

CASE NARRATIVE
Client: Sundance Consulting, Inc.
Project: Fort Wingate, New Mexico
Report Number: 280-76216-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receipt

Three samples were received on 10/31/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 0.3°C, 0.4°C, 0.4°C, 1.1°C, 1.2°C and 3.0°C.

Additional samples/analyses requested on the chain-of-custody are reported under separate covers (280-76216-1 & 280-76216-3).

No other anomalies were encountered during sample receipt.

GC/MS Semivolatiles - 8270D

Samples TMW33102015 (280-76216-11), BGMW03102015 (280-76216-12) and TMW07102015 (280-76216-13) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 11/02/2015 and 11/10/2015 and analyzed on 11/16/2015, 11/18/2015 and 11/19/2015.

Please note the Caprolactam data are reported under separate cover, as the laboratory does not hold DOD ELAP certification for this compound. The laboratory does not maintain quarterly QC requirements for precision, accuracy and detections.

Reporting limits and method detection limits have been adjusted accordingly for the initial volumes extracted.

Due to the sample was lost at concentration, sample TMW33102015 (280-76216-11) was re-extracted out of the prescribed hold time. Please note that the sample results should be considered estimated.

MS/MSD analyses for prep batches 280-303170 and 280-305782 were not requested.

No other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Field QC Assignments and Associated Samples

EDD File Name: 280-76216-2

eQapp Name: FtWingate_Primary_120405

Associated Samples	Sample Collection Date
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Data Qualifier Summary

Lab Reporting Batch ID: 280-76216-2

Laboratory: TA DEN

EDD Filename: 280-76216-2

eQAPP Name: FtWingate_Primary_120405

Method Category: SVOA

Method: 8270D

Matrix: AQ

Sample ID: TMW33102015

Collected: 10/30/2015 11:20:00 AM

Analysis Type: RES-BASE/NEUTRAL Dilution: 1

Analyte	Lab Result	Lab Qual	DL	DL Type	RL	RL Type	Units	Data Review Qual	Reason Code
CAPROLACTAM	2.4	U H	2.4	MDL	4.9	MRL	ug/L	UJ	StoE

* denotes a non-reportable result

Project Name and Number: 102012 - FWDA 102012 GW

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Data Qualifier Summary

Lab Reporting Batch ID: 280-76216-2

Laboratory: TA DEN

EDD Filename: 280-76216-2

eQAPP Name: FtWingate_Primary_120405

Reason Code Legend

<i>Reason Code</i>	<i>Description</i>
Cb	Calibration Blank Contamination
Ccv	Continuing Calibration Verification Percent Difference Lower Estimation
Ccv	Continuing Calibration Verification Percent Difference Lower Rejection
Ccv	Continuing Calibration Verification Percent Difference Upper Estimation
Ccv	Continuing Calibration Verification Percent Difference Upper Rejection
Ccv	Continuing Calibration Verification Percent Recovery Lower Estimation
Ccv	Continuing Calibration Verification Percent Recovery Lower Rejection
Ccv	Continuing Calibration Verification Percent Recovery Upper Estimation
Ccv	Continuing Calibration Verification Percent Recovery Upper Rejection
CcvCC	Continuing Calibration Verification Correlation Coefficient
CcvRrf	Continuing Calibration Verification Relative Response Factor
ContTune	Continuing Tune
Dup=0	Duplicate Sample Count = 0
Dup>1	Duplicate Sample Count > 1
Eb	Equipment Blank Contamination
EtoA	Extraction to Analysis Estimation
EtoA	Extraction to Analysis Rejection
Fb	Field Blank Contamination
Fd	Field Duplicate Precision
Ft	Field Triplicate Precision
IcCC	Initial Calibration Correlation Coefficient
IcRrf	Initial Calibration Relative Response Factor
IcRsd	Initial Calibration Percent Relative Standard Deviation
Icv	Initial Calibration Verification Percent Difference Lower Estimation
Icv	Initial Calibration Verification Percent Difference Lower Rejection
Icv	Initial Calibration Verification Percent Difference Upper Estimation
Icv	Initial Calibration Verification Percent Difference Upper Rejection
Icv	Initial Calibration Verification Percent Recovery Lower Estimation
Icv	Initial Calibration Verification Percent Recovery Lower Rejection
Icv	Initial Calibration Verification Percent Recovery Upper Estimation

* denotes a non-reportable result

Project Name and Number: 102012 - FWDA 102012 GW

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Data Qualifier Summary

Lab Reporting Batch ID: 280-76216-2

Laboratory: TA DEN

EDD Filename: 280-76216-2

eQAPP Name: FtWingate_Primary_120405

Icv	Initial Calibration Verification Percent Recovery Upper Rejection
IcvCC	Initial Calibration Verification Correlation Coefficient
IcvRrf	Initial Calibration Verification Relative Response Factor
IllogicalFraction	Illogical Fraction
InitTune	Initial Tune
Is	Internal Standard Estimation
Is	Internal Standard Rejection
Lcs	Laboratory Control Precision
Lcs	Laboratory Control Spike Lower Estimation
Lcs	Laboratory Control Spike Lower Rejection
Lcs	Laboratory Control Spike Upper Estimation
Lcs	Laboratory Control Spike Upper Rejection
Lcs=0	Laboratory Control Sample Count = 0
Lcs>1	Laboratory Control Sample Count > 1
Ld	Laboratory Duplicate Precision
Lt	Laboratory Triplicate Precision
Mb	Method Blank Contamination
Mb=0	Method Blank Sample Count = 0
Mb>1	Method Blank Sample Count > 1
Moist	Percent Moisture
Ms	Matrix Spike Lower Estimation
Ms	Matrix Spike Lower Rejection
Ms	Matrix Spike Precision
Ms	Matrix Spike Upper Estimation
Ms	Matrix Spike Upper Rejection
Ms=0	Matrix Spike Sample Count = 0
Ms>1	Matrix Spike Sample Count > 1
PEM	Performance Evaluation Mixture
Preservation	Preservation
ProfJudg	Professional Judgment
REM	Resolution Check Mixture
RI	Reporting Limit
RI	Reporting Limit > Project Maximum Contamination Limit

* denotes a non-reportable result

Project Name and Number: 102012 - FWDA 102012 GW

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Data Qualifier Summary

Lab Reporting Batch ID: 280-76216-2

Laboratory: TA DEN

EDD Filename: 280-76216-2

eQAPP Name: FtWingate_Primary_120405

RI	Reporting Limit Trace Value
StoA	Sampling to Analysis Estimation
StoA	Sampling to Analysis Rejection
StoE	Sampling to Extraction Estimation
StoE	Sampling to Extraction Rejection
StoL	Sampling to Leaching Estimation
StoL	Sampling to Leaching Rejection
Surr	Surrogate/Tracer Recovery Lower Estimation
Surr	Surrogate/Tracer Recovery Lower Rejection
Surr	Surrogate/Tracer Recovery Upper Estimation
Surr	Surrogate/Tracer Recovery Upper Rejection
Tb	Trip Blank Contamination
TempEst	Temperature Estimation
TempRej	Temperature Rejection

* denotes a non-reportable result

Project Name and Number: 102012 - FWDA 102012 GW

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Data Review Summary

Lab Reporting Batch ID: 280-76216-2

Laboratory: TA DEN

EDD Filename: 280-76216-2

eQAPP Name: FtWingate_Primary_120405

<i>Validation Area</i>	<i>Note</i>
Technical Holding Times	SR
Temperature	A
Initial Calibration	N
Continuing Calibration/Initial Calibration Verification	N
Method Blanks	A
Surrogate/Tracer Spikes	SR
Matrix Spike/Matrix Spike Duplicates	N
Laboratory Duplicates	N
Laboratory Replicates	N
Laboratory Control Samples	A
Compound Quantitation	A
Field Duplicates	N
Field Triplicates	N
Field Blanks	N

A = Acceptable, N = Not provided/applicable, SR = See report

The contents of this report reflect findings made by ADR during Automated Data Review, manual applied qualifiers are not considered. Please refer to the Overall Qualifier Summary report for manual qualifiers.

QC Outlier Report: HoldingTimes

Lab Reporting Batch ID: 280-76216-2

Laboratory: TA DEN

EDD Filename: 280-76216-2

eQAPP Name: FtWingate_Primary_120405

Method: 8270D		Preparation Method: 3520C			
Matrix: AQ					
<i>Sample ID</i>	<i>Type</i>	<i>Actual</i>	<i>Criteria</i>	<i>Units</i>	<i>Flag</i>
TMW33102015 (RES)	Sampling To Extraction	11.00	7.00	DAYS	J (all detects) UJ (all non-detects)



Data Review Sample Summary Report by Analysis Method

Reviewed By:

Approved By:

Laboratory: TA DEN

<i>Client Sample ID</i>	<i>Lab Sample ID</i>	<i>Matrix</i>	<i>Sample Type</i>	<i>Preparation Method</i>	<i>Collection Date</i>	<i>Validation Code</i>
Lab Reporting Batch: 280-76216-2						
Method: 8270D						
BGMW03102015	280-76216-12	AQ	N	3520C	10/30/2015 12:30:00 PM	S2AVE
TMW07102015	280-76216-13	AQ	N	3520C	10/30/2015 12:10:00 PM	S2AVE
TMW33102015	280-76216-11	AQ	N	3520C	10/30/2015 11:20:00 AM	S2AVE



Data Review Sample Summary Report by Analysis Method

Reviewed By:

Approved By:

Laboratory: TA DEN

<i>Client Sample ID</i>	<i>Lab Sample ID</i>	<i>Matrix</i>	<i>Sample Type</i>	<i>Preparation Method</i>	<i>Collection Date</i>	<i>Validation Code</i>
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Validation Label Legend

<i>Label Code</i>	<i>Label Description</i>	<i>EPA Level</i>
S1VE	Stage_1_Validation_Electronic	N/A
S1VM	Stage_1_Validation_Manual	N/A
S1VEM	Stage_1_Validation_Electronic_and_Manual	N/A
S2AVE	Stage_2A_Validation_Electronic	Level 3 w/o calibration
S2AVM	Stage_2A_Validation_Manual	Level 3 w/o calibration
S2AVEM	Stage_2A_Validation_Electronic_and_Manual	Level 3 w/o calibration
S2BVE	Stage_2B_Validation_Electronic	Level 3 with calibration
S2BVM	Stage_2B_Validation_Manual	Level 3 with calibration
S2BVEM	Stage_2B_Validation_Electronic_and_Manual	Level 3 with calibration
S3VE	Stage_3_Validation_Electronic	Level 4
S3VM	Stage_3_Validation_Manual	Level 4
S3VEM	Stage_3_Validation_Electronic_and_Manual	Level 4
S4VE	Stage_4_Validation_Electronic	Level 4
S4VM	Stage_4_Validation_Manual	Level 4
S4VEM	Stage_4_Validation_Electronic_and_Manual	Level 4
NV	Not_Validated	N/A

Surrogate Outlier Report

Lab Reporting Batch ID: 280-76216-2

Laboratory: TA DEN

EDD Filename: 280-76216-2

eQAPP Name: FtWingate_Primary_120405

Method: 8270D**Matrix:** AQ

<i>Sample ID (Analysis Type)</i>	<i>Surrogate</i>	<i>Sample % Recovery</i>	<i>% Recovery Limits</i>	<i>Affected Compounds</i>	<i>Flag</i>
BGMW03102015	Terphenyl-d14	36	50.00-135.00	No Affected Compounds	
TMW33102015	Terphenyl-d14	40	50.00-135.00	No Affected Compounds	