate
MW39042023	D322-01I	10	NA	06/26/2319:36	05/04/2315:42	H6F24112	H6F24110	IME011W	Diluted Sample
TMW25042023	D322-02G	5	NA	06/26/2319:39	05/04/2315:42	H6F24113	H6F24110	IME011W	Diluted Sample
MW38042023	D322-03G	5	NA	06/26/2319:42	05/04/2315:42	H6F24114	H6F24110	IME011W	Diluted Sample
TMW32042023	D322-04G	5	NA	06/26/2319:45	05/04/2315:42	H6F24115	H6F24110	IME011W	Diluted Sample
TMW38042023	D322-05G	5	NA	06/26/2319:48	05/04/2315:42	H6F24116	H6F24110	IME011W	Diluted Sample
TMW47042023	D322-06G	5	NA	06/26/2319:51	05/04/2315:42	H6F24117	H6F24110	IME011W	Diluted Sample
TMW21042023	D322-07G	5	NA	06/26/2319:54	05/04/2315:42	H6F24118	H6F24110	IME011W	Diluted Sample
MW22D042023	D322-08I	10	NA	06/26/2319:56	05/04/2315:42	H6F24119	H6F24110	IME011W	Diluted Sample
MW39042023	D322-01T	50	NA	06/26/2320:05	05/04/2315:42	H6F24122	H6F24120	IME011W	Diluted Sample
TMW25042023	D322-02T	50	NA	06/26/2320:08	05/04/2315:42	H6F24123	H6F24120	IME011W	Diluted Sample
MW38042023	D322-03T	50	NA	06/26/2320:11	05/04/2315:42	H6F24124	H6F24120	IME011W	Diluted Sample
TMW32042023	D322-04T	50	NA	06/26/2320:14	05/04/2315:42	H6F24125	H6F24120	IME011W	Diluted Sample
TMW38042023	D322-05T	50	NA	06/26/2320:17	05/04/2315:42	H6F24126	H6F24120	IME011W	Diluted Sample
TMW47042023	D322-06T	50	NA	06/26/2320:20	05/04/2315:42	H6F24127	H6F24120	IME011W	Diluted Sample
TMW21042023	D322-07T	50	NA	06/26/2320:23	05/04/2315:42	H6F24128	H6F24120	IME011W	Diluted Sample
MW22D042023	D322-08T	50	NA	06/26/2320:26	05/04/2315:42	H6F24129	H6F24120	IME011W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW39042023
Lab Samp ID: D322-01I
Lab File ID: H6F24112
Ext Btch ID: IME011W
Calib. Ref.: H6F24110

Date Collected: 04/27/23 07:15
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 19:36
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	3.6J	10	1.2	2.5
Barium	58	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	61000	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	78	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	1.6J	10	1.5	3.0
Silver	ND	10	1.0	2.0
Thallium	ND	5.0	1.0	2.0
Vanadium	6.8J	10	2.5	5.0
Zinc	ND	200	50	100

Sample ID: MW39042023
Lab Samp ID: D322-01T
Lab File ID: H6F24122
Ext Btch ID: IME011W
Calib. Ref.: H6F24120

Date Analyzed: 06/26/23 20:05
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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW39042023
Lab Samp ID: D322-01I
Lab File ID: H6F24112
Ext Btch ID: IME011W
Calib. Ref.: H6F24110

Date Collected: 04/27/23 07:15
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 19:36
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	3.6J	10	1.2	2.5
Barium	58	10	2.5	5.0
Beryllium	ND	5.0	1.0	2.0
Cadmium	ND	10	1.0	2.0
Calcium	61000	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	78	10	2.5	5.0
Nickel	ND	10	2.5	5.0
Potassium	ND	2000	500	1000
Selenium	1.6J	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	6.8J	10	2.5	5.0
Zinc	ND	200	50	100

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW39042023
Lab Samp ID: D322-01T
Lab File ID: H6F24122
Ext Btch ID: IME011W
Calib. Ref.: H6F24120

Date Collected: 04/27/23 07:15
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 20:05
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	55	50	12	25
Beryllium	ND	25	5.0	10
Cadmium	ND	50	5.0	10
Calcium	62000	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	84	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 : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:45
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW25042023	Date Analyzed:	06/26/23 19:39
Lab Samp ID:	D322-02G	Dilution Factor:	5
Lab File ID:	H6F24113	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24110	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	0.67J	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	50000	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	21	5.0	1.2	2.5
Nickel	1.3J	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	3.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID:	TMW25042023	Date Analyzed:	06/26/23 20:08
Lab Samp ID:	D322-02T	Dilution Factor:	50
Lab File ID:	H6F24123	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24120	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:45
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW25042023	Date Analyzed:	06/26/23 19:39
Lab Samp ID:	D322-02G	Dilution Factor:	5
Lab File ID:	H6F24113	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24110	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	0.67J	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	50000	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	21	5.0	1.2	2.5
Nickel	1.3J	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	830000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:45
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW25042023	Date Analyzed:	06/26/23 20:08
Lab Samp ID:	D322-02T	Dilution Factor:	50
Lab File ID:	H6F24123	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24120	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	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	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	910000	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW38042023
Lab Samp ID: D322-03G
Lab File ID: H6F24114
Ext Btch ID: IME011W
Calib. Ref.: H6F24110

Date Collected: 04/27/23 07:50
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 19:42
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	0.67J	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	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	7000	500	100	250
Manganese	27	5.0	1.2	2.5
Nickel	1.6J	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	3.3J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: MW38042023
Lab Samp ID: D322-03T
Lab File ID: H6F24124
Ext Btch ID: IME011W
Calib. Ref.: H6F24120

Date Analyzed: 06/26/23 20:11
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	780000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:50
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MW38042023	Date Analyzed:	06/26/23 19:42
Lab Samp ID:	D322-03G	Dilution Factor:	5
Lab File ID:	H6F24114	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24110	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	0.67J	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	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	7000	500	100	250
Manganese	27	5.0	1.2	2.5
Nickel	1.6J	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	740000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:50
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MW38042023	Date Analyzed:	06/26/23 20:11
Lab Samp ID:	D322-03T	Dilution Factor:	50
Lab File ID:	H6F24124	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24120	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	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	7200	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW32042023
Lab Samp ID: D322-04G
Lab File ID: H6F24115
Ext Btch ID: IME011W
Calib. Ref.: H6F24110

Date Collected: 04/27/23 07:55
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 19:45
Dilution Factor: 5
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	ND	500	100	250
Antimony	ND	5.0	1.2	2.5
Arsenic	1.1J	5.0	0.62	1.2
Barium	6.3	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	7.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	430J	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	ND	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: TMW32042023
Lab Samp ID: D322-04T
Lab File ID: H6F24125
Ext Btch ID: IME011W
Calib. Ref.: H6F24120

Date Analyzed: 06/26/23 20:14
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	890000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 07:55
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW32042023	Date Analyzed:	06/26/23 19:45
Lab Samp ID:	D322-04G	Dilution Factor:	5
Lab File ID:	H6F24115	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24110	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	6.3	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	7.5	5.0	0.50	1.0
Cobalt	ND	3.7	0.50	1.0
Copper	ND	10	2.5	5.0
Iron	430J	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	ND	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	880000E	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW32042023
Lab Samp ID: D322-04T
Lab File ID: H6F24125
Ext Btch ID: IME011W
Calib. Ref.: H6F24120

Date Collected: 04/27/23 07:55
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 20:14
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	17000	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	1800J	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	890000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	280J	1000	250	500

Note: Detection limits are reported relative to sample result significant figures.
Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW38042023
Lab Samp ID: D322-05G
Lab File ID: H6F24116
Ext Btch ID: IME011W
Calib. Ref.: H6F24110

Date Collected: 04/27/23 09:05
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 19:48
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	12	5.0	1.2	2.5
Beryllium	ND	2.5	0.50	1.0
Cadmium	ND	5.0	0.50	1.0
Calcium	22000	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	2500	500	100	250
Manganese	80	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	ND	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW38042023
Lab Samp ID: D322-05T
Lab File ID: H6F24126
Ext Btch ID: IME011W
Calib. Ref.: H6F24120

Date Analyzed: 06/26/23 20:17
Dilution Factor: 50
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Sodium	980000	10000	2500	5000

Sample Amount : 50ml
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:05
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW38042023	Date Analyzed:	06/26/23 19:48
Lab Samp ID:	D322-05G	Dilution Factor:	5
Lab File ID:	H6F24116	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24110	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	22000	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	2500	500	100	250
Manganese	80	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	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:05
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW38042023	Date Analyzed:	06/26/23 20:17
Lab Samp ID:	D322-05T	Dilution Factor:	50
Lab File ID:	H6F24126	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24120	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	22000	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	2500J	5000	1000	2500
Manganese	86	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	980000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	270J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:15
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW47042023	Date Analyzed:	06/26/23 19:51
Lab Samp ID:	D322-06G	Dilution Factor:	5
Lab File ID:	H6F24117	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24110	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	6500	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	690	500	100	250
Manganese	35	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	810J	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:	TMW47042023	Date Analyzed:	06/26/23 20:20
Lab Samp ID:	D322-06T	Dilution Factor:	50
Lab File ID:	H6F24127	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24120	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23 09:15
Project : USACE WINGATE	Date Received: 04/28/23
SDG NO. : 23D322	Date Extracted: 05/04/23 15:42
Sample ID: TMW47042023	Date Analyzed: 06/26/23 19:51
Lab Samp ID: D322-06G	Dilution Factor: 5
Lab File ID: H6F24117	Matrix: WATER
Ext Btch ID: IME011W	% Moisture: NA
Calib. Ref.: H6F24110	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	6500	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	690	500	100	250
Manganese	35	5.0	1.2	2.5
Nickel	ND	5.0	1.2	2.5
Potassium	810J	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 : CKaing	Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: TMW47042023
Lab Samp ID: D322-06T
Lab File ID: H6F24127
Ext Btch ID: IME011W
Calib. Ref.: H6F24120

Date Collected: 04/27/23 09:15
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 20:20
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	6700J	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	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.	Date Collected: 04/27/23 09:55
Project : USACE WINGATE	Date Received: 04/28/23
SDG NO. : 23D322	Date Extracted: 05/04/23 15:42
Sample ID: TMW21042023	Date Analyzed: 06/26/23 19:54
Lab Samp ID: D322-07G	Dilution Factor: 5
Lab File ID: H6F24118	Matrix: WATER
Ext Btch ID: IME011W	% Moisture: NA
Calib. Ref.: H6F24110	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	0.92J	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	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	6100	500	100	250
Manganese	3.0J	5.0	1.2	2.5
Nickel	2.8J	5.0	1.2	2.5
Potassium	390J	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	2.9J	5.0	1.2	2.5
Zinc	ND	100	25	50

Sample ID: TMW21042023	Date Analyzed: 06/26/23 20:23
Lab Samp ID: D322-07T	Dilution Factor: 50
Lab File ID: H6F24128	Matrix: WATER
Ext Btch ID: IME011W	% Moisture: NA
Calib. Ref.: H6F24120	Instrument ID: H6

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:55
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW21042023	Date Analyzed:	06/26/23 19:54
Lab Samp ID:	D322-07G	Dilution Factor:	5
Lab File ID:	H6F24118	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24110	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	0.92J	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	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	6100	500	100	250
Manganese	3.0J	5.0	1.2	2.5
Nickel	2.8J	5.0	1.2	2.5
Potassium	390J	1000	250	500
Selenium	6.0	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	2.9J	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 09:55
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	TMW21042023	Date Analyzed:	06/26/23 20:23
Lab Samp ID:	D322-07T	Dilution Factor:	50
Lab File ID:	H6F24128	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24120	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	6200	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	640000	10000	2500	5000
Thallium	ND	25	5.0	10
Vanadium	ND	50	12	25
Zinc	920J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MW22D042023	Date Analyzed:	06/26/23 19:56
Lab Samp ID:	D322-08I	Dilution Factor:	10
Lab File ID:	H6F24119	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24110	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	92000	2000	500	1000
Chromium	1.4J	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	140	10	2.5	5.0
Nickel	ND	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:	MW22D042023	Date Analyzed:	06/26/23 20:26
Lab Samp ID:	D322-08T	Dilution Factor:	50
Lab File ID:	H6F24129	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24120	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	: CKaing	Analyzed by:	THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
SDG NO. : 23D322
Sample ID: MW22D042023
Lab Samp ID: D322-08I
Lab File ID: H6F24119
Ext Btch ID: IME011W
Calib. Ref.: H6F24110

Date Collected: 04/27/23 11:00
Date Received: 04/28/23
Date Extracted: 05/04/23 15:42
Date Analyzed: 06/26/23 19:56
Dilution Factor: 10
Matrix: WATER
% Moisture: NA
Instrument ID: H6

PARAMETERS	Result (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Aluminum	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	92000	2000	500	1000
Chromium	1.4J	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	140	10	2.5	5.0
Nickel	ND	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	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
Prepared by : CKaing

Final Volume:50ml
Analyzed by:THuang

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	04/27/23 11:00
Project	: USACE WINGATE	Date Received:	04/28/23
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MW22D042023	Date Analyzed:	06/26/23 20:26
Lab Samp ID:	D322-08T	Dilution Factor:	50
Lab File ID:	H6F24129	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24120	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	93000	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	150	50	12	25
Nickel	ND	50	12	25
Potassium	ND	10000	2500	5000
Selenium	41J	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	280J	1000	250	500

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

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

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

Client	: ECO & ASSOCIATES, INC.	Date Collected:	NA
Project	: USACE WINGATE	Date Received:	NA
SDG NO.	: 23D322	Date Extracted:	05/04/23 15:42
Sample ID:	MBLK1W	Date Analyzed:	06/26/23 18:00
Lab Samp ID:	IME011WB	Dilution Factor:	1
Lab File ID:	H6F24079	Matrix:	WATER
Ext Btch ID:	IME011W	% Moisture:	NA
Calib. Ref.:	H6F24077	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	: CKaing	Analyzed by:	THuang

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW7470A
MERCURY BY COLD VAPOR

A total of eight(8) water samples were received on 04/28/23 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 HGE032WB. 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. HGE032WL/HGE032WC 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 D322-08M/D322-08S. 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
MERCURY BY COLD VAPOR

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

SDG NO. : 23D322
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	HGE032WB	1	NA	05/24/2318:23	05/24/2313:06	M47E024012	M47E024	23HGE032W	Method Blank
LCS1W	HGE032WL	1	NA	05/24/2318:25	05/24/2313:06	M47E024013	M47E024	23HGE032W	Lab Control Sample (LCS)
LCD1W	HGE032WC	1	NA	05/24/2318:27	05/24/2313:06	M47E024014	M47E024	23HGE032W	LCS Duplicate
MW39042023	D322-01	1	NA	05/24/2318:29	05/24/2313:06	M47E024015	M47E024	23HGE032W	Field Sample
TMW25042023	D322-02	1	NA	05/24/2318:30	05/24/2313:06	M47E024016	M47E024	23HGE032W	Field Sample
MW38042023	D322-03	1	NA	05/24/2318:32	05/24/2313:06	M47E024017	M47E024	23HGE032W	Field Sample
TMW32042023	D322-04	1	NA	05/24/2318:34	05/24/2313:06	M47E024018	M47E024	23HGE032W	Field Sample
TMW38042023	D322-05	1	NA	05/24/2318:36	05/24/2313:06	M47E024019	M47E024	23HGE032W	Field Sample
TMW47042023	D322-06	1	NA	05/24/2318:37	05/24/2313:06	M47E024020	M47E024	23HGE032W	Field Sample
TMW21042023	D322-07	1	NA	05/24/2318:39	05/24/2313:06	M47E024021	M47E024	23HGE032W	Field Sample
MW22D042023MS	D322-08M	1	NA	05/24/2318:45	05/24/2313:06	M47E024024	M47E024	23HGE032W	Matrix Spike Sample (MS)
MW22D042023MSD	D322-08S	1	NA	05/24/2318:47	05/24/2313:06	M47E024025	M47E024	23HGE032W	MS Duplicate (MSD)
MW22D042023	D322-08	1	NA	05/24/2318:51	05/24/2313:06	M47E024027	M47E024	23HGE032W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D322

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	HGE032WB	ND	1	NA	0.50	0.10	0.20	05/24/2318:23	05/24/2313:06	M47E024012	M47E024	23HGE032W	NA	NA
LCS1W	HGE032WL	2.6	1	NA	0.50	0.10	0.20	05/24/2318:25	05/24/2313:06	M47E024013	M47E024	23HGE032W	NA	NA
LCD1W	HGE032WC	2.7	1	NA	0.50	0.10	0.20	05/24/2318:27	05/24/2313:06	M47E024014	M47E024	23HGE032W	NA	NA
MW39042023	D322-01	0.28J	1	NA	0.50	0.10	0.20	05/24/2318:29	05/24/2313:06	M47E024015	M47E024	23HGE032W	04/27/2307:15	04/28/23
TMW25042023	D322-02	ND	1	NA	0.50	0.10	0.20	05/24/2318:30	05/24/2313:06	M47E024016	M47E024	23HGE032W	04/27/2307:45	04/28/23
MW38042023	D322-03	ND	1	NA	0.50	0.10	0.20	05/24/2318:32	05/24/2313:06	M47E024017	M47E024	23HGE032W	04/27/2307:50	04/28/23
TMW32042023	D322-04	ND	1	NA	0.50	0.10	0.20	05/24/2318:34	05/24/2313:06	M47E024018	M47E024	23HGE032W	04/27/2307:55	04/28/23
TMW38042023	D322-05	ND	1	NA	0.50	0.10	0.20	05/24/2318:36	05/24/2313:06	M47E024019	M47E024	23HGE032W	04/27/2309:05	04/28/23
TMW47042023	D322-06	ND	1	NA	0.50	0.10	0.20	05/24/2318:37	05/24/2313:06	M47E024020	M47E024	23HGE032W	04/27/2309:15	04/28/23
TMW21042023	D322-07	ND	1	NA	0.50	0.10	0.20	05/24/2318:39	05/24/2313:06	M47E024021	M47E024	23HGE032W	04/27/2309:55	04/28/23
MW22D042023MS	D322-08M	2.8	1	NA	0.50	0.10	0.20	05/24/2318:45	05/24/2313:06	M47E024024	M47E024	23HGE032W	04/27/2311:00	04/28/23
MW22D042023MSD	D322-08S	2.7	1	NA	0.50	0.10	0.20	05/24/2318:47	05/24/2313:06	M47E024025	M47E024	23HGE032W	04/27/2311:00	04/28/23
MW22D042023	D322-08	ND	1	NA	0.50	0.10	0.20	05/24/2318:51	05/24/2313:06	M47E024027	M47E024	23HGE032W	04/27/2311:00	04/28/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

A total of eight(8) water samples were received on 04/28/23 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 HGE032WB. 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. HGE032WL/HGE032WC 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. : 23D322
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	HGE032WB	1	NA	05/24/2318:23	05/24/2313:06	M47E024012	M47E024	23HGE032W	Method Blank
LCS1W	HGE032WL	1	NA	05/24/2318:25	05/24/2313:06	M47E024013	M47E024	23HGE032W	Lab Control Sample (LCS)
LCD1W	HGE032WC	1	NA	05/24/2318:27	05/24/2313:06	M47E024014	M47E024	23HGE032W	LCS Duplicate
MW39042023	D322-01	1	NA	05/24/2318:55	05/24/2313:06	M47E024029	M47E024	23HGE032W	Field Sample
TMW25042023	D322-02	1	NA	05/24/2318:56	05/24/2313:06	M47E024030	M47E024	23HGE032W	Field Sample
MW38042023	D322-03	1	NA	05/24/2318:59	05/24/2313:06	M47E024031	M47E024	23HGE032W	Field Sample
TMW32042023	D322-04	1	NA	05/24/2319:01	05/24/2313:06	M47E024032	M47E024	23HGE032W	Field Sample
TMW38042023	D322-05	1	NA	05/24/2319:02	05/24/2313:06	M47E024033	M47E024	23HGE032W	Field Sample
TMW47042023	D322-06	1	NA	05/24/2319:08	05/24/2313:06	M47E024036	M47E024	23HGE032W	Field Sample
TMW21042023	D322-07	1	NA	05/24/2319:10	05/24/2313:06	M47E024037	M47E024	23HGE032W	Field Sample
MW22D042023	D322-08	1	NA	05/24/2319:12	05/24/2313:06	M47E024038	M47E024	23HGE032W	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD SW7470A (DISSOLVED)
DISSOLVED MERCURY BY COLD VAPOR

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D322

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	HGE032WB	ND	1	NA	0.50	0.10	0.20	05/24/2318:23	05/24/2313:06	M47E024012	M47E024	23HGE032W	NA	NA
LCS1W	HGE032WL	2.6	1	NA	0.50	0.10	0.20	05/24/2318:25	05/24/2313:06	M47E024013	M47E024	23HGE032W	NA	NA
LCD1W	HGE032WC	2.7	1	NA	0.50	0.10	0.20	05/24/2318:27	05/24/2313:06	M47E024014	M47E024	23HGE032W	NA	NA
MW39042023	D322-01	ND	1	NA	0.50	0.10	0.20	05/24/2318:55	05/24/2313:06	M47E024029	M47E024	23HGE032W	04/27/2307:15	04/28/23
TMW25042023	D322-02	ND	1	NA	0.50	0.10	0.20	05/24/2318:56	05/24/2313:06	M47E024030	M47E024	23HGE032W	04/27/2307:45	04/28/23
MW38042023	D322-03	ND	1	NA	0.50	0.10	0.20	05/24/2318:59	05/24/2313:06	M47E024031	M47E024	23HGE032W	04/27/2307:50	04/28/23
TMW32042023	D322-04	ND	1	NA	0.50	0.10	0.20	05/24/2319:01	05/24/2313:06	M47E024032	M47E024	23HGE032W	04/27/2307:55	04/28/23
TMW38042023	D322-05	ND	1	NA	0.50	0.10	0.20	05/24/2319:02	05/24/2313:06	M47E024033	M47E024	23HGE032W	04/27/2309:05	04/28/23
TMW47042023	D322-06	ND	1	NA	0.50	0.10	0.20	05/24/2319:08	05/24/2313:06	M47E024036	M47E024	23HGE032W	04/27/2309:15	04/28/23
TMW21042023	D322-07	ND	1	NA	0.50	0.10	0.20	05/24/2319:10	05/24/2313:06	M47E024037	M47E024	23HGE032W	04/27/2309:55	04/28/23
MW22D042023	D322-08	ND	1	NA	0.50	0.10	0.20	05/24/2319:12	05/24/2313:06	M47E024038	M47E024	23HGE032W	04/27/2311:00	04/28/23

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

LABORATORY REPORT FOR

ECO & ASSOCIATES, INC.

USACE WINGATE

WET CHEMICAL ANALYSES

SDG#: 23D322

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD SW6850
PERCHLORATE BY HPLC/MS

A total of seven(7) water samples were received on 04/28/23 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 PLE009WB. 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. PLE009WL/PLE009WC 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 D322-01I, -03I and -07I 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. : 23D322

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	PLE009WB	ND	1	NA	0.20	0.050	0.10	05/19/2313:16	NA	23ME19007	ME19004	PLE009W	NA	NA
LCS1W	PLE009WL	0.20J	1	NA	0.20	0.050	0.10	05/19/2313:33	NA	23ME19008	ME19004	PLE009W	NA	NA
LCD1W	PLE009WC	0.20	1	NA	0.20	0.050	0.10	05/19/2313:50	NA	23ME19009	ME19004	PLE009W	NA	NA
TMW32042023	D322-04P	700	100	NA	20	5.0	10	05/19/2316:45	NA	23ME19019	ME19017	PLE009W	04/27/2307:55	04/28/23
TMW38042023	D322-05	ND	1	NA	0.20	0.050	0.10	05/19/2317:00	NA	23ME19020	ME19017	PLE009W	04/27/2309:05	04/28/23
TMW47042023	D322-06	ND	1	NA	0.20	0.050	0.10	05/19/2317:15	NA	23ME19021	ME19017	PLE009W	04/27/2309:15	04/28/23
MW39042023	D322-01I	ND	5	NA	1.0	0.25	0.50	05/19/2317:46	NA	23ME19022	ME19017	PLE009W	04/27/2307:15	04/28/23
MW38042023	D322-03I	ND	5	NA	1.0	0.25	0.50	05/19/2318:05	NA	23ME19023	ME19017	PLE009W	04/27/2307:50	04/28/23
TMW21042023	D322-07I	ND	5	NA	1.0	0.25	0.50	05/19/2318:20	NA	23ME19024	ME19017	PLE009W	04/27/2309:55	04/28/23
MW22D042023	D322-08I	0.81J	5	NA	1.0	0.25	0.50	05/19/2318:35	NA	23ME19025	ME19017	PLE009W	04/27/2311:00	04/28/23

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

CASE NARRATIVE

Client : ECO & ASSOCIATES, INC.

Project: USACE WINGATE

SDG : 23D322

METHOD 9056A
BROMIDE

A total of seven(7) water samples were received on 04/28/23 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 ICD032WB. 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. ICD032WL/ICD032WC 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 D322-01I was reported at 5X dilution factor due to high conductivity and brown color. Samples D322-05I 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 : 23D322

METHOD 9056A
CHLORIDE-CL

A total of seven(7) water samples were received on 04/28/23 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. ICD032WB and ICE002WB 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. ICD032WL/ICD032WC and ICE002WL/ICE002WC 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 : 23D322

METHOD 9056A
FLUORIDE

A total of seven(7) water samples were received on 04/28/23 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 ICD032WB. 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. ICD032WL/ICD032WC 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 : 23D322

METHOD 9056A
ORTHOPHOSPHATE-P

A total of seven(7) water samples were received on 04/28/23 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 ICD032WB. 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. ICD032WL/ICD032WC 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 D322-01I was reported at 5X dilution factor due to high conductivity and brown color. Samples D322-05I and D322-08I 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 : 23D322

METHOD SW9056A
NITRATE-N

A total of seven(7) water samples were received on 04/28/23 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 ICD032WB. 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. ICD032WL/ICD032WC 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 D322-01I was reported at 5X dilution factor due to high conductivity and brown color. Samples D322-05I 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 : 23D322

METHOD SW9056A
NITRITE-N

A total of seven(7) water samples were received on 04/28/23 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 ICD032WB. 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. ICD032WL/ICD032WC 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 D322-01I was reported at 5X dilution factor due to high conductivity and brown color. Samples D322-05I and D322-08I 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 : 23D322

METHOD 9056A
SULFATE

A total of seven(7) water samples were received on 04/28/23 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. ICD032WB and ICE002WB 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. ICD032WL/ICD032WC and ICE002WL/ICE002WC 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. : 23D322

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	ICD032WB	ND	1	NA	0.5	0.13	0.25	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS1W	ICD032WL	0.94	1	NA	0.5	0.13	0.25	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD1W	ICD032WC	0.94	1	NA	0.5	0.13	0.25	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
MW39042023	D322-01I	2.2J	5	NA	2.5	0.65	1.2	04/28/2312:41	NA	AD30-06	AD30-01	ICD032W	04/27/2307:15	04/28/23
MW38042023	D322-03	0.89	1	NA	0.5	0.13	0.25	04/28/2313:21	NA	AD30-08	AD30-01	ICD032W	04/27/2307:50	04/28/23
TMW32042023	D322-04	0.91	1	NA	0.5	0.13	0.25	04/28/2313:42	NA	AD30-09	AD30-01	ICD032W	04/27/2307:55	04/28/23
TMW38042023	D322-05I	0.69J	2	NA	1	0.26	0.5	04/28/2314:02	NA	AD30-10	AD30-01	ICD032W	04/27/2309:05	04/28/23
TMW47042023	D322-06	0.38J	1	NA	0.5	0.13	0.25	04/28/2314:22	NA	AD30-11	AD30-01	ICD032W	04/27/2309:15	04/28/23
TMW21042023	D322-07	0.66	1	NA	0.5	0.13	0.25	04/28/2314:43	NA	AD30-12	AD30-01	ICD032W	04/27/2309:55	04/28/23
MW22D042023	D322-08I	1.0	2	NA	1	0.26	0.5	04/28/2316:04	NA	AD30-15	AD30-13	ICD032W	04/27/2311:00	04/28/23

METHOD 9056A
CHLORIDE-CL

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D322

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	ICD032WB	ND	1	NA	0.2	0.05	0.1	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS1W	ICD032WL	1.8	1	NA	0.2	0.05	0.1	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD1W	ICD032WC	1.8	1	NA	0.2	0.05	0.1	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
MW39042023	D322-01J	670	100	NA	20	5	10	04/28/2318:32	NA	AD30-21	AD30-19	ICD032W	04/27/2307:15	04/28/23
MW38042023	D322-03I	250	40	NA	8	2	4	04/28/2319:53	NA	AD30-25	AD30-19	ICD032W	04/27/2307:50	04/28/23
TMW32042023	D322-04I	210	100	NA	20	5	10	04/28/2320:34	NA	AD30-27	AD30-19	ICD032W	04/27/2307:55	04/28/23
TMW38042023	D322-05J	460	100	NA	20	5	10	04/28/2320:54	NA	AD30-28	AD30-19	ICD032W	04/27/2309:05	04/28/23
TMW47042023	D322-06I	68	20	NA	4	1	2	04/28/2321:14	NA	AD30-29	AD30-19	ICD032W	04/27/2309:15	04/28/23
MW22D042023	D322-08K	240	100	NA	20	5	10	04/28/2323:16	NA	AD30-35	AD30-31	ICD032W	04/27/2311:00	04/28/23
MBLK2W	ICE002WB	ND	1	NA	0.2	0.05	0.1	05/01/2314:29	NA	AE02-03	AE02-01	ICE002W	NA	NA
LCS2W	ICE002WL	1.9	1	NA	0.2	0.05	0.1	05/01/2314:49	NA	AE02-04	AE02-01	ICE002W	NA	NA
LCD2W	ICE002WC	1.9	1	NA	0.2	0.05	0.1	05/01/2315:10	NA	AE02-05	AE02-01	ICE002W	NA	NA
TMW21042023	D322-07J	66	50	NA	10	2.5	5	05/02/2305:42	NA	AE02-48	AE02-37	ICE002W	04/27/2309:55	04/28/23

METHOD 9056A
FLUORIDE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D322

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	ICD032WB	ND	1	NA	0.1	0.025	0.05	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS1W	ICD032WL	0.96	1	NA	0.1	0.025	0.05	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD1W	ICD032WC	0.95	1	NA	0.1	0.025	0.05	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
MW39042023	D322-01I	1.6	5	NA	0.5	0.12	0.25	04/28/2312:41	NA	AD30-06	AD30-01	ICD032W	04/27/2307:15	04/28/23
MW38042023	D322-03	0.73	1	NA	0.1	0.025	0.05	04/28/2313:21	NA	AD30-08	AD30-01	ICD032W	04/27/2307:50	04/28/23
TMW32042023	D322-04	0.71	1	NA	0.1	0.025	0.05	04/28/2313:42	NA	AD30-09	AD30-01	ICD032W	04/27/2307:55	04/28/23
TMW38042023	D322-05I	1.3	2	NA	0.2	0.05	0.1	04/28/2314:02	NA	AD30-10	AD30-01	ICD032W	04/27/2309:05	04/28/23
TMW47042023	D322-06	1.9	1	NA	0.1	0.025	0.05	04/28/2314:22	NA	AD30-11	AD30-01	ICD032W	04/27/2309:15	04/28/23
TMW21042023	D322-07	0.96	1	NA	0.1	0.025	0.05	04/28/2314:43	NA	AD30-12	AD30-01	ICD032W	04/27/2309:55	04/28/23
MW22D042023	D322-08I	0.48	2	NA	0.2	0.05	0.1	04/28/2316:04	NA	AD30-15	AD30-13	ICD032W	04/27/2311:00	04/28/23

METHOD SW9056A
NITRATE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D322

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	ICD032WB	ND	1	NA	0.1	0.03	0.06	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS1W	ICD032WL	0.98	1	NA	0.1	0.03	0.06	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD1W	ICD032WC	0.97	1	NA	0.1	0.03	0.06	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
MW39042023	D322-01I	ND	5	NA	0.5	0.15	0.3	04/28/2312:41	NA	AD30-06	AD30-01	ICD032W	04/27/2307:15	04/28/23
MW38042023	D322-03	0.072J	1	NA	0.1	0.03	0.06	04/28/2313:21	NA	AD30-08	AD30-01	ICD032W	04/27/2307:50	04/28/23
TMW32042023	D322-04	1.4	1	NA	0.1	0.03	0.06	04/28/2313:42	NA	AD30-09	AD30-01	ICD032W	04/27/2307:55	04/28/23
TMW38042023	D322-05I	ND	2	NA	0.2	0.06	0.12	04/28/2314:02	NA	AD30-10	AD30-01	ICD032W	04/27/2309:05	04/28/23
TMW47042023	D322-06	0.070J	1	NA	0.1	0.03	0.06	04/28/2314:22	NA	AD30-11	AD30-01	ICD032W	04/27/2309:15	04/28/23
TMW21042023	D322-07I	12	10	NA	1	0.3	0.6	04/28/2316:25	NA	AD30-16	AD30-13	ICD032W	04/27/2309:55	04/28/23
MW22D042023	D322-08J	19	20	NA	2	0.6	1.2	04/28/2316:45	NA	AD30-17	AD30-13	ICD032W	04/27/2311:00	04/28/23

METHOD SW9056A
NITRITE-N

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D322

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	ICD032WB	ND	1	NA	0.1	0.03	0.06	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS1W	ICD032WL	2.0	1	NA	0.1	0.03	0.06	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD1W	ICD032WC	2.0	1	NA	0.1	0.03	0.06	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
MW39042023	D322-01I	ND	5	NA	0.5	0.15	0.3	04/28/2312:41	NA	AD30-06	AD30-01	ICD032W	04/27/2307:15	04/28/23
MW38042023	D322-03	ND	1	NA	0.1	0.03	0.06	04/28/2313:21	NA	AD30-08	AD30-01	ICD032W	04/27/2307:50	04/28/23
TMW32042023	D322-04	ND	1	NA	0.1	0.03	0.06	04/28/2313:42	NA	AD30-09	AD30-01	ICD032W	04/27/2307:55	04/28/23
TMW38042023	D322-05I	ND	2	NA	0.2	0.06	0.12	04/28/2314:02	NA	AD30-10	AD30-01	ICD032W	04/27/2309:05	04/28/23
TMW47042023	D322-06	ND	1	NA	0.1	0.03	0.06	04/28/2314:22	NA	AD30-11	AD30-01	ICD032W	04/27/2309:15	04/28/23
TMW21042023	D322-07	ND	1	NA	0.1	0.03	0.06	04/28/2314:43	NA	AD30-12	AD30-01	ICD032W	04/27/2309:55	04/28/23
MW22D042023	D322-08I	ND	2	NA	0.2	0.06	0.12	04/28/2316:04	NA	AD30-15	AD30-13	ICD032W	04/27/2311:00	04/28/23

METHOD 9056A
ORTHOPHOSPHATE-P

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D322

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	ICD032WB	ND	1	NA	0.5	0.12	0.25	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS1W	ICD032WL	1.8	1	NA	0.5	0.12	0.25	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD1W	ICD032WC	1.8	1	NA	0.5	0.12	0.25	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
MW39042023	D322-01I	ND	5	NA	2.5	0.62	1.2	04/28/2312:41	NA	AD30-06	AD30-01	ICD032W	04/27/2307:15	04/28/23
MW38042023	D322-03	ND	1	NA	0.5	0.12	0.25	04/28/2313:21	NA	AD30-08	AD30-01	ICD032W	04/27/2307:50	04/28/23
TMW32042023	D322-04	ND	1	NA	0.5	0.12	0.25	04/28/2313:42	NA	AD30-09	AD30-01	ICD032W	04/27/2307:55	04/28/23
TMW38042023	D322-05I	ND	2	NA	1	0.25	0.5	04/28/2314:02	NA	AD30-10	AD30-01	ICD032W	04/27/2309:05	04/28/23
TMW47042023	D322-06	ND	1	NA	0.5	0.12	0.25	04/28/2314:22	NA	AD30-11	AD30-01	ICD032W	04/27/2309:15	04/28/23
TMW21042023	D322-07	ND	1	NA	0.5	0.12	0.25	04/28/2314:43	NA	AD30-12	AD30-01	ICD032W	04/27/2309:55	04/28/23
MW22D042023	D322-08I	ND	2	NA	1	0.25	0.5	04/28/2316:04	NA	AD30-15	AD30-13	ICD032W	04/27/2311:00	04/28/23

METHOD 9056A
SULFATE

Client : ECO & ASSOCIATES, INC.
Project : USACE WINGATE
Batch No. : 23D322

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	ICD032WB	ND	1	NA	0.5	0.13	0.25	04/28/2309:41	NA	AD30-03	AD30-01	ICD032W	NA	NA
LCS1W	ICD032WL	4.7	1	NA	0.5	0.13	0.25	04/28/2310:01	NA	AD30-04	AD30-01	ICD032W	NA	NA
LCD1W	ICD032WC	4.7	1	NA	0.5	0.13	0.25	04/28/2310:22	NA	AD30-05	AD30-01	ICD032W	NA	NA
MW39042023	D322-01K	2000	200	NA	100	26	50	04/28/2318:52	NA	AD30-22	AD30-19	ICD032W	04/27/2307:15	04/28/23
MW38042023	D322-03J	580	100	NA	50	13	25	04/28/2320:13	NA	AD30-26	AD30-19	ICD032W	04/27/2307:50	04/28/23
TMW32042023	D322-04I	1100	100	NA	50	13	25	04/28/2320:34	NA	AD30-27	AD30-19	ICD032W	04/27/2307:55	04/28/23
TMW38042023	D322-05J	1300	100	NA	50	13	25	04/28/2320:54	NA	AD30-28	AD30-19	ICD032W	04/27/2309:05	04/28/23
TMW47042023	D322-06J	790	100	NA	50	13	25	04/28/2321:35	NA	AD30-30	AD30-19	ICD032W	04/27/2309:15	04/28/23
MW22D042023	D322-08K	1300	100	NA	50	13	25	04/28/2323:16	NA	AD30-35	AD30-31	ICD032W	04/27/2311:00	04/28/23
MBLK2W	ICE002WB	ND	1	NA	0.5	0.13	0.25	05/01/2314:29	NA	AE02-03	AE02-01	ICE002W	NA	NA
LCS2W	ICE002WL	4.7	1	NA	0.5	0.13	0.25	05/01/2314:49	NA	AE02-04	AE02-01	ICE002W	NA	NA
LCD2W	ICE002WC	4.7	1	NA	0.5	0.13	0.25	05/01/2315:10	NA	AE02-05	AE02-01	ICE002W	NA	NA
TMW21042023	D322-07J	530	50	NA	25	6.5	12	05/02/2305:42	NA	AE02-48	AE02-37	ICE002W	04/27/2309:55	04/28/23