ANNUAL PERFORMANCE REPORT GRANULAR ACTIVATED CARBON TREATMENT SYSTEM FOR 2012

REILLY TAR & CHEMICAL CORP.

N.P.L. SITE

ST. LOUIS PARK, MINNESOTA

SUBMITTED MARCH 15, 2013

Annual Performance Report
Granulated Activated Carbon Treatment System

2012

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Section 1

COVER LETTER

St. Louis Park
MINNESOTA

Experience LIFE in the Park.

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 15, 2013

Regional Administrator
United States Environmental
Protection Agency, Region 5
ATTN: Michelle Kerr
77 West Jackson Boulevard, SR-6J
Chicago, Illinois 60604

Director, Groundwater and Solid
Waste Division
Minnesota Pollution Control Agency
ATTN: Site Response Section
520 Lafayette Road North
St. Paul, MN 55155

President
Vertellus
300 N. Meridian #1500
Indianapolis, Indiana 46204

Commissioner
Minnesota Department of Health
121 E. Seventh Place
P. O. Box 64975
St. Paul, MN 55164-0975

RE: United States of America, et al. vs. Reilly Tar &
Chemical Corporation, et al.
File No. Civ. 4-80-469
CD-RAP 4.3.5

Gentlemen:

Enclosed is the 2012 annual performance report of the Granular Activated Carbon treatment system submitted pursuant to Section 4.3.5. of the Consent Decree Remedial Action Plan in the above captioned matter. This report is issued by the City in accordance with Section 2(a) of the Reilly/St. Louis Park Agreement (Exhibit B to the Consent Decree).

Sincerely,

Scott E. Anderson
Superintendent of Utilities

SEA/bah
Enclosure

cc: William Gregg (w/enclosures)
Tom Scott (w/o enclosures)
Reilly File

Section 2

ANNUAL REPORT
&
TABLES

ANNUAL PERFORMANCE REPORT
FOR
GRANULAR ACTIVATED CARBON
TREATMENT SYSTEM
2012

Operation:

The City operated the Granular Activated Carbon (GAC) treatment system in substantial compliance with Section 4.2 of the Remedial Action Plan (RAP) during 2012, treating 331.570 million gallons of water pumped from municipal well SLP 10. This equates to an average of 27.631 million gallons per month. RAP Section 4.2.1 Operating Rate states, "Reilly shall operate wells SLP 10 and/or SLP 15 and the GAC treatment system at a minimum annual pumping rate of 200 million gallons per year, with a minimum pumping rate of 10 million gallons in any calendar month..." The GAC treatment system met all pumping requirements outlined in the RAP. The monthly pump data for 2012 is recorded in Table 1 of this section. Although, the system was producing water well below the Drinking Water Advisory level, the City proactively replaced the GAC in November to insure the continued supply of high quality water to the City's residents and businesses.

Monitoring:

The 2012 monitoring was jointly conducted by Summit Envirosolutions, Inc. and Test America Laboratories. Summit Envirosolutions, Inc. collected all samples and TestAmerica was responsible for the analytical services. Laboratory analyses were conducted at the Test America laboratory in Arvada, Colorado.

The 2012 monitoring schedule (Table 2), as established in the 2012 Sampling Plan developed in accordance with the requirements of Section 3.3 of the RAP. The treatment plant effluent (public drinking water) labeled SLP 10T was sampled each quarter. The sample results are included in Section 3, PAH Analysis of this report. All results were well below the drinking water criteria established in the RAP. The Extended list of PAH was collected on June 26, 2012. The results are included in Section 3, PAH Analysis, 2nd Quarter.

The Feed Water and Acid Fraction samples were collected on June 26, 2012. The sample results are included in Section 4 and 5 respectively and the QA/QC is in Section 3, 3rd Quarter.

Data validation was performed on all GAC samples for 2012. The results of the data validation are included in Section 6. The adjusted values are also included on the analytical result tables in Section 3.

Additional Information:

The CD-RAP Section 4 provides the operational criteria for the GAC facility located adjacent to Water Treatment Plant No. 1, located at 2936 Idaho Avenue that treats water

produced by SLP 10 or SLP 15. The City constructed an additional GAC facility in 1994 located at 4701 West 41st Street (GAC-4) to treat water produced by SLP 4. The station was constructed to treat the water and use it consumption rather pump and discharge to the storm sewer sytem to meet the requirements for gradient control in the Prairie du Chien-Jordan aquifer established in Section 7.2.7 of CD-RAP. The 2012 pumping of SLP 4 met or exceeded the cessation pumping requirements with the exception of July due to emergency repairs to SLP 4.

The City operated GAC 4 in substantial compliance with Section 4.2 of the Remedial Action Plan (RAP) during 2012, treating 443.539 million gallons of water pumped from municipal well SLP 4. This equates to an average of 36.962 million gallons per month. The monthly pump data is recorded in Table 4 of this section. The 2012 sample result for Total Other PAH's at SLP 4 (feed water to GAC 4) was 140.5 ng/l total other PAH and 1.6 ng/l total CPAH (adjusted value). The sample results are on page 22 of the 3rd quarter PAH Analysis. Although, this is below the Drinking Water Advisory level of 175 ng/l established in Section 2.2 of the RAP for Total Other PAH's, the City continued to treat the water with GAC. A SLP 4T sample was not taken in 2012.

Data validation for SLP 4 is included in Section 6, Data Validation, 3rd Quarter, page 30.

TABLE 1

CITY ST. LOUIS PARK
GRANULAR ACTIVATED CARBON
TREATMENT PLANT GAC 1

2012 PRODUCTION

	GAC Production	Well Production SLP 10	SLP 15
January	20.239	20.239	0.000
February	21.584	21.584	0.000
March	20.232	20.232	0.000
April	22.265	22.265	0.000
May	29.078	29.078	0.000
June	35.570	35.570	0.000
July	44.568	44.568	0.000
August	40.608	40.608	0.000
September	40.365	40.365	0.000
October	27.943	27.943	0.000
November	14.645	14.645	0.000
December	14.473	14.473	0.000
Total Gallons	**331.570**	331.570	
Monthly Average	**27.631**		

TABLE 2

2012 SAMPLING PLAN
GAC TREATMENT SYSTEM MONITORING SCHEDULE

RAP Section	Sampling Point	Start of Monitoring	Sample Frequency	Analysis
4.3.1(C)	Treated Water (TRTD	Date of plan approval	Quarterly	PAH (ppt)
4.3.3(D)	Feed Water (FEED)	Date of plan approval	Annually	PAH (ppt)
4.3.4	*Treated Water*	*Date of plan approval*	*Annually*	*PAH (ppt) Extended List*
4.3.4	Treated or Feed Water	Date of plan approval	Annually	Acid Fraction EPA Method 625

TABLE 3

GAC Treatment System
Analytical Results 2012

		1ST Quarter		2nd Quarter		2nd Quarter		3rd Quarter		4th Quarter	
	Well	SLP 10T		SLP 10T		SLP 10TEX		SLP10T		SLP 10T	
	Date	3/26/2012	Validated	6/26/2012	Validated	6/26/2012	Validated	9/19/2012	Validated	12/6/2012	Validated
Parameter											
Acenaphthene		14.0	14.0	31.0	31.0	32.0	32.0	42.0	42.0	1.2	1.2
Acenaphthylene		0.9	0.0	1.6	1.6	1.7	1.7	1.8	1.8		
Acridine											
Anthracene											
Benzo (a) anthracene	c										
Benzo (b) fluoranthene	c										
Benzo (k) fluoranthene	c										
2,3 -Benzofuran											
Benzo (ghi) perylene	c							1.5	0.0		
Benzo (a) pyrene	c										
Benzo (e) pyrene											
Benzo (b) thiophene		2.1	2.1	3.8	3.8	3.8	3.8	4.0	4.0		
Biphenyl											
Carbazole								0.7	0.7		
Chrysene	c										
Dibenzo (a, h) anthracene	c										
Dibenzofuran		1.6	1.6								
Dibenzothiophene											
2, 3 -Dihydroindene		24.0	24.0	44.0	44.0	46.0	46.0	35.0	35.0	0.8	0.0
Fluoranthene											
Fluorene		2.2	2.2	2.6	2.6	2.6	2.6	2.8	2.8		
Indene						3.6	3.6	4.4	4.4		
Indeno (1, 2, 3 cd) pyrene	c							1.4	1.4		
Indole		1.9	1.9					3.0	3.0		
2- Methylnaphtalene		2.2	2.2								
1- Methylnaphtalene		3.9	3.9	6.1	0.0	6.2	6.2	7.3	7.3		
Naphthalene		9.5	9.5	3.6	0.0	3.8	0.0	2.0	0.0	2.5	0.0
Perylene											
Phenanthrene											
Pyrene											
Quinoline	c										
Sum of benzo (a) pyrene & dibenz (a,h) anthrancene		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Carcinogenic PAH		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.9**	**1.4**	**0.0**	**0.0**
Total Other PAH		**62.3**	**61.4**	**92.7**	**83.0**	**99.7**	**95.9**	**103.0**	**101.0**	**4.5**	**1.2**

Validated
Value Adjustment

GAC Change-out
November

TABLE 3

GAC Treatment System
SLP 10 Feed Analytical Results 2012

	Well Date	SLP 10 Feed 6/26/2012	SLP 10 Feed Validated
Parameter			
Acenaphthene		700	700
Acenaphthylene		50	50
Acridine			
Anthracene		2.1	2.1
Benzo (a) anthracene			
Benzo (b) fluoranthene			
Benzo (k) fluoranthene			
2,3 -Benzofuran		1.3	1.3
Benzo (ghi) perylene			
Benzo (a) pyrene			
Benzo (e) pyrene			
Benzo (b) thiophene		70	70
Biphenyl		6.1	6.1
Carbazole		22	22
Chrysene			
Dibenzo (a, h) anthracene			
Dibenzofuran		22	22
Dibenzothiophene		33	33
2, 3 -Dihydroindene		280	280
Fluoranthene		63	63
Fluorene		220	220
Indene		69	69
Indeno (1, 2, 3 cd) pyrene			
Indole			
2- Methylnaphtalene			
1- Methylnaphtalene		110	110
Naphthalene		9.4	0
Perylene			
Phenanthrene		15	15
Pyrene		56	56
Quinoline			
Sum of benzo (a) pyrene & dibenz (a,h) anthrancene		**0.0**	**0.0**
Carcinogenic PAH		**0.0**	**0.0**
Total Other PAH		**1728.9**	**1719.5**

Validated
Value Adjustment

TABLE 3

SLP 4

Parameter	Well Date	SLP 4 9/19/2012	SLP 4 Validated
Acenaphthene		56	56
Acenaphthylene		4.2	4.2
Acridine			
Anthracene		2	2
Benzo (a) anthracene			
Benzo (b) fluoranthene			
Benzo (k) fluoranthene			
2,3 -Benzofuran			
Benzo (ghi) perylene		1.6	1.6
Benzo (a) pyrene			
Benzo (e) pyrene			
Benzo (b) thiophene		6.3	6.3
Biphenyl			
Carbazole		5.5	5.5
Chrysene			
Dibenzo (a, h) anthracene			
Dibenzofuran		1.1	1.1
Dibenzothiophene			
2, 3 -Dihydroindene		40	40
Fluoranthene		2.3	2.3
Fluorene		2.5	2.5
Indene		4	4
Indeno (1, 2, 3 cd) pyrene		1.7	0
Indole			
2- Methylnaphtalene			
1- Methylnaphtalene			
Naphthalene		3.9	3.9
Perylene			
Phenanthrene		3.5	3.5
Pyrene		9.2	9.2
Quinoline			
Sum of benzo (a) pyrene & dibenz (a,h) anthrancene		**0.0**	**0.0**
Carcinogenic PAH		**3.3**	**1.6**
Total Other PAH		**140.5**	**140.5**

Validated
Value Adjustment

TABLE 4

CITY ST. LOUIS PARK
GRANULAR ACTIVATED CARBON
TREATMENT PLANT GAC 4

2012 PRODUCTION

	MILLION GALLONS
January	41.311
February	31.750
March	44.067
April	42.888
May	37.894
June	29.695
July	-
August	39.247
September	45.784
October	45.788
November	40.981
December	44.134
TOTAL	**443.539 Gallons**
MONTHLY AVERAGE	**36.962 Gallons**

Section 3

PAH ANALYSIS

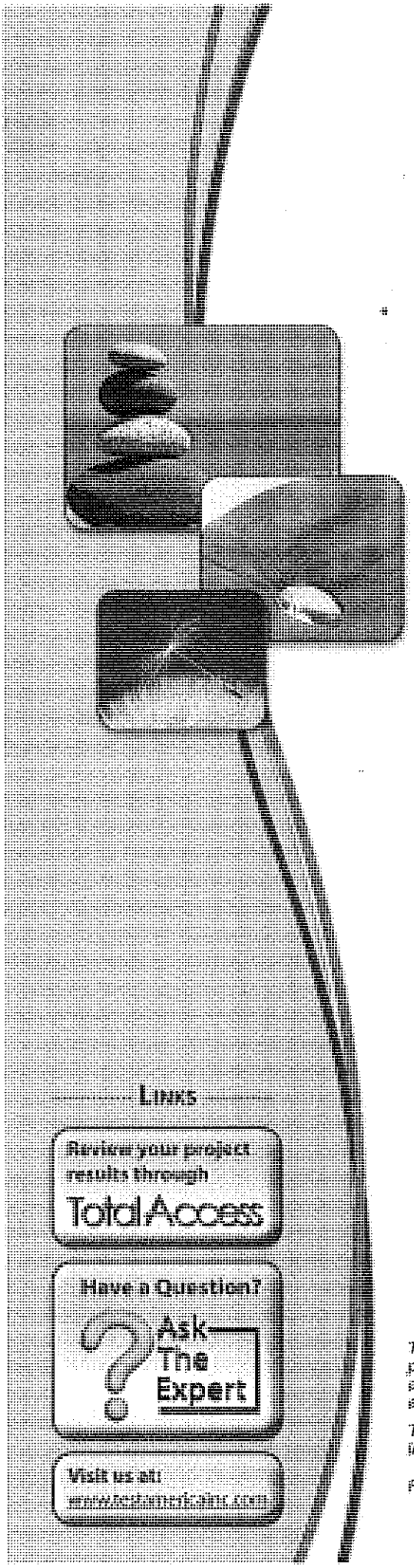
RAP SECTION 4.3.1 (C)

RAP SECTION 4.3.1 (C)

PAH ANALYSIS

FIRST QUARTER

PAH ANALYSIS



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-27039-1
Client Project/Site: CSLP - Reilly Tar & Chemical

For:
Summit Envirosolutions Inc
1217 Bandana Blvd North
Saint Paul, Minnesota 55108

Attn: William M Gregg

Authorized for release by:
4/20/2012 12:53:30 PM

Lisa Uriell
Project Manager II
lisa.uriell@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Receipt Checklists 25

Job ID: 280-27039-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-27039-1

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 Receiving
Four samples were received under chain of custody on March 27, 2012. The samples were received at temperatures of 4.0°C, 4.3° C, 5.1°C, 4.1°C and 2.6°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM
All sample holding times were met.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to limited sample volume, the following samples had an initial aliquot volume below the nominal aliquot volume of 4000 mL. Therefore, the analysis of these samples had to be performed with elevated detection limits. The reporting limits have been adjusted relative to the dilutions required.

SLP10T-032612 (280-27039-1) had an initial volume of 3782.1 mL
W48-032612 (280-27039-2) had an initial volume of 3567.2 mL
W48D-032612 (280-27037-3) had an initial volume of 3870.1 mL
W48FB-032612 (280-27037-4) had an initial volume of 3803.1 mL

Surrogate Chrysene-d12 was recovered below the QC control limits (28-101%) in sample W48-032612 (280-27039-2) at 26%. Upon re-aliquoting and reanalyzing, the surrogate recovery outlier was still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered slightly above the QC control limits (23-84%) in the method blank associated with prep batch 280-113850 at 85%. This is an indicator that data may be biased high. As no detectable concentrations are present in the method blank, corrective action is deemed unnecessary. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

The LCS associated with prep batch 280-113850 exhibited the percent recovery below the QC control limits for Acridine at 7% (limits 30-150%). The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "*".

The MS/MSD associated with prep batch 280-113850 was performed using sample W48-032612 (280-27039-2), as requested.

Job ID: 280-27039-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike Duplicate compound recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylnaphthalene	Benzo[a]pyrene	Benzo[e]pyrene
Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)pyrene	Indeno[1,2,3-cd]pyrene	Perylene

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
JOB: 280-27039-1
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	31
MB Surrogates	3	2
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	6
MS Surrogates	3	3
MSD	7	6
MSD Surrogates	3	3
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	12	11
Samples and QC Internal Standard Area	24	24
TOTAL	**169**	**164**
% Completeness	**97.0%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-27039-1					
Sample: W48-032612		DUP: W48D-032612			
Compound	**Result**	**Compound**	**Result**	**RPD**	**RPD>50%**
Acenaphthene	89	Acenaphthene	88	1.1	
Acenaphthylene	3.4	Acenaphthylene	3.4	0.0	
Acridine	9.9	Acridine	11	10.5	
Anthracene	5.8	Anthracene	7.4	24.2	
Benzo(a)anthracene	ND	Benzo(a)anthracene	3.5	NC	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	2.1	NC	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	2.0	NC	
2,3-Benzofuran	1.5	2,3-Benzofuran	1.4	6.9	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	8.2	Benzo(b)thiophene	7.9	3.7	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	2.2	Carbazole	4.0	58.1	p
Chrysene	ND	Chrysene	2.8	NC	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	4.6	2,3-Dihydroindene	4.2	9.1	
Fluoranthene	ND	Fluoranthene	3.2	NC	
Fluorene	ND	Fluorene	0.94	NC	
Indene	26	Indene	25	3.9	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	2.2	2-Methylnaphthalene	2.0	9.5	
1-Methylnaphthalene	2.2	1-Methylnaphthalene	1.9	14.6	
Naphthalene	7.0	Naphthalene	7.5	6.9	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	3.6	NC	
Pyrene	3.9	Pyrene	5.9	40.8	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
X	Surrogate is outside control limits
F	MS or MSD exceeds tha control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: SLP10T-032612 — Lab Sample ID: 280-27039-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	24		5.3	0.74	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	3.9	J	5.9	0.94	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	2.2	J	6.2	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	14		6.0	0.53	ng/L	1		8270C	Total/NA
Acenaphthylene	0.91	J	5.1	0.81	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	2.1	J	5.5	0.79	ng/L	1		8270C	Total/NA
Dibenzofuran	1.6	J	6.0	1.0	ng/L	1		8270C	Total/NA
Fluorene	2.2	J	4.3	0.90	ng/L	1		8270C	Total/NA
Indole	1.9	J	5.0	1.8	ng/L	1		8270C	Total/NA
Naphthalene	9.5		9.1	1.2	ng/L	1		8270C	Total/NA

Client Sample ID: W48-032612 — Lab Sample ID: 280-27039-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.5	J	6.1	0.76	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	4.6	J	5.6	0.78	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	2.2	J	6.3	1.0	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	2.2	J	6.6	1.1	ng/L	1		8270C	Total/NA
Acenaphthene	89		6.4	0.56	ng/L	1		8270C	Total/NA
Acenaphthylene	3.4	J	5.4	0.86	ng/L	1		8270C	Total/NA
Acridine	9.9	*	7.3	7.3	ng/L	1		8270C	Total/NA
Anthracene	5.8		4.7	0.90	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	8.2		5.8	0.84	ng/L	1		8270C	Total/NA
Carbazole	2.2	J	4.3	0.61	ng/L	1		8270C	Total/NA
Indene	26		5.3	3.7	ng/L	1		8270C	Total/NA
Naphthalene	7.0	J	9.6	1.3	ng/L	1		8270C	Total/NA
Pyrene	3.9	J	4.7	1.1	ng/L	1		8270C	Total/NA

Client Sample ID: W48D-032612 — Lab Sample ID: 280-27039-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.4	J	5.6	0.70	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	4.2	J	5.2	0.72	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.9	J	5.8	0.92	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	2.0	J	6.1	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	88		5.9	0.52	ng/L	1		8270C	Total/NA
Acenaphthylene	3.4	J	5.0	0.80	ng/L	1		8270C	Total/NA
Acridine	11	*	6.7	6.7	ng/L	1		8270C	Total/NA
Anthracene	7.4		4.3	0.83	ng/L	1		8270C	Total/NA
Benzo[a]anthracene	3.5	J	4.4	0.95	ng/L	1		8270C	Total/NA
Benzo[b]fluoranthene	2.1	J	4.9	1.4	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	7.9		5.4	0.78	ng/L	1		8270C	Total/NA
Benzo[k]fluoranthene	2.0	J	4.2	1.3	ng/L	1		8270C	Total/NA
Carbazole	4.0		3.9	0.74	ng/L	1		8270C	Total/NA
Chrysene	2.8	J	5.6	1.3	ng/L	1		8270C	Total/NA
Fluoranthene	3.2	J	4.8	1.7	ng/L	1		8270C	Total/NA
Fluorene	0.94	J	4.2	0.88	ng/L	1		8270C	Total/NA
Indene	25		4.9	3.4	ng/L	1		8270C	Total/NA
Naphthalene	7.5	J	8.9	1.2	ng/L	1		8270C	Total/NA
Phenanthrene	3.6	J	6.5	3.3	ng/L	1		8270C	Total/NA
Pyrene	5.9		4.3	1.0	ng/L	1		8270C	Total/NA

Client Sample ID: W48FB-032612 — Lab Sample ID: 280-27039-4

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: W48FB-032612 (Continued)

Lab Sample ID: 280-27039-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	0.80	J	5.3	0.74	ng/L	1		8270C	Total/NA
Naphthalene	5.3	J	9.0	1.2	ng/L	1		8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-27039-1	SLP10T-032612	Water	03/26/12 12:20	03/27/12 09:00
280-27039-2	W48-032612	Water	03/26/12 13:20	03/27/12 09:00
280-27039-3	W48D-032612	Water	03/26/12 13:35	03/27/12 09:00
280-27039-4	W48FB-032612	Water	03/26/12 13:40	03/27/12 09:00

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: SLP10T-032612
Date Collected: 03/26/12 12:20
Date Received: 03/27/12 09:00

Lab Sample ID: 280-27039-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.72	ng/L		04/01/12 13:00	04/17/12 17:44	1
2,3-Dihydroindene	24		5.3	0.74	ng/L		04/01/12 13:00	04/17/12 17:44	1
1-Methylnaphthalene	3.9	J	5.9	0.94	ng/L		04/01/12 13:00	04/17/12 17:44	1
2-Methylnaphthalene	2.2	J	6.2	1.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Acenaphthene	14		6.0	0.53	ng/L		04/01/12 13:00	04/17/12 17:44	1
Acenaphthylene	0.91	J	5.1	0.81	ng/L		04/01/12 13:00	04/17/12 17:44	1
Acridine	ND	*	6.9	6.9	ng/L		04/01/12 13:00	04/17/12 17:44	1
Anthracene	ND		4.4	0.65	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[a]anthracene	ND		4.5	0.97	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[b]fluoranthene	ND		5.0	1.5	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo(b)thiophene	2.1	J	5.5	0.79	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		04/01/12 13:00	04/17/12 17:44	1
Benzo[g,h,i]perylene	ND		6.6	1.2	ng/L		04/01/12 13:00	04/17/12 17:44	1
Carbazole	ND		4.0	0.76	ng/L		04/01/12 13:00	04/17/12 17:44	1
Chrysene	ND		5.9	1.3	ng/L		04/01/12 13:00	04/17/12 17:44	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		04/01/12 13:00	04/17/12 17:44	1
Dibenzofuran	1.6	J	6.0	1.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Dibenzothiophene	ND		4.3	1.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Fluoranthene	ND		4.9	1.6	ng/L		04/01/12 13:00	04/17/12 17:44	1
Fluorene	2.2	J	4.3	0.90	ng/L		04/01/12 13:00	04/17/12 17:44	1
Indene	ND		5.0	3.5	ng/L		04/01/12 13:00	04/17/12 17:44	1
Indole	1.9	J	5.0	1.8	ng/L		04/01/12 13:00	04/17/12 17:44	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		04/01/12 13:00	04/17/12 17:44	1
Naphthalene	9.5		9.1	1.2	ng/L		04/01/12 13:00	04/17/12 17:44	1
Perylene	ND		4.0	4.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Phenanthrene	ND		6.7	3.4	ng/L		04/01/12 13:00	04/17/12 17:44	1
Pyrene	ND		4.4	1.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Quinoline	ND		9.5	6.0	ng/L		04/01/12 13:00	04/17/12 17:44	1
Biphenyl	ND		5.9	1.1	ng/L		04/01/12 13:00	04/17/12 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*82*		*23 - 84*	*04/01/12 13:00*	*04/17/12 17:44*	*1*
Chrysene-d12 (Surr)	*37*		*28 - 101*	*04/01/12 13:00*	*04/17/12 17:44*	*1*
Naphthalene-d8 (Surr)	*81*		*22 - 97*	*04/01/12 13:00*	*04/17/12 17:44*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: W48-032612

Date Collected: 03/26/12 13:20
Date Received: 03/27/12 09:00

Lab Sample ID: 280-27039-2

Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.5	J	6.1	0.76	ng/L		04/01/12 13:00	04/17/12 18:20	1
2,3-Dihydroindene	4.6	J	5.6	0.78	ng/L		04/01/12 13:00	04/17/12 18:20	1
1-Methylnaphthalene	2.2	J	6.3	1.0	ng/L		04/01/12 13:00	04/17/12 18:20	1
2-Methylnaphthalene	2.2	J	6.6	1.1	ng/L		04/01/12 13:00	04/17/12 18:20	1
Acenaphthene	89		6.4	0.56	ng/L		04/01/12 13:00	04/17/12 18:20	1
Acenaphthylene	3.4	J	5.4	0.66	ng/L		04/01/12 13:00	04/17/12 18:20	1
Acridine	9.9	*	7.3	7.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Anthracene	5.8		4.7	0.90	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[a]anthracene	ND		4.8	1.0	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[a]pyrene	ND		2.8	1.4	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[e]pyrene	ND		4.8	1.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[b]fluoranthene	ND		5.3	1.6	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo(b)thiophene	8.2		5.8	0.84	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[k]fluoranthene	ND		4.6	1.4	ng/L		04/01/12 13:00	04/17/12 18:20	1
Benzo[g,h,i]perylene	ND		7.0	1.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Carbazole	2.2	J	4.3	0.81	ng/L		04/01/12 13:00	04/17/12 18:20	1
Chrysene	ND		6.3	1.4	ng/L		04/01/12 13:00	04/17/12 18:20	1
Dibenz(a,h)anthracene	ND		6.6	1.2	ng/L		04/01/12 13:00	04/17/12 18:20	1
Dibenzofuran	ND		6.4	1.1	ng/L		04/01/12 13:00	04/17/12 18:20	1
Dibenzothiophene	ND		4.6	1.1	ng/L		04/01/12 13:00	04/17/12 18:20	1
Fluoranthene	ND		5.2	1.9	ng/L		04/01/12 13:00	04/17/12 18:20	1
Fluorene	ND		4.6	0.95	ng/L		04/01/12 13:00	04/17/12 18:20	1
Indene	26		5.3	3.7	ng/L		04/01/12 13:00	04/17/12 18:20	1
Indole	ND		5.3	1.9	ng/L		04/01/12 13:00	04/17/12 18:20	1
Indeno[1,2,3-cd]pyrene	ND		6.1	1.4	ng/L		04/01/12 13:00	04/17/12 18:20	1
Naphthalene	7.0	J	9.6	1.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Perylene	ND		4.3	4.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Phenanthrene	ND		7.1	3.6	ng/L		04/01/12 13:00	04/17/12 18:20	1
Pyrene	3.9	J	4.7	1.1	ng/L		04/01/12 13:00	04/17/12 18:20	1
Quinoline	ND		10	6.3	ng/L		04/01/12 13:00	04/17/12 18:20	1
Biphenyl	ND		6.3	1.2	ng/L		04/01/12 13:00	04/17/12 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*81*		*23 - 84*	*04/01/12 13:00*	*04/17/12 18:20*	*1*
Chrysene-d12 (Surr)	*26*	*X*	*28 - 101*	*04/01/12 13:00*	*04/17/12 18:20*	*1*
Naphthalene-d8 (Surr)	*78*		*22 - 97*	*04/01/12 13:00*	*04/17/12 18:20*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: W48D-032612

Date Collected: 03/26/12 13:35
Date Received: 03/27/12 09:00

Lab Sample ID: 280-27039-3
Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.4	J	5.6	0.70	ng/L		04/01/12 13:00	04/17/12 20:05	1
2,3-Dihydroindene	4.2	J	5.2	0.72	ng/L		04/01/12 13:00	04/17/12 20:05	1
1-Methylnaphthalene	1.9	J	5.8	0.92	ng/L		04/01/12 13:00	04/17/12 20:05	1
2-Methylnaphthalene	2.0	J	6.1	1.0	ng/L		04/01/12 13:00	04/17/12 20:05	1
Acenaphthene	88		5.9	0.52	ng/L		04/01/12 13:00	04/17/12 20:05	1
Acenaphthylene	3.4	J	5.0	0.80	ng/L		04/01/12 13:00	04/17/12 20:05	1
Acridine	11	*	6.7	6.7	ng/L		04/01/12 13:00	04/17/12 20:05	1
Anthracene	7.4		4.3	0.83	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[a]anthracene	3.5	J	4.4	0.95	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[b]fluoranthene	2.1	J	4.9	1.4	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo(b)thiophene	7.9		5.4	0.78	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[k]fluoranthene	2.0	J	4.2	1.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		04/01/12 13:00	04/17/12 20:05	1
Carbazole	4.0		3.9	0.74	ng/L		04/01/12 13:00	04/17/12 20:05	1
Chrysene	2.8	J	5.8	1.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		04/01/12 13:00	04/17/12 20:05	1
Dibenzofuran	ND		5.9	1.0	ng/L		04/01/12 13:00	04/17/12 20:05	1
Dibenzothiophene	ND		4.2	1.0	ng/L		04/01/12 13:00	04/17/12 20:05	1
Fluoranthene	3.2	J	4.8	1.7	ng/L		04/01/12 13:00	04/17/12 20:05	1
Fluorene	0.94	J	4.2	0.88	ng/L		04/01/12 13:00	04/17/12 20:05	1
Indene	25		4.9	3.4	ng/L		04/01/12 13:00	04/17/12 20:05	1
Indole	ND		4.9	1.8	ng/L		04/01/12 13:00	04/17/12 20:05	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Naphthalene	7.5	J	8.9	1.2	ng/L		04/01/12 13:00	04/17/12 20:05	1
Perylene	ND		3.9	3.9	ng/L		04/01/12 13:00	04/17/12 20:05	1
Phenanthrene	3.6	J	6.5	3.3	ng/L		04/01/12 13:00	04/17/12 20:05	1
Pyrene	5.9		4.3	1.0	ng/L		04/01/12 13:00	04/17/12 20:05	1
Quinoline	ND		9.3	5.8	ng/L		04/01/12 13:00	04/17/12 20:05	1
Biphenyl	ND		5.8	1.1	ng/L		04/01/12 13:00	04/17/12 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*81*		*23 - 84*	*04/01/12 13:00*	*04/17/12 20:05*	*1*
Chrysene-d12 (Surr)	*39*		*28 - 101*	*04/01/12 13:00*	*04/17/12 20:05*	*1*
Naphthalene-d8 (Surr)	*71*		*22 - 97*	*04/01/12 13:00*	*04/17/12 20:05*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: W48FB-032612
Date Collected: 03/26/12 13:40
Date Received: 03/27/12 09:00

Lab Sample ID: 280-27039-4
Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.72	ng/L		04/01/12 13:00	04/17/12 20:40	1
2,3-Dihydroindene	0.80	J	5.3	0.74	ng/L		04/01/12 13:00	04/17/12 20:40	1
1-Methylnaphthalene	ND		5.9	0.94	ng/L		04/01/12 13:00	04/17/12 20:40	1
2-Methylnaphthalene	ND		6.2	1.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Acenaphthene	ND		6.0	0.53	ng/L		04/01/12 13:00	04/17/12 20:40	1
Acenaphthylene	ND		5.0	0.81	ng/L		04/01/12 13:00	04/17/12 20:40	1
Acridine	ND	*	6.8	6.8	ng/L		04/01/12 13:00	04/17/12 20:40	1
Anthracene	ND		4.4	0.84	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[a]anthracene	ND		4.5	0.97	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[b]fluoranthene	ND		4.9	1.5	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo(b)thiophene	ND		5.5	0.79	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		04/01/12 13:00	04/17/12 20:40	1
Benzo[g,h,i]perylene	ND		6.5	1.2	ng/L		04/01/12 13:00	04/17/12 20:40	1
Carbazole	ND		4.0	0.78	ng/L		04/01/12 13:00	04/17/12 20:40	1
Chrysene	ND		5.9	1.3	ng/L		04/01/12 13:00	04/17/12 20:40	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		04/01/12 13:00	04/17/12 20:40	1
Dibenzofuran	ND		6.0	1.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Dibenzothiophene	ND		4.3	1.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Fluoranthene	ND		4.8	1.8	ng/L		04/01/12 13:00	04/17/12 20:40	1
Fluorene	ND		4.3	0.89	ng/L		04/01/12 13:00	04/17/12 20:40	1
Indene	ND		4.9	3.4	ng/L		04/01/12 13:00	04/17/12 20:40	1
Indole	ND		4.9	1.8	ng/L		04/01/12 13:00	04/17/12 20:40	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		04/01/12 13:00	04/17/12 20:40	1
Naphthalene	5.3	J	9.0	1.2	ng/L		04/01/12 13:00	04/17/12 20:40	1
Perylene	ND		4.0	4.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Phenanthrene	ND		6.6	3.4	ng/L		04/01/12 13:00	04/17/12 20:40	1
Pyrene	ND		4.4	1.0	ng/L		04/01/12 13:00	04/17/12 20:40	1
Quinoline	ND		9.5	5.9	ng/L		04/01/12 13:00	04/17/12 20:40	1
Biphenyl	ND		5.9	1.1	ng/L		04/01/12 13:00	04/17/12 20:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*77*		*23 - 84*	*04/01/12 13:00*	*04/17/12 20:40*	*1*
Chrysene-d12 (Surr)	*83*		*28 - 101*	*04/01/12 13:00*	*04/17/12 20:40*	*1*
Naphthalene-d8 (Surr)	*75*		*22 - 97*	*04/01/12 13:00*	*04/17/12 20:40*	*1*

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FD10	sene-d12 (	thalene-d8
Lab Sample ID	Client Sample ID	(23-84)	(28-101)	(22-97)
280-27039-1	SLP10T-032612	82	37	81
280-27039-2	W48-032612	81	26 X	78
280-27039-2 MS	W48-032612	81	51	66
280-27039-2 MSD	W48-032612	83	35	79
280-27039-3	W48D-032612	81	39	71
280-27039-4	W48FB-032612	77	83	75
LCS 280-113850/2-A	Lab Control Sample	81	85	83
MB 280-113850/1-A	Method Blank	85 X	83	82

Surrogate Legend

FD10 = Fluorene-d10 (Surr)
Chrysene-d12 (Surr) = Chrysene-d12 (Surr)
Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-113850/1-A
Matrix: Water
Analysis Batch: 116160

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.66	ng/L		04/01/12 13:00	04/17/12 16:34	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		04/01/12 13:00	04/17/12 16:34	1
1-Methylnaphthalene	ND		5.6	0.89	ng/L		04/01/12 13:00	04/17/12 16:34	1
2-Methylnaphthalene	ND		5.9	0.98	ng/L		04/01/12 13:00	04/17/12 16:34	1
Acenaphthene	ND		5.7	0.50	ng/L		04/01/12 13:00	04/17/12 16:34	1
Acenaphthylene	ND		4.8	0.77	ng/L		04/01/12 13:00	04/17/12 16:34	1
Acridine	ND		6.5	6.5	ng/L		04/01/12 13:00	04/17/12 16:34	1
Anthracene	ND		4.2	0.80	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Carbazole	ND		3.8	0.72	ng/L		04/01/12 13:00	04/17/12 16:34	1
Chrysene	ND		5.6	1.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		04/01/12 13:00	04/17/12 16:34	1
Dibenzofuran	ND		5.7	0.99	ng/L		04/01/12 13:00	04/17/12 16:34	1
Dibenzothiophene	ND		4.1	0.98	ng/L		04/01/12 13:00	04/17/12 16:34	1
Fluoranthene	ND		4.6	1.7	ng/L		04/01/12 13:00	04/17/12 16:34	1
Fluorene	ND		4.1	0.85	ng/L		04/01/12 13:00	04/17/12 16:34	1
Indene	ND		4.7	3.3	ng/L		04/01/12 13:00	04/17/12 16:34	1
Indole	ND		4.7	1.7	ng/L		04/01/12 13:00	04/17/12 16:34	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		04/01/12 13:00	04/17/12 16:34	1
Naphthalene	ND		8.6	1.1	ng/L		04/01/12 13:00	04/17/12 16:34	1
Perylene	ND		3.8	3.8	ng/L		04/01/12 13:00	04/17/12 16:34	1
Phenanthrene	ND		6.3	3.2	ng/L		04/01/12 13:00	04/17/12 16:34	1
Pyrene	ND		4.2	0.99	ng/L		04/01/12 13:00	04/17/12 16:34	1
Quinoline	ND		9.0	5.7	ng/L		04/01/12 13:00	04/17/12 16:34	1
Biphenyl	ND		5.6	1.1	ng/L		04/01/12 13:00	04/17/12 16:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*85*	*X*	*23 - 84*	*04/01/12 13:00*	*04/17/12 16:34*	*1*
Chrysene-d12 (Surr)	*83*		*28 - 101*	*04/01/12 13:00*	*04/17/12 16:34*	*1*
Naphthalene-d8 (Surr)	*82*		*22 - 97*	*04/01/12 13:00*	*04/17/12 16:34*	*1*

Lab Sample ID: LCS 280-113850/2-A
Matrix: Water
Analysis Batch: 116160

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	60.9		ng/L		81	30 - 150
2,3-Dihydroindene	75.0	48.6		ng/L		65	30 - 150
1-Methylnaphthalene	75.0	65.5		ng/L		87	30 - 150
2-Methylnaphthalene	75.0	63.3		ng/L		84	25 - 95
3-Methylcholanthrene	75.0	53.8		ng/L		72	30 - 150
Acenaphthene	75.0	66.4		ng/L		89	30 - 150
Acenaphthylene	75.0	65.7		ng/L		88	30 - 150

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-113850/2-A
Matrix: Water
Analysis Batch: 116160

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	ND	*	ng/L		7	30 - 150
Anthracene	75.0	66.9		ng/L		89	30 - 150
Benzo[a]anthracene	75.0	65.2		ng/L		87	30 - 150
Benzo[a]pyrene	75.0	65.7		ng/L		88	30 - 150
Benzo[e]pyrene	75.0	67.7		ng/L		90	37 - 105
Benzo[b]fluoranthene	75.0	67.5		ng/L		90	30 - 150
Benzo(b)thiophene	75.0	63.9		ng/L		85	30 - 150
Benzo[k]fluoranthene	75.0	71.0		ng/L		95	30 - 150
Benzo[g,h,i]perylene	75.0	66.9		ng/L		89	30 - 150
Carbazole	75.0	66.1		ng/L		88	30 - 150
Chrysene	75.0	70.0		ng/L		93	20 - 136
Dibenz(a,h)anthracene	75.0	67.2		ng/L		90	30 - 150
Dibenzofuran	75.0	65.8		ng/L		88	30 - 150
Dibenzothiophene	75.0	67.1		ng/L		89	30 - 150
Fluoranthene	75.0	70.6		ng/L		94	30 - 150
Fluorene	75.0	67.5		ng/L		90	34 - 96
Indene	75.0	58.4		ng/L		78	22 - 86
Indole	75.0	58.8		ng/L		78	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	62.9		ng/L		84	30 - 150
Naphthalene	75.0	65.7		ng/L		88	27 - 95
Perylene	75.0	66.6		ng/L		89	30 - 150
Phenanthrene	75.0	68.3		ng/L		91	30 - 150
Pyrene	75.0	70.9		ng/L		95	30 - 150
Quinoline	75.0	40.2		ng/L		54	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	43.5		ng/L		58	30 - 150
Biphenyl	75.0	64.7		ng/L		88	30 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*81*		*23 - 84*
Chrysene-d12 (Surr)	*85*		*28 - 101*
Naphthalene-d8 (Surr)	*83*		*22 - 97*

Lab Sample ID: 280-27039-2 MS
Matrix: Water
Analysis Batch: 116160

Client Sample ID: W48-032612
Prep Type: Total/NA
Prep Batch: 113850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	1.5	J	81.1	59.4		ng/L		71	30 - 150
2,3-Dihydroindene	4.6	J	81.1	52.7		ng/L		59	30 - 150
1-Methylnaphthalene	2.2	J	81.1	65.4		ng/L		78	30 - 150
2-Methylnaphthalene	2.2	J	81.1	63.6		ng/L		76	25 - 95
3-Methylcholanthrene	ND		81.1	9.19	F	ng/L		11	30 - 150
Acenaphthene	89		81.1	160		ng/L		88	30 - 150
Acenaphthylene	3.4	J	81.1	75.4		ng/L		89	30 - 150
Acridine	9.9	*	81.1	90.3		ng/L		99	30 - 150
Anthracene	5.8		81.1	87.1		ng/L		100	30 - 150
Benzo[a]anthracene	ND		81.1	43.4		ng/L		54	30 - 150
Benzo[a]pyrene	ND		81.1	9.54	F	ng/L		12	30 - 150
Benzo[e]pyrene	ND		81.1	8.79	F	ng/L		11	37 - 105

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-27039-2 MS
Matrix: Water
Analysis Batch: 116160

Client Sample ID: W48-032612
Prep Type: Total/NA
Prep Batch: 113850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	ND		81.1	11.2	F	ng/L		14	30 - 150
Benzo(b)thiophene	8.2		81.1	71.2		ng/L		78	30 - 150
Benzo[k]fluoranthene	ND		81.1	11.0	F	ng/L		14	30 - 150
Benzo[g,h,i]perylene	ND		81.1	3.96	J F	ng/L		5	30 - 150
Carbazole	2.2	J	81.1	82.4		ng/L		99	30 - 150
Chrysene	ND		81.1	45.6		ng/L		56	20 - 136
Dibenz(a,h)anthracene	ND		81.1	4.93	J F	ng/L		6	30 - 150
Dibenzofuran	ND		81.1	71.8		ng/L		88	30 - 150
Dibenzothiophene	ND		81.1	74.8		ng/L		92	30 - 150
Fluoranthene	ND		81.1	79.3		ng/L		98	30 - 150
Fluorene	ND		81.1	72.0		ng/L		89	34 - 96
Indene	26		81.1	83.7		ng/L		71	22 - 86
Indole	ND		81.1	76.4		ng/L		94	30 - 150
Indeno[1,2,3-cd]pyrene	ND		81.1	4.48	J F	ng/L		6	30 - 150
Naphthalene	7.0	J	81.1	71.1		ng/L		79	27 - 95
Perylene	ND		81.1	9.43	F	ng/L		12	30 - 150
Phenanthrene	ND		81.1	76.3		ng/L		94	30 - 150
Pyrene	3.9	J	81.1	82.3		ng/L		97	30 - 150
Quinoline	ND		81.1	73.6		ng/L		91	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		81.1	57.4		ng/L		71	30 - 150
Biphenyl	ND		81.1	63.9		ng/L		79	30 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*81*		*23 - 84*
Chrysene-d12 (Surr)	*51*		*28 - 101*
Naphthalene-d8 (Surr)	*66*		*22 - 97*

Lab Sample ID: 280-27039-2 MSD
Matrix: Water
Analysis Batch: 116160

Client Sample ID: W48-032612
Prep Type: Total/NA
Prep Batch: 113850

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3-Benzofuran	1.5	J	80.1	61.7		ng/L		75	30 - 150	4	50
2,3-Dihydroindene	4.6	J	80.1	56.1		ng/L		64	30 - 150	6	50
1-Methylnaphthalene	2.2	J	80.1	65.9		ng/L		80	30 - 150	1	50
2-Methylnaphthalene	2.2	J	80.1	65.3		ng/L		79	25 - 95	3	50
3-Methylcholanthrene	ND		80.1	6.41	F	ng/L		8	30 - 150	36	50
Acenaphthene	89		80.1	159		ng/L		87	30 - 150	1	50
Acenaphthylene	3.4	J	80.1	74.1		ng/L		88	30 - 150	2	50
Acridine	9.9	*	80.1	79.6		ng/L		87	30 - 150	13	50
Anthracene	5.8		80.1	82.6		ng/L		96	30 - 150	5	50
Benzo[a]anthracene	ND		80.1	28.4		ng/L		35	30 - 150	42	50
Benzo[a]pyrene	ND		80.1	6.94	F	ng/L		9	30 - 150	32	50
Benzo[e]pyrene	ND		80.1	8.44	F	ng/L		8	37 - 105	31	50
Benzo[b]fluoranthene	ND		80.1	8.84	F	ng/L		11	30 - 150	24	50
Benzo(b)thiophene	8.2		80.1	72.0		ng/L		80	30 - 150	1	50
Benzo[k]fluoranthene	ND		80.1	8.87	F	ng/L		11	30 - 150	21	50
Benzo[g,h,i]perylene	ND		80.1	3.91	J F	ng/L		5	30 - 150	1	50
Carbazole	2.2	J	80.1	78.9		ng/L		96	30 - 150	4	50

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-27039-2 MSD — **Client Sample ID: W48-032612**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 116160 — **Prep Batch: 113850**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chrysene	ND		80.1	30.9		ng/L		39	20 - 136	38	50
Dibenz(a,h)anthracene	ND		80.1	5.04	J F	ng/L		6	30 - 150	2	50
Dibenzofuran	ND		80.1	70.7		ng/L		88	30 - 150	2	50
Dibenzothiophene	ND		80.1	72.3		ng/L		90	30 - 150	3	50
Fluoranthene	ND		80.1	72.0		ng/L		90	30 - 150	10	50
Fluorene	ND		80.1	70.2		ng/L		88	34 - 96	3	50
Indene	26		80.1	85.4		ng/L		74	22 - 86	2	50
Indole	ND		80.1	69.2		ng/L		86	30 - 150	10	50
Indeno[1,2,3-cd]pyrene	ND		80.1	4.45	J F	ng/L		6	30 - 150	1	50
Naphthalene	7.0	J	80.1	73.2		ng/L		83	27 - 95	3	50
Perylene	ND		80.1	6.57	F	ng/L		8	30 - 150	36	50
Phenanthrene	ND		80.1	74.8		ng/L		93	30 - 150	2	50
Pyrene	3.9	J	80.1	74.8		ng/L		89	30 - 150	10	50
Quinoline	ND		80.1	72.1		ng/L		90	20 - 112	2	50
7,12-Dimethylbenz(a)anthracene	ND		80.1	55.0		ng/L		69	30 - 150	4	50
Biphenyl	ND		80.1	64.7		ng/L		81	30 - 150	1	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Fluorene-d10 (Surr)	*83*		*23 - 84*
Chrysene-d12 (Surr)	*35*		*28 - 101*
Naphthalene-d8 (Surr)	*79*		*22 - 97*

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

GC/MS Semi VOA

Prep Batch: 113850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-27039-1	SLP10T-032612	Total/NA	Water	3520C	
280-27039-2	W48-032612	Total/NA	Water	3520C	
280-27039-2 MS	W48-032612	Total/NA	Water	3520C	
280-27039-2 MSD	W48-032612	Total/NA	Water	3520C	
280-27039-3	W48D-032612	Total/NA	Water	3520C	
280-27039-4	W48FB-032612	Total/NA	Water	3520C	
LCS 280-113850/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-113850/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 116160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-27039-1	SLP10T-032612	Total/NA	Water	8270C	113850
280-27039-2	W48-032612	Total/NA	Water	8270C	113850
280-27039-2 MS	W48-032612	Total/NA	Water	8270C	113850
280-27039-2 MSD	W48-032612	Total/NA	Water	8270C	113850
280-27039-3	W48D-032612	Total/NA	Water	8270C	113850
280-27039-4	W48FB-032612	Total/NA	Water	8270C	113850
LCS 280-113850/2-A	Lab Control Sample	Total/NA	Water	8270C	113850
MB 280-113850/1-A	Method Blank	Total/NA	Water	8270C	113850

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Client Sample ID: SLP10T-032612

Lab Sample ID: 280-27039-1
Matrix: Water

Date Collected: 03/26/12 12:20
Date Received: 03/27/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3782.1 mL	1000 uL	113850	04/01/12 13:00	DFB	TAL DEN
Total/NA	Analysis	8270C		1			116160	04/17/12 17:44	KGV	TAL DEN

Client Sample ID: W48-032612

Lab Sample ID: 280-27039-2
Matrix: Water

Date Collected: 03/26/12 13:20
Date Received: 03/27/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3567.2 mL	1000 uL	113850	04/01/12 13:00	DFB	TAL DEN
Total/NA	Analysis	8270C		1			116160	04/17/12 18:20	KGV	TAL DEN

Client Sample ID: W48D-032612

Lab Sample ID: 280-27039-3
Matrix: Water

Date Collected: 03/26/12 13:35
Date Received: 03/27/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3870.1 mL	1000 uL	113850	04/01/12 13:00	DFB	TAL DEN
Total/NA	Analysis	8270C		1			116160	04/17/12 20:05	KGV	TAL DEN

Client Sample ID: W48FB-032612

Lab Sample ID: 280-27039-4
Matrix: Water

Date Collected: 03/26/12 13:40
Date Received: 03/27/12 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3803.1 mL	1000 uL	113850	04/01/12 13:00	DFB	TAL DEN
Total/NA	Analysis	8270C		1			116160	04/17/12 20:40	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-27039-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Denver	A2LA	DoD ELAP		2907.01
TestAmerica Denver	A2LA	ISO/IEC 17025		2907.01
TestAmerica Denver	Alabama	State Program	4	40730
TestAmerica Denver	Alaska (UST)	State Program	10	UST-30
TestAmerica Denver	Arizona	State Program	9	AZ0713
TestAmerica Denver	Arkansas DEQ	State Program	6	88-0687
TestAmerica Denver	California	State Program	9	2513
TestAmerica Denver	Colorado	State Program	8	N/A
TestAmerica Denver	Connecticut	State Program	1	PH-0686
TestAmerica Denver	Florida	NELAC	4	E87667
TestAmerica Denver	Georgia	State Program	4	N/A
TestAmerica Denver	Idaho	State Program	10	CO00026
TestAmerica Denver	Illinois	NELAC	5	200017
TestAmerica Denver	Iowa	State Program	7	370
TestAmerica Denver	Kansas	NELAC	7	E-10166
TestAmerica Denver	Louisiana	NELAC	6	30785
TestAmerica Denver	Maine	State Program	1	CO0002
TestAmerica Denver	Maryland	State Program	3	268
TestAmerica Denver	Minnesota	NELAC	5	8-999-405
TestAmerica Denver	Nevada	State Program	9	CO0026
TestAmerica Denver	New Hampshire	NELAC	1	205310
TestAmerica Denver	New Jersey	NELAC	2	CO004
TestAmerica Denver	New Mexico	State Program	6	N/A
TestAmerica Denver	New York	NELAC	2	11964
TestAmerica Denver	North Carolina DENR	State Program	4	358
TestAmerica Denver	North Dakota	State Program	8	R-034
TestAmerica Denver	Oklahoma	State Program	6	8614
TestAmerica Denver	Oregon	NELAC	10	CO200001
TestAmerica Denver	Pennsylvania	NELAC	3	68-00664
TestAmerica Denver	South Carolina	State Program	4	72002
TestAmerica Denver	Tennessee	State Program	4	TN02944
TestAmerica Denver	Texas	NELAC	6	T104704183-08-TX
TestAmerica Denver	USDA	Federal		P330-08-00036
TestAmerica Denver	Utah	NELAC	8	QUAN5
TestAmerica Denver	Washington	State Program	10	C1284
TestAmerica Denver	West Virginia DEP	State Program	3	354
TestAmerica Denver	Wisconsin	State Program	5	999615430

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.

Chain of Custody Record

Sampler ID 4.0, 4.3

Temperature on Receipt 5.1, 4.1, 2.6

Drinking Water? Yes ☐ No ☐ 3/27/12 [illegible]

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Summit Envirosolutions	Project Manager: Bill Gregg	Date: 3/26/12	Chain of Custody Number: 151473
Address: 1217 Bandana Blvd. N.	Telephone Number (Area Code)/Fax Number: 651.262.4236	Lab Number:	Page 1 of 1
City: St. Paul; State: MN; Zip Code: 55108	Site Contact: Peter Bell; Lab Contact: Lisa Uriell		
Project Name and Location (State): Reilly Site (MN)	Carrier/Waybill Number: Fed Ex		
Contract/Purchase Order/Quote No.: 0987-0009-400			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	PAH PPT	Special Instructions/ Conditions of Receipt
~~SLP10-T~~	3/26/12			X			6						X	
SLP10T-032612		12:20												
W48-032612		13:20												
W48D-032612		13:35												
W48FB-032612		1340												
W48MS-032612		1325												
W48MSD-032612		1330												

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: William M Gregg	3/26/12	1500	1. Received By: [signature]	3/27/12	900
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Seal #s 549111-115

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

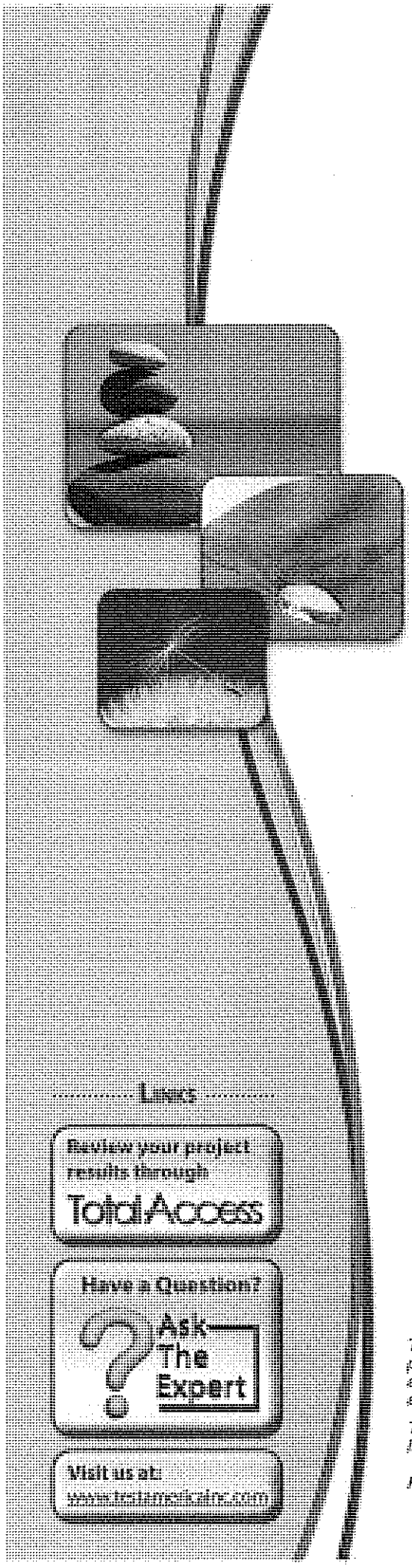
Login Number: 27039
List Number: 1
Creator: Cofold, Stephen T

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SECOND QUARTER

PAH ANALYSIS



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-30464-1
Client Project/Site: CSLP - Reilly Tar & Chemical
Revision: 1

For:
Summit Envirosolutions Inc
1217 Bandana Blvd North
Saint Paul, Minnesota 55108

Attn: William M Gregg

Authorized for release by:
7/30/2012 3:44:18 PM

Lisa Uriell
Project Manager II
lisa.uriell@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of e traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 280-30464-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-30464-1

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 Receiving
Thirteen samples were received under chain of custody on June 27, 2012. The samples were received at temperatures of 4.3°C, 3.5°C, 4.9°C, 4.5°C, 5.1°C, 4.7°C, 3.8°C, 3.0°C, 2.3°C and 3.7°C.

One of 2x1 Liter amber bottles was received at the laboratory broken for sample SLP10TACID-062612 (280-30464-12). Sufficient volume remained to proceed with the requested analysis. The client was notified on June 27, 2012.

No other anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C
All sample holding times were met.

The method required MS/MSD could not be performed for prep batch 280-125974, due to insufficient sample volume.

No other anomalies were noted.

GC/MS Semivolatiles, Method SW846 8270C SIM
All sample holding times were met.

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to limited sample volume, the following samples had an initial aliquot volume below the nominal aliquot volume of 4000 mL. Therefore, the analysis of these samples had to be performed with elevated detection limits. The reporting limits have been adjusted relative to the dilutions required.

MTKA6-062612 (280-30464-1) had an initial volume of 3585.3 mL
H6-062612 (280-30464-2) had an initial volume of 3812 mL
SLP16-062612 (280-30464-3) had an initial volume of 3803.4 mL
SLP6-062612 (280-30464-4) had an initial volume of 3906.6 mL
SLP13-062612 (280-30464-5) had an initial volume of 3473.1 mL
SLP14-062612 (280-30464-6) had an initial volume of 3484.8 mL
SLP10-062612 (280-30464-7) had an initial volume of 3764.3 mL
SLP10D-062612 (280-30464-8) had an initial volume of 3850.1 mL
SLP10FB-062612 280-30464-9) had an initial volume of 3613.4 mL
SLP10T-062612 (280-30464-10) had an initial volume of 3404.2 mL

Job ID: 280-30464-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

SLP10TEXTENDED-062612 (280-30464-11) had an initial volume of 3638.4 mL
SLPFEED-062612 (280-30464-13) had an initial volume of 3484.1 mL

The following samples were analyzed at two different dilutions to obtain all target analytes within the linear calibration range. Reporting limits were adjusted accordingly. Only those compounds that were within the linear range were reported in each dilution in order to achieve the lowest reporting limits possible within the constraints of the method. Surrogate recoveries could not be calculated for the analysis performed at a dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

SLP10-062612 (280-30464-7) was analyzed at a 1X and a 4X dilution
SLP10D-062612 (280-30464-8) was analyzed at a 1X and a 4X dilution
SLPFEED-062612 (280-30464-13) was analyzed at a 1X and a 4X dilution

Surrogate Fluorene-d10 was recovered outside the QC control limits in the following samples, as detailed below. Matrix interference was not obvious. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

MTKA6-062612 (280-30464-1) recovered Fuorene-d10 at 87% (limits 23-84%)
SLP6-062612 (280-30464-4) recovered Fuorene-d10 at 88% (limits 23-84%)
SLP10D-062612 (280-30464-8) recovered Fuorene-d10 at 86% (limits 23-84%)
SLP10FB-062612 (280-30464-9) recovered Fuorene-d10 at 85% (limits 23-84%)
SLP10T-062612 (280-30464-10) recovered Fuorene-d10 at 86% (limits 23-84%)
SLP10TEXTENDED-062612 (280-30464-11) recovered Fuorene-d10 at 87% (limits 23-84%)
SLPFEED-062612 (280-30464-13) recovered Fuorene-d10 at 91% (limits 23-84%)

Low levels of several analytes are present in the method blank associated with prep batch 280-126003. Because the concentrations in the method blank are not present at levels greater than one half the reporting limits, corrective action is deemed unnecessary. The associated positive results in the analytical report have been flagged with "B".

A low level of Fluoranthene is present in the method blank associated with prep batch 280-126003. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. The associated positive results in the analytical report have been flagged with "B".

Additionally, levels of Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Chrysene, Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene are present in the method blank associated with prep batch 280-126003 at levels above the RL. The associated positive results in the analytical report have been flagged with "B". Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is.

Low levels of several analytes are present in the method blank associated with prep batch 280-126251. Because the concentrations in the method blank are not present at levels greater than one half the reporting limits, corrective action is deemed unnecessary. The associated positive results in the analytical report have been flagged with "B".

The LCS associated with prep batches 280-126003 and 280-126251 exhibited percent recoveries below the QC control limits for Acridine at 8% and 28%, respectively (limits 30-150%). Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "*".

The MS/MSD associated with prep batch 280-126003 was performed using a sample from another job. MS/MSD exhibited 10 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. The MS/MSD exhibited 1 of the 33 Relative Percent Difference (RPD) data outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylchloranthrene	Acridine	Benzo[a]pyrene

Job ID: 280-30464-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Benzo[e]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)anthracene	Indene		
Indeno[1,2,3-cd]pyrene	Perylene	Fulorene-d10	

The MS/MSD associated with prep batch 280-129124 was performed using sample SLP10-062612 (280-30464-7), as requested. MS/MSD exhibited 11 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 12 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylchloranthrene	Acenaphthene	Acridine	
Benzo[a]pyrene	Benzo[e]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene
Benzo[ghi]perylene	Dibenzo(a,h)anthracene	Indene	
Fluorene	Indene	Indeno[1,2,3-cd]pyrene	
Perylene	Fulorene-d10		

The initial calibration verification (ICV) associated with analytical batches 280-129031 and 280-129124 exhibited recoveries above the QC control limits for Benzo(a)anthracene at 59.9% D and % D, respectively. This is an indicator that the data may be biased high. As no detectable concentrations of Benzo(a)anthracene are present in the associated samples greater than the reporting limit, corrective action is deemed unnecessary.

No other anomalies were noted.

Data Completeness for Method 8270C Acid Compounds

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below.

DATA COMPLETENES CALCULATION JOB 280-30464-1 ANALYSIS: Acid Compounds by SW846 8270C		
QC Parameter	**Data Planned**	**Valid Data Obtained**
Method Blank	11	11
MB Surrogates	5	5
FB/FBD	NA	NA
MS	NA	NA
MS Surrogates	NA	NA
MSD	NA	NA
MSD Surrogates	NA	NA
MS/MSD RPD	NA	NA
Sample/Dup. RPD	NA	NA
LCS/LCSD	32	32
LCS/LCSD Surrogates	12	12
Sample Surrogates	5	5
Samples and QC Internal Standard Area	12	12
TOTAL	**77**	**77**
% Completeness	**100.00%**	

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION JOB: 280-30464-1 ANALYSIS: SW846-8270C SIM		
QC Parameter	**Data Planned**	**Valid Data Obtained**
Method Blank	62	54
MB Surrogates	6	6
LCS	14	12
LCS Surrogates	6	6
FB	31	31
MS	14	10
MS Surrogates	6	4
MSD	14	11
MSD Surrogates	6	4
MS/MSD RPD	14	14
Sample/Dup. RPD	31	31
Sample Surrogates	36	29
Samples and QC Internal Standard Area	60	60
TOTAL	**300**	**272**
% Completeness	**90.7%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-30464-1					
Sample: SLP10-062612		DUP: SLP10D-062612			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	730	Acenaphthene	ND	NC	
Acenaphthylene	75	Acenaphthylene	77	2.6	
Acridine	ND	Acridine	ND	0.0	
Anthracene	5.9	Anthracene	6.3	6.6	
Benzo(a)anthracene	2.1	Benzo(a)anthracene	2.0	4.9	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	1.4	NC	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	63	Benzo(b)thiophene	65	3.1	
Biphenyl	5.3	Biphenyl	5.6	5.5	
Carbazole	34	Carbazole	33	3.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	19	Dibenzofuran	20	5.1	
Dibenzothiophene	34	Dibenzothiophene	34	0.0	
2,3-Dihydroindene	250	2,3-Dihydroindene	260	3.9	
Fluoranthene	70	Fluoranthene	69	1.4	
Fluorene	200	Fluorene	210	4.9	
Indene	92	Indene	95	3.2	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	110	1-Methylnaphthalene	110	0.0	
Naphthalene	8.0	Naphthalene	9.5	17.1	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	15	Phenanthrene	14	6.9	
Pyrene	90	Pyrene	90	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD exceeds the control limits
X	Surrogate is outside control limits
B	Compound was found in the blank and sample.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
E	Result exceeded calibration range.
F	MS or MSD exceeds the control limits
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: MTKA6-062612 — Lab Sample ID: 280-30464-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	1.7	J	5.6	0.78	ng/L	1		8270C	Total/NA
Naphthalene	4.4	J B	9.6	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: H6-062612 — Lab Sample ID: 280-30464-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	1.9	J	5.2	0.73	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.0	J B	5.9	0.93	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	1.1	J B	6.2	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	28	B	6.0	0.52	ng/L	1		8270C	Total/NA
Acenaphthylene	4.1	J	5.0	0.81	ng/L	1		8270C	Total/NA
Dibenzothiophene	2.3	J	4.3	1.0	ng/L	1		8270C	Total/NA
Fluorene	1.2	J	4.3	0.89	ng/L	1		8270C	Total/NA
Naphthalene	4.4	J	9.0	1.2	ng/L	1		8270C	Total/NA
Pyrene	2.2	J	4.4	1.0	ng/L	1		8270C	Total/NA

Client Sample ID: SLP16-062612 — Lab Sample ID: 280-30464-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	0.95	J	5.3	0.74	ng/L	1		8270C	Total/NA
Naphthalene	2.6	J	9.0	1.2	ng/L	1		8270C	Total/NA

Client Sample ID: SLP6-062612 — Lab Sample ID: 280-30464-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	0.96	J	5.5	0.70	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	58		5.1	0.72	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	10	B	5.7	0.91	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	9.9	B	6.0	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	88	B	5.8	0.51	ng/L	1		8270C	Total/NA
Acenaphthylene	13		4.9	0.79	ng/L	1		8270C	Total/NA
Acridine	9.0	*	6.7	6.7	ng/L	1		8270C	Total/NA
Anthracene	4.0	J	4.3	0.82	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	12		5.3	0.77	ng/L	1		8270C	Total/NA
Carbazole	3.0	J	3.9	0.74	ng/L	1		8270C	Total/NA
Dibenzofuran	1.8	J B	5.8	1.0	ng/L	1		8270C	Total/NA
Dibenzothiophene	2.0	J	4.2	1.0	ng/L	1		8270C	Total/NA
Fluoranthene	3.3	J	4.7	1.7	ng/L	1		8270C	Total/NA
Fluorene	1.3	J	4.2	0.87	ng/L	1		8270C	Total/NA
Indene	8.3		4.8	3.4	ng/L	1		8270C	Total/NA
Naphthalene	14		8.8	1.2	ng/L	1		8270C	Total/NA
Pyrene	4.8		4.3	1.0	ng/L	1		8270C	Total/NA

Client Sample ID: SLP13-062612 — Lab Sample ID: 280-30464-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	2.0	J	5.8	0.81	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	1.3	J B	6.4	1.0	ng/L	1		8270C	Total/NA
2-Methylnaphthalene	1.8	J B	6.8	1.1	ng/L	1		8270C	Total/NA
Naphthalene	6.1	J	9.9	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP14-062612 — Lab Sample ID: 280-30464-6

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP14-062612 (Continued) — Lab Sample ID: 280-30464-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	2.4	J	5.7	0.80	ng/L	1		8270C	Total/NA
Acenaphthene	2.9	J B	6.5	0.57	ng/L	1		8270C	Total/NA
Acenaphthylene	1.1	J	5.5	0.88	ng/L	1		8270C	Total/NA
Naphthalene	2.4	J	9.9	1.3	ng/L	1		8270C	Total/NA
Pyrene	1.1	J	4.8	1.1	ng/L	1		8270C	Total/NA

Client Sample ID: SLP10-062612 — Lab Sample ID: 280-30464-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	250		5.3	0.74	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	110	B	6.0	0.95	ng/L	1		8270C	Total/NA
Acenaphthylene	75		5.1	0.82	ng/L	1		8270C	Total/NA
Anthracene	5.9		4.5	0.85	ng/L	1		8270C	Total/NA
Benzo[a]anthracene	2.1	J	4.6	0.98	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	63		5.5	0.80	ng/L	1		8270C	Total/NA
Carbazole	34		4.0	0.77	ng/L	1		8270C	Total/NA
Dibenzofuran	19	B	6.1	1.1	ng/L	1		8270C	Total/NA
Dibenzothiophene	34		4.4	1.0	ng/L	1		8270C	Total/NA
Fluoranthene	70		4.9	1.8	ng/L	1		8270C	Total/NA
Fluorene	200		4.4	0.90	ng/L	1		8270C	Total/NA
Indene	92		5.0	3.5	ng/L	1		8270C	Total/NA
Naphthalene	8.0	J	9.1	1.2	ng/L	1		8270C	Total/NA
Phenanthrene	15		6.7	3.4	ng/L	1		8270C	Total/NA
Pyrene	90		4.5	1.1	ng/L	1		8270C	Total/NA
Biphenyl	5.3	J	6.0	1.1	ng/L	1		8270C	Total/NA
Acenaphthene - DL	730	B	24	2.1	ng/L	4		8270C	Total/NA

Client Sample ID: SLP10D-062612 — Lab Sample ID: 280-30464-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.4	J	5.6	0.71	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	260		5.2	0.73	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	110	B	5.8	0.92	ng/L	1		8270C	Total/NA
Acenaphthylene	77		5.0	0.80	ng/L	1		8270C	Total/NA
Anthracene	6.3		4.4	0.83	ng/L	1		8270C	Total/NA
Benzo[a]anthracene	2.0	J	4.5	0.96	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	65		5.4	0.78	ng/L	1		8270C	Total/NA
Carbazole	33		3.9	0.75	ng/L	1		8270C	Total/NA
Dibenzofuran	20	B	5.9	1.0	ng/L	1		8270C	Total/NA
Dibenzothiophene	34		4.3	1.0	ng/L	1		8270C	Total/NA
Fluoranthene	69		4.8	1.8	ng/L	1		8270C	Total/NA
Fluorene	210		4.3	0.88	ng/L	1		8270C	Total/NA
Indene	95		4.9	3.4	ng/L	1		8270C	Total/NA
Naphthalene	9.5		8.9	1.2	ng/L	1		8270C	Total/NA
Phenanthrene	14		6.5	3.3	ng/L	1		8270C	Total/NA
Pyrene	90		4.4	1.0	ng/L	1		8270C	Total/NA
Biphenyl	5.6	J	5.8	1.1	ng/L	1		8270C	Total/NA
Acenaphthene - DL	780	B	24	2.1	ng/L	4		8270C	Total/NA

Client Sample ID: SLP10FB-062612 — Lab Sample ID: 280-30464-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	2.7	J	5.5	0.77	ng/L	1		8270C	Total/NA

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10FB-062612 (Continued) — Lab Sample ID: 280-30464-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	1.2	J B	6.5	1.1	ng/L	1		8270C	Total/NA
Naphthalene	5.3	J	9.5	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP10T-062612 — Lab Sample ID: 280-30464-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	44		5.9	0.82	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	6.1	J B	6.6	1.0	ng/L	1		8270C	Total/NA
Acenaphthene	31	B	6.7	0.59	ng/L	1		8270C	Total/NA
Acenaphthylene	1.6	J	5.6	0.90	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	3.8	J	6.1	0.88	ng/L	1		8270C	Total/NA
Fluorene	2.6	J	4.8	1.0	ng/L	1		8270C	Total/NA
Naphthalene	3.6	J	10	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP10TEXTENDED-062612 — Lab Sample ID: 280-30464-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	46		5.5	0.77	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	6.2	B	6.2	0.98	ng/L	1		8270C	Total/NA
Acenaphthene	32	B	6.3	0.55	ng/L	1		8270C	Total/NA
Acenaphthylene	1.7	J	5.3	0.85	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	3.8	J	5.7	0.82	ng/L	1		8270C	Total/NA
Fluorene	2.6	J	4.5	0.93	ng/L	1		8270C	Total/NA
Indene	3.8	J	5.2	3.6	ng/L	1		8270C	Total/NA
Naphthalene	3.8	J	9.5	1.3	ng/L	1		8270C	Total/NA

Client Sample ID: SLP10TACID-062612 — Lab Sample ID: 280-30464-12

No Detections

Client Sample ID: SLPFEED-062612 — Lab Sample ID: 280-30464-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.3	J	6.2	0.78	ng/L	1		8270C	Total/NA
2,3-Dihydroindene	280		5.7	0.80	ng/L	1		8270C	Total/NA
1-Methylnaphthalene	110	B	6.4	1.0	ng/L	1		8270C	Total/NA
Acenaphthylene	50		5.5	0.88	ng/L	1		8270C	Total/NA
Anthracene	2.1	J	4.8	0.92	ng/L	1		8270C	Total/NA
Benzo(b)thiophene	70		6.0	0.86	ng/L	1		8270C	Total/NA
Carbazole	22		4.4	0.83	ng/L	1		8270C	Total/NA
Dibenzofuran	22	B	6.5	1.1	ng/L	1		8270C	Total/NA
Dibenzothiophene	33		4.7	1.1	ng/L	1		8270C	Total/NA
Fluoranthene	63		5.3	1.9	ng/L	1		8270C	Total/NA
Fluorene	220		4.7	0.98	ng/L	1		8270C	Total/NA
Indene	69		5.4	3.8	ng/L	1		8270C	Total/NA
Naphthalene	9.4	J	9.9	1.3	ng/L	1		8270C	Total/NA
Phenanthrene	15		7.2	3.7	ng/L	1		8270C	Total/NA
Pyrene	56		4.8	1.1	ng/L	1		8270C	Total/NA
Biphenyl	8.1	J	6.4	1.2	ng/L	1		8270C	Total/NA
Acenaphthene - DL	700	B	26	2.3	ng/L	4		8270C	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-30464-1	MTKA6-062612	Water	06/26/12 09:10	06/27/12 09:45
280-30464-2	H6-062612	Water	06/26/12 09:55	06/27/12 09:45
280-30464-3	SLP16-062612	Water	06/26/12 11:20	06/27/12 09:45
280-30464-4	SLP6-062612	Water	06/26/12 11:50	06/27/12 09:45
280-30464-5	SLP13-062612	Water	06/26/12 12:15	06/27/12 09:45
280-30464-6	SLP14-062612	Water	06/26/12 12:20	06/27/12 09:45
280-30464-7	SLP10-062612	Water	06/26/12 12:55	06/27/12 09:45
280-30464-8	SLP10D-062612	Water	06/26/12 12:55	06/27/12 09:45
280-30464-9	SLP10FB-062612	Water	06/26/12 12:55	06/27/12 09:45
280-30464-10	SLP10T-062612	Water	06/26/12 13:30	06/27/12 09:45
280-30464-11	SLP10TEXTENDED-062612	Water	06/25/12 13:30	06/27/12 09:45
280-30464-12	SLP10TACID-062612	Water	06/25/12 13:30	06/27/12 09:45
280-30464-13	SLPFEED-062612	Water	06/25/12 13:45	06/27/12 09:45

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10-062612

Lab Sample ID: 280-30464-7

Date Collected: 06/26/12 12:55
Date Received: 06/27/12 09:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.72	ng/L		07/01/12 08:40	07/21/12 21:51	1
2,3-Dihydroindene	250		5.3	0.74	ng/L		07/01/12 08:40	07/21/12 21:51	1
1-Methylnaphthalene	110	B	6.0	0.95	ng/L		07/01/12 08:40	07/21/12 21:51	1
2-Methylnaphthalene	ND		6.3	1.0	ng/L		07/01/12 08:40	07/21/12 21:51	1
Acenaphthylene	75		5.1	0.82	ng/L		07/01/12 08:40	07/21/12 21:51	1
Acridine	ND	*	6.9	6.9	ng/L		07/01/12 08:40	07/21/12 21:51	1
Anthracene	5.9		4.5	0.85	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[a]anthracene	2.1	J	4.6	0.98	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[b]fluoranthene	ND		5.0	1.5	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo(b)thiophene	63		5.5	0.80	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		07/01/12 08:40	07/21/12 21:51	1
Benzo[g,h,i]perylene	ND		6.6	1.2	ng/L		07/01/12 08:40	07/21/12 21:51	1
Carbazole	34		4.0	0.77	ng/L		07/01/12 08:40	07/21/12 21:51	1
Chrysene	ND		6.0	1.3	ng/L		07/01/12 08:40	07/21/12 21:51	1
Dibenz(a,h)anthracene	ND		6.3	1.1	ng/L		07/01/12 08:40	07/21/12 21:51	1
Dibenzofuran	19	B	6.1	1.1	ng/L		07/01/12 08:40	07/21/12 21:51	1
Dibenzothiophene	34		4.4	1.0	ng/L		07/01/12 08:40	07/21/12 21:51	1
Fluoranthene	70		4.9	1.8	ng/L		07/01/12 08:40	07/21/12 21:51	1
Fluorene	200		4.4	0.90	ng/L		07/01/12 08:40	07/21/12 21:51	1
Indene	92		5.0	3.5	ng/L		07/01/12 08:40	07/21/12 21:51	1
Indole	ND		5.0	1.8	ng/L		07/01/12 08:40	07/21/12 21:51	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		07/01/12 08:40	07/21/12 21:51	1
Naphthalene	8.0	J	9.1	1.2	ng/L		07/01/12 08:40	07/21/12 21:51	1
Perylene	ND		4.0	4.0	ng/L		07/01/12 08:40	07/21/12 21:51	1
Phenanthrene	15		6.7	3.4	ng/L		07/01/12 08:40	07/21/12 21:51	1
Pyrene	90		4.5	1.1	ng/L		07/01/12 08:40	07/21/12 21:51	1
Quinoline	ND		9.6	6.0	ng/L		07/01/12 08:40	07/21/12 21:51	1
Biphenyl	5.3	J	8.0	1.1	ng/L		07/01/12 08:40	07/21/12 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*84*		*23 - 84*	*07/01/12 08:40*	*07/21/12 21:51*	*1*
Chrysene-d12 (Surr)	*55*		*28 - 101*	*07/01/12 08:40*	*07/21/12 21:51*	*1*
Naphthalene-d8 (Surr)	*80*		*22 - 97*	*07/01/12 08:40*	*07/21/12 21:51*	*1*

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	730	B	24	2.1	ng/L		07/01/12 08:40	07/24/12 11:26	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*70*	*D*	*23 - 84*	*07/01/12 08:40*	*07/24/12 11:26*	*4*
Chrysene-d12 (Surr)	*41*	*D*	*28 - 101*	*07/01/12 08:40*	*07/24/12 11:26*	*4*
Naphthalene-d8 (Surr)	*78*	*D*	*22 - 97*	*07/01/12 08:40*	*07/24/12 11:26*	*4*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10D-062612

Date Collected: 06/26/12 12:55
Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-8
Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.4	J	5.6	0.71	ng/L		07/01/12 08:40	07/21/12 23:37	1
2,3-Dihydroindene	260		5.2	0.73	ng/L		07/01/12 08:40	07/21/12 23:37	1
1-Methylnaphthalene	110	B	5.8	0.92	ng/L		07/01/12 08:40	07/21/12 23:37	1
2-Methylnaphthalene	ND		6.1	1.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Acenaphthylene	77		5.0	0.80	ng/L		07/01/12 08:40	07/21/12 23:37	1
Acridine	ND	*	6.8	6.8	ng/L		07/01/12 08:40	07/21/12 23:37	1
Anthracene	6.3		4.4	0.83	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[a]anthracene	2.0	J	4.5	0.96	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[a]pyrene	ND		2.8	1.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[b]fluoranthene	ND		4.9	1.4	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo(b)thiophene	65		5.4	0.78	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		07/01/12 08:40	07/21/12 23:37	1
Carbazole	33		3.9	0.75	ng/L		07/01/12 08:40	07/21/12 23:37	1
Chrysene	ND		5.8	1.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		07/01/12 08:40	07/21/12 23:37	1
Dibenzofuran	20	B	5.9	1.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Dibenzothiophene	34		4.3	1.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Fluoranthene	69		4.8	1.8	ng/L		07/01/12 08:40	07/21/12 23:37	1
Fluorene	210		4.3	0.88	ng/L		07/01/12 08:40	07/21/12 23:37	1
Indene	95		4.9	3.4	ng/L		07/01/12 08:40	07/21/12 23:37	1
Indole	ND		4.9	1.8	ng/L		07/01/12 08:40	07/21/12 23:37	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Naphthalene	9.5		8.9	1.2	ng/L		07/01/12 08:40	07/21/12 23:37	1
Perylene	ND		4.0	4.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Phenanthrene	14		6.5	3.3	ng/L		07/01/12 08:40	07/21/12 23:37	1
Pyrene	90		4.4	1.0	ng/L		07/01/12 08:40	07/21/12 23:37	1
Quinoline	ND		9.4	5.9	ng/L		07/01/12 08:40	07/21/12 23:37	1
Biphenyl	5.6	J	5.8	1.1	ng/L		07/01/12 08:40	07/21/12 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*86*	*X*	*23 - 84*	*07/01/12 08:40*	*07/21/12 23:37*	*1*
Chrysene-d12 (Surr)	*50*		*28 - 101*	*07/01/12 08:40*	*07/21/12 23:37*	*1*
Naphthalene-d8 (Surr)	*82*		*22 - 97*	*07/01/12 08:40*	*07/21/12 23:37*	*1*

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	780	B	24	2.1	ng/L		07/01/12 08:40	07/24/12 12:02	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*75*	*D*	*23 - 84*	*07/01/12 08:40*	*07/24/12 12:02*	*4*
Chrysene-d12 (Surr)	*44*	*D*	*28 - 101*	*07/01/12 08:40*	*07/24/12 12:02*	*4*
Naphthalene-d8 (Surr)	*84*	*D*	*22 - 97*	*07/01/12 08:40*	*07/24/12 12:02*	*4*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10FB-062612
Date Collected: 06/26/12 12:55
Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-9
Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.0	0.75	ng/L		07/01/12 08:40	07/22/12 00:12	1
2,3-Dihydroindene	**2.7**	**J**	5.5	0.77	ng/L		07/01/12 08:40	07/22/12 00:12	1
1-Methylnaphthalene	ND		6.2	0.99	ng/L		07/01/12 08:40	07/22/12 00:12	1
2-Methylnaphthalene	**1.2**	**J B**	6.5	1.1	ng/L		07/01/12 08:40	07/22/12 00:12	1
Acenaphthene	ND		6.3	0.55	ng/L		07/01/12 08:40	07/22/12 00:12	1
Acenaphthylene	ND		5.3	0.85	ng/L		07/01/12 08:40	07/22/12 00:12	1
Acridine	ND	*	7.2	7.2	ng/L		07/01/12 08:40	07/22/12 00:12	1
Anthracene	ND		4.6	0.89	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[a]anthracene	ND		4.8	1.0	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[a]pyrene	ND		2.8	1.4	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[e]pyrene	ND		4.8	1.3	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[b]fluoranthene	ND		5.2	1.5	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo(b)thiophene	ND		5.8	0.83	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[k]fluoranthene	ND		4.5	1.4	ng/L		07/01/12 08:40	07/22/12 00:12	1
Benzo[g,h,i]perylene	ND		6.9	1.3	ng/L		07/01/12 08:40	07/22/12 00:12	1
Carbazole	ND		4.2	0.80	ng/L		07/01/12 08:40	07/22/12 00:12	1
Chrysene	ND		6.2	1.4	ng/L		07/01/12 08:40	07/22/12 00:12	1
Dibenz(a,h)anthracene	ND		6.5	1.2	ng/L		07/01/12 08:40	07/22/12 00:12	1
Dibenzofuran	ND		6.3	1.1	ng/L		07/01/12 08:40	07/22/12 00:12	1
Dibenzothiophene	ND		4.5	1.1	ng/L		07/01/12 08:40	07/22/12 00:12	1
Fluoranthene	ND		5.1	1.9	ng/L		07/01/12 08:40	07/22/12 00:12	1
Fluorene	ND		4.5	0.94	ng/L		07/01/12 08:40	07/22/12 00:12	1
Indene	ND		5.2	3.6	ng/L		07/01/12 08:40	07/22/12 00:12	1
Indole	ND		5.2	1.9	ng/L		07/01/12 08:40	07/22/12 00:12	1
Indeno[1,2,3-cd]pyrene	ND		6.0	1.4	ng/L		07/01/12 08:40	07/22/12 00:12	1
Naphthalene	**5.3**	**J**	9.5	1.3	ng/L		07/01/12 08:40	07/22/12 00:12	1
Perylene	ND		4.2	4.2	ng/L		07/01/12 08:40	07/22/12 00:12	1
Phenanthrene	ND		7.0	3.6	ng/L		07/01/12 08:40	07/22/12 00:12	1
Pyrene	ND		4.6	1.1	ng/L		07/01/12 08:40	07/22/12 00:12	1
Quinoline	ND		10	6.3	ng/L		07/01/12 08:40	07/22/12 00:12	1
Biphenyl	ND		6.2	1.2	ng/L		07/01/12 08:40	07/22/12 00:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*85*	*X*	*23 - 84*	*07/01/12 08:40*	*07/22/12 00:12*	*1*
Chrysene-d12 (Surr)	*87*		*28 - 101*	*07/01/12 08:40*	*07/22/12 00:12*	*1*
Naphthalene-d8 (Surr)	*85*		*22 - 97*	*07/01/12 08:40*	*07/22/12 00:12*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10T-062612
Date Collected: 06/26/12 13:30
Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-10
Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.3	0.80	ng/L		07/01/12 08:40	07/22/12 00:48	1
2,3-Dihydroindene	44		5.9	0.82	ng/L		07/01/12 08:40	07/22/12 00:48	1
1-Methylnaphthalene	6.1	J B	6.6	1.0	ng/L		07/01/12 08:40	07/22/12 00:48	1
2-Methylnaphthalene	ND		6.9	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Acenaphthene	31	B	6.7	0.59	ng/L		07/01/12 08:40	07/22/12 00:48	1
Acenaphthylene	1.6	J	5.6	0.90	ng/L		07/01/12 08:40	07/22/12 00:48	1
Acridine	ND	*	7.6	7.6	ng/L		07/01/12 08:40	07/22/12 00:48	1
Anthracene	ND		4.9	0.94	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[a]anthracene	ND		5.1	1.1	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[a]pyrene	ND		2.9	1.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[e]pyrene	ND		5.1	1.3	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[b]fluoranthene	ND		5.5	1.6	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo(b)thiophene	3.8	J	6.1	0.88	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[k]fluoranthene	ND		4.8	1.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Benzo[g,h,i]perylene	ND		7.3	1.4	ng/L		07/01/12 08:40	07/22/12 00:48	1
Carbazole	ND		4.5	0.85	ng/L		07/01/12 08:40	07/22/12 00:48	1
Chrysene	ND		6.6	1.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Dibenz(a,h)anthracene	ND		6.9	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Dibenzofuran	ND		6.7	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Dibenzothiophene	ND		4.8	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Fluoranthene	ND		5.4	2.0	ng/L		07/01/12 08:40	07/22/12 00:48	1
Fluorene	2.6	J	4.8	1.0	ng/L		07/01/12 08:40	07/22/12 00:48	1
Indene	ND		5.5	3.9	ng/L		07/01/12 08:40	07/22/12 00:48	1
Indole	ND		5.5	2.0	ng/L		07/01/12 08:40	07/22/12 00:48	1
Indeno[1,2,3-cd]pyrene	ND		6.3	1.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Naphthalene	3.6	J	10	1.3	ng/L		07/01/12 08:40	07/22/12 00:48	1
Perylene	ND		4.5	4.5	ng/L		07/01/12 08:40	07/22/12 00:48	1
Phenanthrene	ND		7.4	3.8	ng/L		07/01/12 08:40	07/22/12 00:48	1
Pyrene	ND		4.9	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1
Quinoline	ND		11	6.6	ng/L		07/01/12 08:40	07/22/12 00:48	1
Biphenyl	ND		6.6	1.2	ng/L		07/01/12 08:40	07/22/12 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*86*	*X*	*23 - 84*	*07/01/12 08:40*	*07/22/12 00:48*	*1*
Chrysene-d12 (Surr)	*50*		*28 - 101*	*07/01/12 08:40*	*07/22/12 00:48*	*1*
Naphthalene-d8 (Surr)	*87*		*22 - 97*	*07/01/12 08:40*	*07/22/12 00:48*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10TEXTENDED-062612

Lab Sample ID: 280-30464-11

Date Collected: 06/25/12 13:30
Matrix: Water
Date Received: 06/27/12 09:45

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.9	0.75	ng/L		07/01/12 08:40	07/22/12 01:23	1
2,3-Dihydroindene	**46**		5.5	0.77	ng/L		07/01/12 08:40	07/22/12 01:23	1
1-Methylnaphthalene	**6.2**	**B**	6.2	0.98	ng/L		07/01/12 08:40	07/22/12 01:23	1
2-Methylnaphthalene	ND		6.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
3-Methylcholanthrene	ND		5.5	5.5	ng/L		07/01/12 08:40	07/22/12 01:23	1
Acenaphthene	**32**	**B**	6.3	0.55	ng/L		07/01/12 08:40	07/22/12 01:23	1
Acenaphthylene	**1.7**	**J**	5.3	0.85	ng/L		07/01/12 08:40	07/22/12 01:23	1
Acridine	ND	*	7.1	7.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Anthracene	ND		4.6	0.88	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[a]anthracene	ND		4.7	1.0	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[a]pyrene	ND		2.7	1.4	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[e]pyrene	ND		4.7	1.3	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[b]fluoranthene	ND		5.2	1.5	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo(b)thiophene	**3.8**	**J**	5.7	0.82	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[k]fluoranthene	ND		4.5	1.4	ng/L		07/01/12 08:40	07/22/12 01:23	1
Benzo[g,h,i]perylene	ND		6.8	1.3	ng/L		07/01/12 08:40	07/22/12 01:23	1
Carbazole	ND		4.2	0.79	ng/L		07/01/12 08:40	07/22/12 01:23	1
Chrysene	ND		6.2	1.4	ng/L		07/01/12 08:40	07/22/12 01:23	1
Dibenz(a,h)anthracene	ND		6.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Dibenzofuran	ND		6.3	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Dibenzothiophene	ND		4.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Fluoranthene	ND		5.1	1.9	ng/L		07/01/12 08:40	07/22/12 01:23	1
Fluorene	**2.6**	**J**	4.5	0.93	ng/L		07/01/12 08:40	07/22/12 01:23	1
Indene	**3.6**	**J**	5.2	3.6	ng/L		07/01/12 08:40	07/22/12 01:23	1
Indole	ND		5.2	1.9	ng/L		07/01/12 08:40	07/22/12 01:23	1
Indeno[1,2,3-cd]pyrene	ND		5.9	1.4	ng/L		07/01/12 08:40	07/22/12 01:23	1
Naphthalene	**3.8**	**J**	9.5	1.3	ng/L		07/01/12 08:40	07/22/12 01:23	1
Perylene	ND		4.2	4.2	ng/L		07/01/12 08:40	07/22/12 01:23	1
Phenanthrene	ND		6.9	3.5	ng/L		07/01/12 08:40	07/22/12 01:23	1
Pyrene	ND		4.6	1.1	ng/L		07/01/12 08:40	07/22/12 01:23	1
Quinoline	ND		9.9	6.2	ng/L		07/01/12 08:40	07/22/12 01:23	1
7,12-Dimethylbenz(a)anthracene	ND		3.1	2.5	ng/L		07/01/12 08:40	07/22/12 01:23	1
Biphenyl	ND		6.2	1.2	ng/L		07/01/12 08:40	07/22/12 01:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*87*	*X*	*23 - 84*	*07/01/12 08:40*	*07/22/12 01:23*	*1*
Chrysene-d12 (Surr)	*52*		*28 - 101*	*07/01/12 08:40*	*07/22/12 01:23*	*1*
Naphthalene-d8 (Surr)	*88*		*22 - 97*	*07/01/12 08:40*	*07/22/12 01:23*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10TACID-062612
Date Collected: 06/25/12 13:30
Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-12
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		9.5	1.9	ug/L		06/28/12 15:05	07/03/12 18:11	1
2-Chlorophenol	ND		9.5	1.9	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dimethylphenol	ND		9.5	0.55	ug/L		06/28/12 15:05	07/03/12 18:11	1
2-Nitrophenol	ND		19	0.37	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dichlorophenol	ND		9.5	0.61	ug/L		06/28/12 15:05	07/03/12 18:11	1
4-Chloro-3-methylphenol	ND		19	2.3	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4,6-Trichlorophenol	ND		19	0.28	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dinitrophenol	ND		57	9.5	ug/L		06/28/12 15:05	07/03/12 18:11	1
4-Nitrophenol	ND		48	1.2	ug/L		06/28/12 15:05	07/03/12 18:11	1
4,6-Dinitro-2-methylphenol	ND		57	3.8	ug/L		06/28/12 15:05	07/03/12 18:11	1
Pentachlorophenol	ND		57	19	ug/L		06/28/12 15:05	07/03/12 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*85*		*51 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*
Phenol-d5	*88*		*51 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*
Nitrobenzene-d5	*88*		*48 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*
2-Fluorobiphenyl	*73*		*38 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*
Terphenyl-d14	*98*		*50 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLPFEED-062612

Date Collected: 06/25/12 13:45
Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-13
Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.3	J	6.2	0.78	ng/L		07/01/12 08:40	07/22/12 01:58	1
2,3-Dihydroindene	280		5.7	0.80	ng/L		07/01/12 08:40	07/22/12 01:58	1
1-Methylnaphthalene	110	B	6.4	1.0	ng/L		07/01/12 08:40	07/22/12 01:58	1
2-Methylnaphthalene	ND		6.8	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Acenaphthylene	50		5.5	0.88	ng/L		07/01/12 08:40	07/22/12 01:58	1
Acridine	ND	*	7.5	7.5	ng/L		07/01/12 08:40	07/22/12 01:58	1
Anthracene	2.1	J	4.8	0.92	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[a]anthracene	ND		4.9	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[e]pyrene	ND		4.9	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo(b)thiophene	70		6.0	0.86	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[g,h,i]perylene	ND		7.1	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Carbazole	22		4.4	0.83	ng/L		07/01/12 08:40	07/22/12 01:58	1
Chrysene	ND		6.4	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenz(a,h)anthracene	ND		6.8	1.2	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenzofuran	22	B	6.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenzothiophene	33		4.7	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Fluoranthene	63		5.3	1.9	ng/L		07/01/12 08:40	07/22/12 01:58	1
Fluorene	220		4.7	0.98	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indene	69		5.4	3.8	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indole	ND		5.4	2.0	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Naphthalene	9.4	J	9.9	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Perylene	ND		4.4	4.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Phenanthrene	15		7.2	3.7	ng/L		07/01/12 08:40	07/22/12 01:58	1
Pyrene	56		4.8	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Quinoline	ND		10	6.5	ng/L		07/01/12 08:40	07/22/12 01:58	1
Biphenyl	6.1	J	6.4	1.2	ng/L		07/01/12 08:40	07/22/12 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*91*	*X*	*23 - 84*	*07/01/12 08:40*	*07/22/12 01:58*	*1*
Chrysene-d12 (Surr)	*50*		*28 - 101*	*07/01/12 08:40*	*07/22/12 01:58*	*1*
Naphthalene-d8 (Surr)	*90*		*22 - 97*	*07/01/12 08:40*	*07/22/12 01:58*	*1*

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	700	B	26	2.3	ng/L		07/01/12 08:40	07/24/12 12:37	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*85*	*D*	*23 - 84*	*07/01/12 08:40*	*07/24/12 12:37*	*4*
Chrysene-d12 (Surr)	*42*	*D*	*28 - 101*	*07/01/12 08:40*	*07/24/12 12:37*	*4*
Naphthalene-d8 (Surr)	*97*	*D*	*22 - 97*	*07/01/12 08:40*	*07/24/12 12:37*	*4*

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water — Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FD10	sene-d12 (S	thalene-d8
Lab Sample ID	Client Sample ID	(23-84)	(28-101)	(22-97)
280-30464-1	MTKA6-062612	87 X	52	87
280-30464-2	H6-062612	81	39	83
280-30464-3	SLP16-062612	83	43	86
280-30464-4	SLP6-062612	88 X	43	85
280-30464-5	SLP13-062612	75	59	81
280-30464-6	SLP14-062612	75	38	76
280-30464-7	SLP10-062612	84	55	80
280-30464-7 - DL	SLP10-062612	70 D	41 D	78 D
280-30464-7 MS	SLP10-062612	89 X	62	86
280-30464-7 MSD	SLP10-062612	88 X	47	85
280-30464-8	SLP10D-062612	86 X	50	82
280-30464-8 - DL	SLP10D-062612	75 D	44 D	84 D
280-30464-9	SLP10FB-062612	85 X	87	85
280-30464-10	SLP10T-062612	86 X	50	87
280-30464-11	SLP10TEXTENDED-062612	87 X	52	88
280-30464-13	SLPFEED-062612	91 X	50	90
280-30464-13 - DL	SLPFEED-062612	85 D	42 D	97 D
LCS 280-126003/2-A	Lab Control Sample	81	98	85
LCS 280-126251/2-A	Lab Control Sample	82	100	91
MB 280-126003/1-A	Method Blank	75	83	83
MB 280-126251/1-A	Method Blank	79	92	90

Surrogate Legend

FD10 = Fluorene-d10 (Surr)
Chrysene-d12 (Surr) = Chrysene-d12 (Surr)
Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water — Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	PHL	NBZ	FBP	TBP	TPH
Lab Sample ID	Client Sample ID	(51-120)	(51-120)	(48-120)	(38-120)	(57-120)	(50-120)
280-30464-12	SLP10TACID-062612	85	88	88	73		98
LCS 280-125974/2-A	Lab Control Sample	78	83	83	65	111	92
LCSD 280-125974/3-A	Lab Control Sample Dup	78	83	83	60	110	95
MB 280-125974/1-A	Method Blank	79	83	79	51	102	97

Surrogate Legend

2FP = 2-Fluorophenol
PHL = Phenol-d5
NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TBP = 2,4,6-Tribromophenol
TPH = Terphenyl-d14

QC Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-125974/1-A
Matrix: Water
Analysis Batch: 126613

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 125974

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		10	2.0	ug/L		06/28/12 15:05	07/03/12 13:00	1
2-Chlorophenol	ND		10	2.0	ug/L		06/28/12 15:05	07/03/12 13:00	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		06/28/12 15:05	07/03/12 13:00	1
2-Nitrophenol	ND		20	0.39	ug/L		06/28/12 15:05	07/03/12 13:00	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		06/28/12 15:05	07/03/12 13:00	1
4-Chloro-3-methylphenol	ND		20	2.4	ug/L		06/28/12 15:05	07/03/12 13:00	1
2,4,6-Trichlorophenol	ND		20	0.29	ug/L		06/28/12 15:05	07/03/12 13:00	1
2,4-Dinitrophenol	ND		60	10	ug/L		06/28/12 15:05	07/03/12 13:00	1
4-Nitrophenol	ND		50	1.2	ug/L		06/28/12 15:05	07/03/12 13:00	1
4,6-Dinitro-2-methylphenol	ND		60	4.0	ug/L		06/28/12 15:05	07/03/12 13:00	1
Pentachlorophenol	ND		60	20	ug/L		06/28/12 15:05	07/03/12 13:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*79*		*51 - 120*	*06/28/12 15:05*	*07/03/12 13:00*	*1*
Phenol-d5	*83*		*51 - 120*	*06/28/12 15:05*	*07/03/12 13:00*	*1*
Nitrobenzene-d5	*79*		*48 - 120*	*06/28/12 15:05*	*07/03/12 13:00*	*1*
2-Fluorobiphenyl	*51*		*38 - 120*	*06/28/12 15:05*	*07/03/12 13:00*	*1*
Terphenyl-d14	*97*		*50 - 120*	*06/28/12 15:05*	*07/03/12 13:00*	*1*

Lab Sample ID: LCS 280-125974/2-A
Matrix: Water
Analysis Batch: 126613

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	80.0	67.4		ug/L		84	61 - 120
2-Chlorophenol	80.0	65.0		ug/L		81	58 - 120
1,4-Dichlorobenzene	80.0	40.5		ug/L		51	25 - 120
2-Methylphenol	80.0	65.4		ug/L		82	62 - 120
N-Nitrosodi-n-propylamine	80.0	69.8		ug/L		87	58 - 120
1,2,4-Trichlorobenzene	80.0	42.1		ug/L		53	28 - 120
4-Chloro-3-methylphenol	80.0	76.3		ug/L		95	69 - 120
2-Methylnaphthalene	80.0	51.0		ug/L		64	42 - 120
2,4,6-Trichlorophenol	80.0	73.0		ug/L		91	62 - 120
Acenaphthene	80.0	82.5		ug/L		78	61 - 120
4-Nitrophenol	80.0	88.3		ug/L		110	59 - 129
2,4-Dinitrotoluene	80.0	82.7		ug/L		103	76 - 120
Pentachlorophenol	80.0	75.4		ug/L		94	57 - 120
Anthracene	80.0	72.7		ug/L		91	71 - 120
Carbazole	80.0	74.7		ug/L		93	72 - 120
Pyrene	80.0	71.1		ug/L		89	71 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol	*78*		*51 - 120*
Phenol-d5	*83*		*51 - 120*
Nitrobenzene-d5	*83*		*48 - 120*
2-Fluorobiphenyl	*65*		*38 - 120*
2,4,6-Tribromophenol	*111*		*57 - 120*
Terphenyl-d14	*92*		*50 - 120*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-125974/3-A
Matrix: Water
Analysis Batch: 126613

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 125974

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	80.0	66.8		ug/L		84	61 - 120	1	42
2-Chlorophenol	80.0	64.8		ug/L		81	58 - 120	0	30
1,4-Dichlorobenzene	80.0	35.8		ug/L		45	25 - 120	12	52
2-Methylphenol	80.0	65.6		ug/L		82	62 - 120	0	30
N-Nitrosodi-n-propylamine	80.0	67.5		ug/L		84	58 - 120	3	30
1,2,4-Trichlorobenzene	80.0	36.3		ug/L		45	28 - 120	15	42
4-Chloro-3-methylphenol	80.0	74.8		ug/L		93	69 - 120	2	30
2-Methylnaphthalene	80.0	41.9		ug/L		52	42 - 120	20	32
2,4,6-Trichlorophenol	80.0	70.8		ug/L		89	62 - 120	3	30
Acenaphthene	80.0	56.8		ug/L		71	61 - 120	10	30
4-Nitrophenol	80.0	87.7		ug/L		110	59 - 129	1	35
2,4-Dinitrotoluene	80.0	83.8		ug/L		105	76 - 120	1	32
Pentachlorophenol	80.0	75.8		ug/L		95	57 - 120	1	33
Anthracene	80.0	73.3		ug/L		92	71 - 120	1	30
Carbazole	80.0	76.8		ug/L		96	72 - 120	3	30
Pyrene	80.0	72.2		ug/L		90	71 - 120	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol	*78*		*51 - 120*
Phenol-d5	*83*		*51 - 120*
Nitrobenzene-d5	*83*		*48 - 120*
2-Fluorobiphenyl	*60*		*38 - 120*
2,4,6-Tribromophenol	*110*		*57 - 120*
Terphenyl-d14	*95*		*50 - 120*

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-126003/1-A
Matrix: Water
Analysis Batch: 129031

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 126003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		06/28/12 18:05	07/20/12 16:27	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		06/28/12 18:05	07/20/12 16:27	1
1-Methylnaphthalene	1.60	J	5.6	0.89	ng/L		06/28/12 18:05	07/20/12 16:27	1
2-Methylnaphthalene	1.94	J	5.9	0.98	ng/L		06/28/12 18:05	07/20/12 16:27	1
3-Methylcholanthrene	ND		5.0	5.0	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acenaphthene	0.855	J	5.7	0.50	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acenaphthylene	ND		4.8	0.77	ng/L		06/28/12 18:05	07/20/12 16:27	1
Acridine	ND		6.5	6.5	ng/L		06/28/12 18:05	07/20/12 16:27	1
Anthracene	2.00	J	4.2	0.80	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[a]anthracene	16.9		4.3	0.92	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[a]pyrene	12.3		2.5	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[b]fluoranthene	15.1		4.7	1.4	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[k]fluoranthene	18.8		4.1	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Benzo[g,h,i]perylene	9.38		6.2	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Carbazole	0.795	J	3.8	0.72	ng/L		06/28/12 18:05	07/20/12 16:27	1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: MB 280-126003/1-A
Matrix: Water
Analysis Batch: 129031

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 126003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	14.2		5.6	1.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenz(a,h)anthracene	11.8		5.9	1.0	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenzofuran	0.994	J	5.7	0.99	ng/L		06/28/12 18:05	07/20/12 16:27	1
Dibenzothiophene	ND		4.1	0.98	ng/L		06/28/12 18:05	07/20/12 16:27	1
Fluoranthene	2.27	J	4.6	1.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
Fluorene	ND		4.1	0.85	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indene	ND		4.7	3.3	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indole	ND		4.7	1.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
Indeno[1,2,3-cd]pyrene	16.1		5.4	1.3	ng/L		06/28/12 18:05	07/20/12 16:27	1
Naphthalene	1.35	J	8.6	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1
Perylene	ND		3.8	3.8	ng/L		06/28/12 18:05	07/20/12 16:27	1
Phenanthrene	ND		6.3	3.2	ng/L		06/28/12 18:05	07/20/12 16:27	1
Pyrene	2.03	J	4.2	0.99	ng/L		06/28/12 18:05	07/20/12 16:27	1
Quinoline	ND		9.0	5.7	ng/L		06/28/12 18:05	07/20/12 16:27	1
7,12-Dimethylbenz(a)anthracene	ND		2.8	2.3	ng/L		06/28/12 18:05	07/20/12 16:27	1
Biphenyl	ND		5.6	1.1	ng/L		06/28/12 18:05	07/20/12 16:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*75*		*23 - 84*	*06/28/12 18:05*	*07/20/12 16:27*	*1*
Chrysene-d12 (Surr)	*83*		*28 - 101*	*06/28/12 18:05*	*07/20/12 16:27*	*1*
Naphthalene-d8 (Surr)	*83*		*22 - 97*	*06/28/12 18:05*	*07/20/12 16:27*	*1*

Lab Sample ID: LCS 280-126003/2-A
Matrix: Water
Analysis Batch: 129031

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 126003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	63.2		ng/L		84	30 - 150
2,3-Dihydroindene	75.0	57.5		ng/L		77	30 - 150
1-Methylnaphthalene	75.0	63.4		ng/L		85	30 - 150
2-Methylnaphthalene	75.0	63.4		ng/L		85	25 - 95
3-Methylcholanthrene	75.0	28.4		ng/L		38	30 - 150
Acenaphthene	75.0	65.0		ng/L		87	30 - 150
Acenaphthylene	75.0	63.4		ng/L		85	30 - 150
Acridine	75.0	ND	*	ng/L		8	30 - 150
Anthracene	75.0	63.3		ng/L		84	30 - 150
Benzo[a]anthracene	75.0	75.3		ng/L		100	30 - 150
Benzo[a]pyrene	75.0	64.9		ng/L		87	30 - 150
Benzo[e]pyrene	75.0	68.1		ng/L		91	37 - 105
Benzo[b]fluoranthene	75.0	73.4		ng/L		98	30 - 150
Benzo(b)thiophene	75.0	64.3		ng/L		66	30 - 150
Benzo[k]fluoranthene	75.0	72.6		ng/L		97	30 - 150
Benzo[g,h,i]perylene	75.0	64.3		ng/L		86	30 - 150
Carbazole	75.0	64.7		ng/L		66	30 - 150
Chrysene	75.0	74.6		ng/L		99	20 - 136
Dibenz(a,h)anthracene	75.0	66.3		ng/L		88	30 - 150
Dibenzofuran	75.0	65.0		ng/L		87	30 - 150
Dibenzothiophene	75.0	65.4		ng/L		87	30 - 150
Fluoranthene	75.0	63.8		ng/L		85	30 - 150

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-126003/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 129031 — **Prep Batch: 126003**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	75.0	86.1		ng/L		88	34 - 96
Indene	75.0	60.4		ng/L		80	22 - 86
Indole	75.0	55.5		ng/L		74	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	83.5		ng/L		85	30 - 150
Naphthalene	75.0	63.9		ng/L		85	27 - 95
Perylene	75.0	64.7		ng/L		86	30 - 150
Phenanthrene	75.0	64.0		ng/L		85	30 - 150
Pyrene	75.0	58.1		ng/L		77	30 - 150
Quinoline	75.0	53.4		ng/L		71	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	41.4		ng/L		55	30 - 150
Biphenyl	75.0	63.7		ng/L		85	30 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*81*		*23 - 84*
Chrysene-d12 (Surr)	*98*		*28 - 101*
Naphthalene-d8 (Surr)	*85*		*22 - 97*

Lab Sample ID: MB 280-126251/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 129124 — **Prep Batch: 126251**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		07/01/12 08:40	07/21/12 15:53	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		07/01/12 08:40	07/21/12 15:53	1
1-Methylnaphthalene	1.34	J	5.6	0.89	ng/L		07/01/12 08:40	07/21/12 15:53	1
2-Methylnaphthalene	1.77	J	5.9	0.98	ng/L		07/01/12 08:40	07/21/12 15:53	1
3-Methylcholanthrene	ND		5.0	5.0	ng/L		07/01/12 08:40	07/21/12 15:53	1
Acenaphthene	0.908	J	5.7	0.50	ng/L		07/01/12 08:40	07/21/12 15:53	1
Acenaphthylene	ND		4.8	0.77	ng/L		07/01/12 08:40	07/21/12 15:53	1
Acridine	ND		6.5	6.5	ng/L		07/01/12 08:40	07/21/12 15:53	1
Anthracene	ND		4.2	0.80	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Benzo[g,h,i]perylene	ND		6.2	1.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Carbazole	ND		3.8	0.72	ng/L		07/01/12 08:40	07/21/12 15:53	1
Chrysene	ND		5.6	1.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		07/01/12 08:40	07/21/12 15:53	1
Dibenzofuran	1.37	J	5.7	0.99	ng/L		07/01/12 08:40	07/21/12 15:53	1
Dibenzothiophene	ND		4.1	0.98	ng/L		07/01/12 08:40	07/21/12 15:53	1
Fluoranthene	ND		4.6	1.7	ng/L		07/01/12 08:40	07/21/12 15:53	1
Fluorene	ND		4.1	0.85	ng/L		07/01/12 08:40	07/21/12 15:53	1
Indene	ND		4.7	3.3	ng/L		07/01/12 08:40	07/21/12 15:53	1
Indole	ND		4.7	1.7	ng/L		07/01/12 08:40	07/21/12 15:53	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		07/01/12 08:40	07/21/12 15:53	1
Naphthalene	ND		8.6	1.1	ng/L		07/01/12 08:40	07/21/12 15:53	1

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: MB 280-126251/1-A
Matrix: Water
Analysis Batch: 129124

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 126251

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perylene	ND		3.8	3.8	ng/L		07/01/12 08:40	07/21/12 15:53	1
Phenanthrene	ND		6.3	3.2	ng/L		07/01/12 08:40	07/21/12 15:53	1
Pyrene	ND		4.2	0.99	ng/L		07/01/12 08:40	07/21/12 15:53	1
Quinoline	ND		9.0	5.7	ng/L		07/01/12 08:40	07/21/12 15:53	1
7,12-Dimethylbenz(a)anthracene	ND		2.8	2.3	ng/L		07/01/12 08:40	07/21/12 15:53	1
Biphenyl	ND		5.6	1.1	ng/L		07/01/12 08:40	07/21/12 15:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*79*		*23 - 84*	*07/01/12 08:40*	*07/21/12 15:53*	*1*
Chrysene-d12 (Surr)	*92*		*28 - 101*	*07/01/12 08:40*	*07/21/12 15:53*	*1*
Naphthalene-d8 (Surr)	*90*		*22 - 97*	*07/01/12 08:40*	*07/21/12 15:53*	*1*

Lab Sample ID: LCS 280-126251/2-A
Matrix: Water
Analysis Batch: 129124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 126251

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	67.2		ng/L		90	30 - 150
2,3-Dihydroindene	75.0	62.5		ng/L		83	30 - 150
1-Methylnaphthalene	75.0	67.5		ng/L		90	30 - 150
2-Methylnaphthalene	75.0	67.9		ng/L		91	25 - 95
3-Methylcholanthrene	75.0	47.2		ng/L		63	30 - 150
Acenaphthene	75.0	66.5		ng/L		89	30 - 150
Acenaphthylene	75.0	61.1		ng/L		81	30 - 150
Acridine	75.0	21.0	*	ng/L		28	30 - 150
Anthracene	75.0	60.9		ng/L		81	30 - 150
Benzo[e]anthracene	75.0	62.5		ng/L		83	30 - 150
Benzo[a]pyrene	75.0	61.5		ng/L		82	30 - 150
Benzo[e]pyrene	75.0	69.9		ng/L		93	37 - 105
Benzo[b]fluoranthene	75.0	72.3		ng/L		96	30 - 150
Benzo(b)thiophene	75.0	68.5		ng/L		91	30 - 150
Benzo[k]fluoranthene	75.0	73.8		ng/L		98	30 - 150
Benzo[g,h,i]perylene	75.0	66.3		ng/L		88	30 - 150
Carbazole	75.0	60.6		ng/L		81	30 - 150
Chrysene	75.0	78.2		ng/L		104	20 - 136
Dibenz(a,h)anthracene	75.0	69.9		ng/L		93	30 - 150
Dibenzofuran	75.0	68.3		ng/L		91	30 - 150
Dibenzothiophene	75.0	66.2		ng/L		88	30 - 150
Fluoranthene	75.0	58.1		ng/L		78	30 - 150
Fluorene	75.0	66.4		ng/L		89	34 - 96
Indene	75.0	64.4		ng/L		86	22 - 86
Indole	75.0	60.1		ng/L		80	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	63.6		ng/L		85	30 - 150
Naphthalene	75.0	68.1		ng/L		91	27 - 95
Perylene	75.0	71.4		ng/L		95	30 - 150
Phenanthrene	75.0	65.2		ng/L		87	30 - 150
Pyrene	75.0	53.2		ng/L		71	30 - 150
Quinoline	75.0	50.4		ng/L		67	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	38.8		ng/L		52	30 - 150

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-126251/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 129124 — **Prep Batch: 126251**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biphenyl			75.0	66.0		ng/L		88	30 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*82*		*23 - 84*
Chrysene-d12 (Surr)	*100*		*28 - 101*
Naphthalene-d8 (Surr)	*91*		*22 - 97*

Lab Sample ID: 280-30464-7 MS — **Client Sample ID: SLP10-062612**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 129124 — **Prep Batch: 126251**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		78.7	67.5		ng/L		86	30 - 150
2,3-Dihydroindene	250		78.7	330	E	ng/L		105	30 - 150
1-Methylnaphthalene	110	B	78.7	186		ng/L		101	30 - 150
2-Methylnaphthalene	ND		78.7	70.1		ng/L		89	25 - 95
3-Methylcholanthrene	ND		78.7	13.7	F	ng/L		17	30 - 150
Acenaphthene	790		78.7	900	E 4	ng/L		140	30 - 150
Acenaphthylene	75		78.7	170		ng/L		121	30 - 150
Acridine	ND	*	78.7	63.5		ng/L		81	30 - 150
Anthracene	5.9		78.7	92.0		ng/L		109	30 - 150
Benzo[a]anthracene	2.1	J	78.7	64.0		ng/L		79	30 - 150
Benzo[a]pyrene	ND		78.7	12.1	F	ng/L		15	30 - 150
Benzo[e]pyrene	ND		78.7	10.8	F	ng/L		14	37 - 105
Benzo[b]fluoranthene	ND		78.7	13.0	F	ng/L		17	30 - 150
Benzo(b)thiophene	63		78.7	136		ng/L		93	30 - 150
Benzo[k]fluoranthene	ND		78.7	13.0	F	ng/L		16	30 - 150
Benzo[g,h,i]perylene	ND		78.7	3.88	J F	ng/L		5	30 - 150
Carbazole	34		78.7	125		ng/L		116	30 - 150
Chrysene	ND		78.7	48.8		ng/L		62	20 - 136
Dibenz(a,h)anthracene	ND		78.7	3.93	J F	ng/L		5	30 - 150
Dibenzofuran	19	B	78.7	92.2		ng/L		92	30 - 150
Dibenzothiophene	34		78.7	107		ng/L		93	30 - 150
Fluoranthene	70		78.7	148		ng/L		99	30 - 150
Fluorene	200		78.7	292	F	ng/L		112	34 - 96
Indene	92		78.7	166	F	ng/L		96	22 - 86
Indole	ND		78.7	65.6		ng/L		83	30 - 150
Indeno[1,2,3-cd]pyrene	ND		78.7	4.34	J F	ng/L		6	30 - 150
Naphthalene	8.0	J	78.7	76.9		ng/L		88	27 - 95
Perylene	ND		78.7	11.0	F	ng/L		14	30 - 150
Phenanthrene	15		78.7	82.7		ng/L		87	30 - 150
Pyrene	90		78.7	163		ng/L		92	30 - 150
Quinoline	ND		78.7	80.7		ng/L		103	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		78.7	90.2		ng/L		115	30 - 150
Biphenyl	5.3	J	78.7	73.6		ng/L		87	30 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*89*	*X*	*23 - 84*
Chrysene-d12 (Surr)	*62*		*28 - 101*

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-30464-7 MS
Matrix: Water
Analysis Batch: 129124

Client Sample ID: SLP10-062612
Prep Type: Total/NA
Prep Batch: 126251

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Naphthalene-d8 (Surr)	*86*		*22 - 97*

Lab Sample ID: 280-30464-7 MSD
Matrix: Water
Analysis Batch: 129124

Client Sample ID: SLP10-062612
Prep Type: Total/NA
Prep Batch: 126251

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3-Benzofuran	ND		82.5	68.2		ng/L		83	30 - 150	1	50
2,3-Dihydroindene	250		82.5	332	E	ng/L		101	30 - 150	0	50
1-Methylnaphthalene	110	B	82.5	189		ng/L		100	30 - 150	2	50
2-Methylnaphthalene	ND		82.5	71.6		ng/L		87	25 - 95	2	50
3-Methylcholanthrene	ND		82.5	9.83	F	ng/L		12	30 - 150	33	50
Acenaphthene	790		82.5	916	E 4	ng/L		153	30 - 150	2	50
Acenaphthylene	75		82.5	176		ng/L		123	30 - 150	3	50
Acridine	ND	*	82.5	47.1		ng/L		57	30 - 150	30	50
Anthracene	5.9		82.5	95.4		ng/L		109	30 - 150	4	50
Benzo[a]anthracene	2.1	J	82.5	47.5		ng/L		55	30 - 150	30	50
Benzo[a]pyrene	ND		82.5	9.16	F	ng/L		11	30 - 150	28	50
Benzo[e]pyrene	ND		82.5	8.07	F	ng/L		10	37 - 105	29	50
Benzo[b]fluoranthene	ND		82.5	10.3	F	ng/L		12	30 - 150	24	50
Benzo(b)thiophene	63		82.5	140		ng/L		94	30 - 150	3	50
Benzo[k]fluoranthene	ND		82.5	9.87	F	ng/L		12	30 - 150	27	50
Benzo[g,h,i]perylene	ND		82.5	3.42	J F	ng/L		4	30 - 150	13	50
Carbazole	34		82.5	126		ng/L		112	30 - 150	1	50
Chrysene	ND		82.5	38.4		ng/L		47	20 - 136	24	50
Dibenz(a,h)anthracene	ND		82.5	3.17	J F	ng/L		4	30 - 150	21	50
Dibenzofuran	19	B	82.5	95.5		ng/L		92	30 - 150	3	50
Dibenzothiophene	34		82.5	110		ng/L		92	30 - 150	3	50
Fluoranthene	70		82.5	145		ng/L		91	30 - 150	2	50
Fluorene	200		82.5	297	F	ng/L		112	34 - 96	2	50
Indene	92		82.5	170	F	ng/L		95	22 - 88	1	50
Indole	ND		82.5	68.0		ng/L		82	30 - 150	3	50
Indeno[1,2,3-cd]pyrene	ND		82.5	3.61	J F	ng/L		4	30 - 150	18	50
Naphthalene	8.0	J	82.5	78.0		ng/L		85	27 - 95	1	50
Perylene	ND		82.5	8.50	F	ng/L		10	30 - 150	25	50
Phenanthrene	15		82.5	84.6		ng/L		85	30 - 150	2	50
Pyrene	90		82.5	159		ng/L		83	30 - 150	2	50
Quinoline	ND		82.5	82.5		ng/L		100	20 - 112	2	50
7,12-Dimethylbenz(a)anthracene	ND		82.5	80.6		ng/L		98	30 - 150	11	50
Biphenyl	5.3	J	82.5	75.8		ng/L		85	30 - 150	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Fluorene-d10 (Surr)	*88*	*X*	*23 - 84*
Chrysene-d12 (Surr)	*47*		*28 - 101*
Naphthalene-d8 (Surr)	*85*		*22 - 97*

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

GC/MS Semi VOA

Prep Batch: 125974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-12	SLP10TACID-062612	Total/NA	Water	3520C	
LCS 280-125974/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-125974/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 280-125974/1-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 126003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-1	MTKA6-062612	Total/NA	Water	3520C	
LCS 280-126003/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-126003/1-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 126251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-2	H6-062612	Total/NA	Water	3520C	
280-30464-3	SLP16-062612	Total/NA	Water	3520C	
280-30464-4	SLP6-062612	Total/NA	Water	3520C	
280-30464-5	SLP13-062612	Total/NA	Water	3520C	
280-30464-6	SLP14-062612	Total/NA	Water	3520C	
280-30464-7	SLP10-062612	Total/NA	Water	3520C	
280-30464-7 - DL	SLP10-062612	Total/NA	Water	3520C	
280-30464-7 MS	SLP10-062612	Total/NA	Water	3520C	
280-30464-7 MSD	SLP10-062612	Total/NA	Water	3520C	
280-30464-8	SLP10D-062612	Total/NA	Water	3520C	
280-30464-8 - DL	SLP10D-062612	Total/NA	Water	3520C	
280-30464-9	SLP10FB-062612	Total/NA	Water	3520C	
280-30464-10	SLP10T-062612	Total/NA	Water	3520C	
280-30464-11	SLP10TEXTENDED-062612	Total/NA	Water	3520C	
280-30464-13	SLPFEED-062612	Total/NA	Water	3520C	
280-30464-13 - DL	SLPFEED-062612	Total/NA	Water	3520C	
LCS 280-126251/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-126251/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 126613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-12	SLP10TACID-062612	Total/NA	Water	8270C	125974
LCS 280-125974/2-A	Lab Control Sample	Total/NA	Water	8270C	125974
LCSD 280-125974/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	125974
MB 280-125974/1-A	Method Blank	Total/NA	Water	8270C	125974

Analysis Batch: 129031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-126003/2-A	Lab Control Sample	Total/NA	Water	8270C	126003
MB 280-126003/1-A	Method Blank	Total/NA	Water	8270C	126003

Analysis Batch: 129124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-1	MTKA6-062612	Total/NA	Water	8270C	126003
280-30464-2	H6-062612	Total/NA	Water	8270C	126251
280-30464-3	SLP16-062612	Total/NA	Water	8270C	126251
280-30464-4	SLP6-062612	Total/NA	Water	8270C	126251
280-30464-5	SLP13-062612	Total/NA	Water	8270C	126251
280-30464-6	SLP14-062612	Total/NA	Water	8270C	126251

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

GC/MS Semi VOA (Continued)

Analysis Batch: 129124 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-7	SLP10-062612	Total/NA	Water	8270C	126251
280-30464-7 MS	SLP10-062612	Total/NA	Water	8270C	126251
280-30464-7 MSD	SLP10-062612	Total/NA	Water	8270C	126251
280-30464-8	SLP10D-062612	Total/NA	Water	8270C	126251
280-30464-9	SLP10FB-062612	Total/NA	Water	8270C	126251
280-30464-10	SLP10T-062612	Total/NA	Water	8270C	126251
280-30464-11	SLP10TEXTENDED-062612	Total/NA	Water	8270C	126251
280-30464-13	SLPFEED-062612	Total/NA	Water	8270C	126251
LCS 280-126251/2-A	Lab Control Sample	Total/NA	Water	8270C	126251
MB 280-126251/1-A	Method Blank	Total/NA	Water	8270C	126251

Analysis Batch: 129495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-30464-7 - DL	SLP10-062612	Total/NA	Water	8270C	126251
280-30464-8 - DL	SLP10D-062612	Total/NA	Water	8270C	126251
280-30464-13 - DL	SLPFEED-062612	Total/NA	Water	8270C	126251

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: MTKA6-062612 — Lab Sample ID: 280-30464-1

Date Collected: 06/26/12 09:10
Date Received: 06/27/12 09:45
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3585.3 mL	1000 uL	126003	06/28/12 18:05	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 18:17	KGV	TAL DEN

Client Sample ID: H6-062612 — Lab Sample ID: 280-30464-2

Date Collected: 06/26/12 09:55
Date Received: 06/27/12 09:45
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3812 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 18:53	KGV	TAL DEN

Client Sample ID: SLP16-062612 — Lab Sample ID: 280-30464-3

Date Collected: 06/26/12 11:20
Date Received: 06/27/12 09:45
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3803.4 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 19:29	KGV	TAL DEN

Client Sample ID: SLP6-062612 — Lab Sample ID: 280-30464-4

Date Collected: 06/26/12 11:50
Date Received: 06/27/12 09:45
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3903.6 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 20:04	KGV	TAL DEN

Client Sample ID: SLP13-062612 — Lab Sample ID: 280-30464-5

Date Collected: 06/26/12 12:15
Date Received: 06/27/12 09:45
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3473.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 20:40	KGV	TAL DEN

Client Sample ID: SLP14-062612 — Lab Sample ID: 280-30464-6

Date Collected: 06/26/12 12:20
Date Received: 06/27/12 09:45
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3484.8 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 21:16	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10-062612

Lab Sample ID: 280-30464-7
Matrix: Water

Date Collected: 06/26/12 12:55
Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3764.3 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 21:51	KGV	TAL DEN
Total/NA	Prep	3520C	DL		3764.3 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C	DL	4			129495	07/24/12 11:26	KGV	TAL DEN

Client Sample ID: SLP10D-062612

Lab Sample ID: 280-30464-8
Matrix: Water

Date Collected: 06/26/12 12:55
Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3850.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/21/12 23:37	KGV	TAL DEN
Total/NA	Prep	3520C	DL		3850.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C	DL	4			129495	07/24/12 12:02	KGV	TAL DEN

Client Sample ID: SLP10FB-062612

Lab Sample ID: 280-30464-9
Matrix: Water

Date Collected: 06/26/12 12:55
Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3613.4 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/22/12 00:12	KGV	TAL DEN

Client Sample ID: SLP10T-062612

Lab Sample ID: 280-30464-10
Matrix: Water

Date Collected: 06/26/12 13:30
Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3404.2 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/22/12 00:48	KGV	TAL DEN

Client Sample ID: SLP10TEXTENDED-062612

Lab Sample ID: 280-30464-11
Matrix: Water

Date Collected: 06/25/12 13:30
Date Received: 06/27/12 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3638.4 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/22/12 01:23	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10TACID-062612

Lab Sample ID: 280-30464-12

Date Collected: 06/25/12 13:30
Date Received: 06/27/12 09:45

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1050.5 mL	1000 uL	125974	06/28/12 15:05	DFB	TAL DEN
Total/NA	Analysis	8270C		1			126613	07/03/12 18:11	MGH	TAL DEN

Client Sample ID: SLPFEED-062612

Lab Sample ID: 280-30464-13

Date Collected: 06/25/12 13:45
Date Received: 06/27/12 09:45

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3484.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C		1			129124	07/22/12 01:58	KGV	TAL DEN
Total/NA	Prep	3520C	DL		3484.1 mL	1000 uL	126251	07/01/12 08:40	CRC	TAL DEN
Total/NA	Analysis	8270C	DL	4			129495	07/24/12 12:37	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-12
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	09-30-12
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-12
Oklahoma	State Program	6	8614	08-31-12
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-12
South Carolina	State Program	4	72002	06-30-12
Tennessee	State Program	4	TN02944	09-30-12
Texas	NELAC	6	T104704183-08-TX	09-30-12
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-12
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-12
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-12
Wyoming (UST)	A2LA	8		10-31-13

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID: TAC

Temperature on Receipt: 6/27

Drinking Water? Yes ☒ No ☐

4.3 3.5 4.9 4.5 5.1 4.7 3.8 3.0 2.3 2.7

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

Client: Summit EnviroSolutions	Project Manager: Bill Gregg	Date: 6/25/12	Chain of Custody Number: 151474
Address: 1217 Bandana Blvd. N.	Telephone Number (Area Code)/Fax Number: (651) 262-4236	Lab Number	Page 1 of 2
City: St. Paul; State: MN; Zip Code: 55108	Site Contact: Bill Gregg	Lab Contact	
Project Name and Location (State): Reilly Site (MN)	Carrier/Waybill Number: Fed Ex		
Contract/Purchase Order/Quote No.: 0987-0009			

Analysis (Attach list if more space is needed): 8270C-SIM-PAH-LL-Prep

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Other	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Other	8270C-SIM-PAH-LL-Prep	Special Instructions/ Conditions of Receipt
MTKA6-062612	6/26/12	9:10		X				6							X	
H6-062612		9:55						6								
SLP16-062612		11:20						6								
SLP6-062612		11:50						6								
SLP13-062612		12:15						6								
SLP14-062612		12:20						6								
SLP10-062612		12:55						6								
SLP10MS-062612		12:55						6								
SLP10MSD-062612		12:55						6								
SLP10D-062612		12:55						6								
SLP10FB-062612		12:55						4								
SLP10T-062612		13:30						6								

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	6/26/12	15:00	1. Received By: [signature]	6/27/12	0945
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Custody Seal #s 627561 through 627570 (10 coolers)

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

TAL-4124-280 (0508)

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☒ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client: Summit Envirosolutions	Project Manager: Bill Gregg	Date: 6/25/12	Chain of Custody Number: 151475
Address: 1217 Bandana Blvd. N.	Telephone Number (Area Code)/Fax Number: (651) 262-4236	Lab Number:	Page 2 of 2
City: St. Paul; State: MN; Zip Code: 55108	Site Contact: Bill Gregg; Lab Contact:		
Project Name and Location (State): Reilly Site (MN)	Carrier/Waybill Number: Fed Ex		
Contract/Purchase Order/Quote No.: 0987-0009			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): 8270C SIM LL-PPT (4L Prep)	Special Instructions/ Conditions of Receipt
SLP10T Extended-062612	6/25/12	13:30					6						X	
SLP10T Acid-062612	↓	13:30					2						↓	
SLPFEED-062612	↓	13:45					6						↓	

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	6/26/12	15:00	1. Received By: [signature]	6/27/12	0945
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Custody Seals 627561 through 627570 (10 coolers)

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

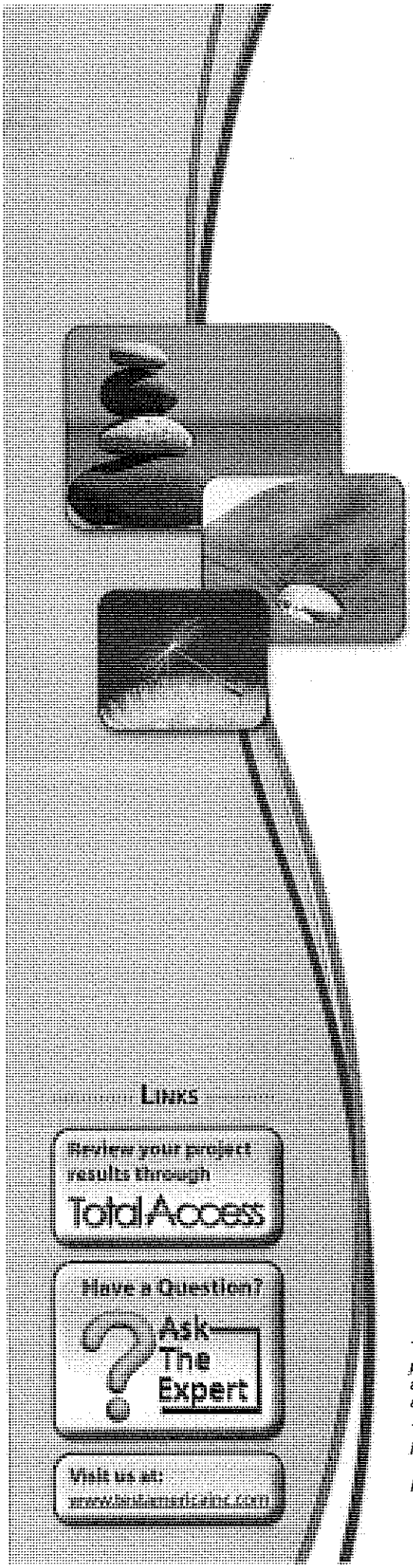
Login Number: 30464
List Number: 1
Creator: Paulsen, Lindsay T

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	1of 2x1 Liter amber bottles rec'd broken sample SPL10TACID. Suff. vol. remains
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

THIRD QUARTER

PAH ANALYSIS



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-33493-1
Client Project/Site: CSLP - Reilly Tar & Chemical

For:
Summit Envirosolutions Inc
1217 Bandana Blvd North
Saint Paul, Minnesota 55108

Attn: William M Gregg

Authorized for release by:
10/18/2012 8:37:16 AM

Lisa Uriell
Project Manager II
lisa.uriell@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 280-33493-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-33493-1

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 Receiving
Eleven samples were received under chain of custody on September 20, 2012. The samples were received at temperatures of 1.3° C, 0.9°C, 0.5°C, 2.6°C, 1.4°C, 1.0°C and 1.6°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM
All sample holding times were met.

The following samples exhibited surrogate recoveries outside the QC control limits, as detailed below. Matrix interference was not obvious. Upon re-aliquoting and reanalyzing, the surrogate recovery outliers were still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

0987-09 SLP6 (280-33493-3) recovered Fluorene-d10 at 92% (limits 23-84%)
0987-09 SLP10T (280-33493-4) recovered Fluorene-d10 at 86% (limits 23-84%)
0987-09 W48 (280-33493-5) recovered Chrysene-d12 at 25% (limits 28-101%)
0987-09 W119 (280-33493-6) recovered Fluorene-d10 at 85% (limits 23-84%)
0987-09 SLP4 (280-33493-7) recovered Fluorene-d10 at 87% (limits 23-84%)
0987-09 W23 (280-33493-8) recovered Fluorene-d10 at 88% (limits 23-84%)
0987-09 E7D (280-33493-10) recovered Fluorene-d10 at 88% (limits 23-84%)
0987-09 E7FB (280-33493-11) recovered Chrysene-d12 at 105% (limits 28-101%)

Sample 0987-09 W23 (280-33493-8) was analyzed at a 1X, a 10X and a 20X dilution to obtain all target analytes within the linear calibration range. Reporting limits were adjusted accordingly. Only those compounds that were within the linear range were reported in each dilution in order to achieve the lowest reporting limits possible within the constraints of the method. Surrogate recoveries could not be calculated for the analyses performed at a dilution, because the extracts were diluted beyond the ability to quantitate recoveries.

Low levels of Benzo[g,h,i]perylene and Naphthalene are present in the method blank associated with prep batch 280-138557. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than one half the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

Additionally, surrogates Fluorene-d10 and Chrysene-d12 were recovered above the QC control limits in the method blank

Job ID: 280-33493-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

associated with prep batch 280-138557 as detailed below. This is an indicator that data may be biased high. As no detectable concentrations are present above the reporting limits in the method blank, corrective action is deemed unnecessary. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered at 87% (limits 23-84%)
Surrogate Chrysene-d12 was recovered at 104% (limits 28-101%)

Low levels of Benzo[g,h,i]perylene and Indeno[1,2,3-cd]pyrene are present in the method blank associated with prep batch 280-139011. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than one half the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

Additionally, surrogates Fluorene-d10,Chrysene-d12 and Naphthalene-d8 were recovered above the QC control limits in the method blank associated with prep batch 280-139011 as detailed below. This is an indicator that data may be biased high. As no detectable concentrations are present above the reporting limits in the method blank, corrective action is deemed unnecessary. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered at 87% (limits 23-84%)
Surrogate Chrysene-d12 was recovered at 104% (limits 28-101%)
Surrogate Naphthalene-d8 was recovered at 99% (limits 22-97%)

The LCS/LCSD associated with prep batch 280-138557 exhibited the LCSD percent recovery below the QC control limits for Acridine at 13% (limits 30-150%). Additionally, the LCS/LCSD exhibited the relative percent difference (RPD) data outside the QC control limits for Acridine. The LCS/LCSD was re-aliquoted and re-analyzed with similar results. The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "*".

Additionally, surrogates Fluorene-d10 and Chrysene-d12 were recovered above the QC control limits in the LCSD associated with prep batch 280-138557 as detailed below. The acceptable LCS surrogate recoveries provide evidence that the laboratory is performing the method within acceptable guidelines. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered at 86% (limits 23-84%)
Surrogate Chrysene-d12 was recovered at 103% (limits 28-101%)

The LCS associated with prep batch 280-139011 exhibited percent recoveries outside the QC control limits for Acridine at 20% (limits 30-150%), Indene at 91% (limits 22-86%), Naphthalene at 101% (limits 27-95%) and 7,12-Dimethylbenz(a)anthracene at 26% (limits 30-150%). 7,12-Dimethylbenz(a)anthracene is not a compound of interest for this project. The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is. The associated results in the analytical report have been flagged with "*".

Additionally, surrogates Fluorene-d10 and Chrysene-d12 were recovered above the QC control limits in the LCS associated with prep batch 280-139011 as detailed below. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

Surrogate Fluorene-d10 was recovered at 86% (limits 23-84%)
Surrogate Chrysene-d12 was recovered at 105% (limits 28-101%)

The method required MS/MSD could not be performed for prep batch 280-138557, due to insufficient sample volume.

The MS/MSD associated with prep batch 280-139011 was performed using sample 0987-09 E7 (280-33493-9), as requested. MS/MSD exhibited 9 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 10 of the 33 Matrix Spike Duplicate compound recoveries and 1 of the 3 surrogate recoveries outside the

Job ID: 280-33493-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

control limits. The MS/MSD exhibited percent recoveries and/or RPD data outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylcholanthrene	Benzo[a]pyrene	Benzo[e]pyrene
Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[ghi]perylene
Dibenzo(a,h)anthracene	Indene	Indeno[1,2,3-cd]pyrene
Perylene	Fluorene-d10	

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
JOB: 280-33493-1
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	62	62
MB Surrogates	6	1
LCS/LCSD	21	19
LCS/LCSD Surrogates	9	5
FB	31	31
MS	7	6
MS Surrogates	3	2
MSD	7	5
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	31
Sample Surrogates	33	25
Samples and QC Internal Standard Area	162	162
TOTAL	**382**	**358**
% Completeness	**93.7%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-33493-1					
Sample: 0987-09 E7		DUP: 0987-09 E7D			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	8.6	Acenaphthene	9.6	11.0	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	1.7	Anthracene	1.7	0.0	
Benzo(a)anthracene	1.5	Benzo(a)anthracene	1.0	40.0	
Benzo(b)fluoranthene	2.0	Benzo(b)fluoranthene	ND	NC	
Benzo(k)fluoranthene	2.2	Benzo(k)fluoranthene	1.5	37.8	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	2.7	Benzo(ghi)perylene	2.3	16.0	
Benzo(a)pyrene	1.4	Benzo(a)pyrene	1.3	7.4	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	3.1	Benzo(b)thiophene	3.5	12.1	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	1.1	Carbazole	1.2	8.7	
Chrysene	1.9	Chrysene	ND	NC	
Dibenz(a,h)anthracene	2.3	Dibenz(a,h)anthracene	1.5	42.1	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	3.8	2,3-Dihydroindene	4.5	16.9	
Fluoranthene	2.3	Fluoranthene	1.8	24.4	
Fluorene	ND	Fluorene	ND	0.0	
Indene	6.1	Indene	6.5	6.3	
Indeno(1,2,3-cd)pyrene	2.8	Indeno(1,2,3-cd)pyrene	2.1	28.6	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	1.7	NC	
1-Methylnaphthalene	1.1	1-Methylnaphthalene	1.5	30.8	
Naphthalene	4.1	Naphthalene	6.8	49.5	
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	2.6	Pyrene	2.4	8.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

Definitions/Glossary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
X	Surrogate is outside control limits
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: 0987-09 SLP6 (Continued) — Lab Sample ID: 280-33493-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Indene	7.5		4.9	3.4	ng/L	1		8270C SIM	Total/NA
Indole	2.9	J	4.9	1.8	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.5	J	5.6	1.3	ng/L	1		8270C SIM	Total/NA
Naphthalene	7.1	J B	9.0	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	6.2		4.4	1.0	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 SLP10T — Lab Sample ID: 280-33493-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	35		4.9	0.69	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	7.3		5.5	0.88	ng/L	1		8270C SIM	Total/NA
Acenaphthene	42		5.6	0.49	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	1.8	J	4.7	0.76	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	4.0	J	5.1	0.74	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.5	J B	6.1	1.2	ng/L	1		8270C SIM	Total/NA
Carbazole	0.74	J	3.7	0.71	ng/L	1		8270C SIM	Total/NA
Fluorene	2.8	J	4.0	0.84	ng/L	1		8270C SIM	Total/NA
Indene	4.4	J	4.6	3.2	ng/L	1		8270C SIM	Total/NA
Indole	3.0	J	4.6	1.7	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.4	J	5.3	1.2	ng/L	1		8270C SIM	Total/NA
Naphthalene	2.0	J B	8.5	1.1	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 W48 — Lab Sample ID: 280-33493-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	1.2	J	5.8	0.73	ng/L	1		8270C SIM	Total/NA
2,3-Dihydroindene	5.6		5.4	0.75	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	4.0	J	6.0	0.96	ng/L	1		8270C SIM	Total/NA
2-Methylnaphthalene	2.5	J	6.3	1.1	ng/L	1		8270C SIM	Total/NA
Acenaphthene	92		6.1	0.54	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	4.3	J	5.2	0.83	ng/L	1		8270C SIM	Total/NA
Acridine	7.1	*	7.0	7.0	ng/L	1		8270C SIM	Total/NA
Anthracene	4.2	J	4.5	0.86	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	12		5.6	0.81	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.5	J B	6.7	1.3	ng/L	1		8270C SIM	Total/NA
Carbazole	1.5	J	4.1	0.77	ng/L	1		8270C SIM	Total/NA
Dibenzothiophene	1.3	J	4.4	1.1	ng/L	1		8270C SIM	Total/NA
Indene	47		5.1	3.5	ng/L	1		8270C SIM	Total/NA
Indole	2.3	J	5.1	1.9	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.5	J	5.8	1.4	ng/L	1		8270C SIM	Total/NA
Naphthalene	6.3	J B	9.2	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	2.9	J	4.5	1.1	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 W119 — Lab Sample ID: 280-33493-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	5.3		5.1	0.72	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	1.7	J	5.7	0.91	ng/L	1		8270C SIM	Total/NA
2-Methylnaphthalene	1.6	J	6.1	1.0	ng/L	1		8270C SIM	Total/NA
Acenaphthene	16		5.8	0.51	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	1.2	J	4.9	0.79	ng/L	1		8270C SIM	Total/NA
Acridine	7.1	*	6.7	6.7	ng/L	1		8270C SIM	Total/NA
Anthracene	3.0	J	4.3	0.82	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 W119 (Continued) — Lab Sample ID: 280-33493-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo(b)thiophene	4.6	J	5.3	0.77	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.7	J B	6.4	1.2	ng/L	1		8270C SIM	Total/NA
Carbazole	1.3	J	3.9	0.74	ng/L	1		8270C SIM	Total/NA
Indene	9.9	*	4.8	3.4	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.6	J B	5.5	1.3	ng/L	1		8270C SIM	Total/NA
Naphthalene	5.5	J *	8.8	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	12		4.3	1.0	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 SLP4 — Lab Sample ID: 280-33493-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	40		4.9	0.69	ng/L	1		8270C SIM	Total/NA
Acenaphthene	56		5.6	0.49	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	4.2	J	4.7	0.75	ng/L	1		8270C SIM	Total/NA
Anthracene	2.0	J	4.1	0.78	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	6.3		5.1	0.73	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	1.6	J B	6.1	1.1	ng/L	1		8270C SIM	Total/NA
Carbazole	5.5		3.7	0.71	ng/L	1		8270C SIM	Total/NA
Dibenzofuran	1.1	J	5.6	0.97	ng/L	1		8270C SIM	Total/NA
Fluoranthene	2.3	J	4.5	1.7	ng/L	1		8270C SIM	Total/NA
Fluorene	2.5	J	4.0	0.83	ng/L	1		8270C SIM	Total/NA
Indene	4.0	J *	4.6	3.2	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	1.7	J B	5.3	1.2	ng/L	1		8270C SIM	Total/NA
Naphthalene	3.9	J *	8.4	1.1	ng/L	1		8270C SIM	Total/NA
Phenanthrene	3.5	J	6.2	3.1	ng/L	1		8270C SIM	Total/NA
Pyrene	9.2		4.1	0.97	ng/L	1		8270C SIM	Total/NA

Client Sample ID: 0987-09 W23 — Lab Sample ID: 280-33493-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Benzofuran	2.5	J	5.7	0.72	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	140		5.1	0.81	ng/L	1		8270C SIM	Total/NA
Acridine	310	*	6.9	6.9	ng/L	1		8270C SIM	Total/NA
Anthracene	210		4.4	0.84	ng/L	1		8270C SIM	Total/NA
Benzo[a]anthracene	190		4.5	0.97	ng/L	1		8270C SIM	Total/NA
Benzo[a]pyrene	10		2.6	1.3	ng/L	1		8270C SIM	Total/NA
Benzo[e]pyrene	7.3		4.5	1.2	ng/L	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	23		5.0	1.5	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	83		5.5	0.79	ng/L	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	2.1	J B	6.5	1.2	ng/L	1		8270C SIM	Total/NA
Carbazole	170		4.0	0.76	ng/L	1		8270C SIM	Total/NA
Chrysene	110		5.9	1.3	ng/L	1		8270C SIM	Total/NA
Dibenz(a,h)anthracene	1.2	J	6.2	1.1	ng/L	1		8270C SIM	Total/NA
Indene	55	*	5.0	3.5	ng/L	1		8270C SIM	Total/NA
Indeno[1,2,3-cd]pyrene	2.2	J B	5.7	1.3	ng/L	1		8270C SIM	Total/NA
Quinoline	24		9.5	6.0	ng/L	1		8270C SIM	Total/NA
2,3-Dihydroindene - DL	410		53	7.4	ng/L	10		8270C SIM	Total/NA
1-Methylnaphthalene - DL	1200		59	9.4	ng/L	10		8270C SIM	Total/NA
2-Methylnaphthalene - DL	640		62	10	ng/L	10		8270C SIM	Total/NA
Dibenzofuran - DL	1000		60	10	ng/L	10		8270C SIM	Total/NA
Dibenzothiophene - DL	380		43	10	ng/L	10		8270C SIM	Total/NA
Fluoranthene - DL	1800		49	18	ng/L	10		8270C SIM	Total/NA
Fluorene - DL	2500		43	9.0	ng/L	10		8270C SIM	Total/NA

Method Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method	Method Description	Protocol	Laboratory
8270C SIM	Semivolatile Organic Compound (GC/MS SIM LL)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-33493-1	0987-09 W105	Water	09/19/12 08:40	09/20/12 09:30
280-33493-2	0987-09 E13	Water	09/19/12 12:09	09/20/12 09:30
280-33493-3	0987-09 SLP6	Water	09/19/12 13:21	09/20/12 09:30
280-33493-4	0987-09 SLP10T	Water	09/19/12 08:13	09/20/12 09:30
280-33493-5	0987-09 W48	Water	09/19/12 10:50	09/20/12 09:30
280-33493-6	0987-09 W119	Water	09/19/12 10:10	09/20/12 09:30
280-33493-7	0987-09 SLP4	Water	09/19/12 09:28	09/20/12 09:30
280-33493-8	0987-09 W23	Water	09/19/12 08:50	09/20/12 09:30
280-33493-9	0987-09 E7	Water	09/19/12 12:35	09/20/12 09:30
280-33493-10	0987-09 E7D	Water	09/19/12 12:35	09/20/12 09:30
280-33493-11	0987-09 E7FB	Water	09/19/12 12:35	09/20/12 09:30

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W105
Date Collected: 09/19/12 08:40
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-1
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/22/12 12:15	10/11/12 22:31	1
2,3-Dihydroindene	53		5.0	0.70	ng/L		09/22/12 12:15	10/11/12 22:31	1
1-Methylnaphthalene	32		5.6	0.89	ng/L		09/22/12 12:15	10/11/12 22:31	1
2-Methylnaphthalene	16		5.9	0.98	ng/L		09/22/12 12:15	10/11/12 22:31	1
Acenaphthene	110		5.7	0.50	ng/L		09/22/12 12:15	10/11/12 22:31	1
Acenaphthylene	10		4.8	0.77	ng/L		09/22/12 12:15	10/11/12 22:31	1
Acridine	ND	*	6.5	6.5	ng/L		09/22/12 12:15	10/11/12 22:31	1
Anthracene	15		4.2	0.80	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[a]anthracene	18		4.3	0.92	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[a]pyrene	1.6	J	2.5	1.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[e]pyrene	1.1	J	4.3	1.1	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[b]fluoranthene	1.9	J	4.7	1.4	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo(b)thiophene	12		5.2	0.75	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Benzo[g,h,i]perylene	1.3	J B	6.2	1.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Carbazole	9.3		3.8	0.72	ng/L		09/22/12 12:15	10/11/12 22:31	1
Chrysene	11		5.6	1.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/22/12 12:15	10/11/12 22:31	1
Dibenzofuran	30		5.7	0.99	ng/L		09/22/12 12:15	10/11/12 22:31	1
Dibenzothiophene	11		4.1	0.98	ng/L		09/22/12 12:15	10/11/12 22:31	1
Fluoranthene	240		4.6	1.7	ng/L		09/22/12 12:15	10/11/12 22:31	1
Fluorene	73		4.1	0.85	ng/L		09/22/12 12:15	10/11/12 22:31	1
Indene	5.3		4.7	3.3	ng/L		09/22/12 12:15	10/11/12 22:31	1
Indole	ND		4.7	1.7	ng/L		09/22/12 12:15	10/11/12 22:31	1
Indeno[1,2,3-cd]pyrene	1.3	J	5.4	1.3	ng/L		09/22/12 12:15	10/11/12 22:31	1
Naphthalene	35	B	8.6	1.1	ng/L		09/22/12 12:15	10/11/12 22:31	1
Perylene	ND		3.8	3.8	ng/L		09/22/12 12:15	10/11/12 22:31	1
Phenanthrene	67		6.3	3.2	ng/L		09/22/12 12:15	10/11/12 22:31	1
Pyrene	200		4.2	0.99	ng/L		09/22/12 12:15	10/11/12 22:31	1
Quinoline	ND		9.0	5.7	ng/L		09/22/12 12:15	10/11/12 22:31	1
Biphenyl	24		5.6	1.1	ng/L		09/22/12 12:15	10/11/12 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*82*		*23 - 84*	*09/22/12 12:15*	*10/11/12 22:31*	*1*
Chrysene-d12 (Surr)	*50*		*28 - 101*	*09/22/12 12:15*	*10/11/12 22:31*	*1*
Naphthalene-d8 (Surr)	*85*		*22 - 97*	*09/22/12 12:15*	*10/11/12 22:31*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E13
Date Collected: 09/19/12 12:09
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-2
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/22/12 12:15	10/11/12 23:10	1
2,3-Dihydroindene	**6.3**		5.0	0.70	ng/L		09/22/12 12:15	10/11/12 23:10	1
1-Methylnaphthalene	ND		5.6	0.90	ng/L		09/22/12 12:15	10/11/12 23:10	1
2-Methylnaphthalene	ND		5.9	0.99	ng/L		09/22/12 12:15	10/11/12 23:10	1
Acenaphthene	**120**		5.7	0.50	ng/L		09/22/12 12:15	10/11/12 23:10	1
Acenaphthylene	**9.4**		4.8	0.77	ng/L		09/22/12 12:15	10/11/12 23:10	1
Acridine	ND	*	6.5	6.5	ng/L		09/22/12 12:15	10/11/12 23:10	1
Anthracene	ND		4.2	0.80	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[a]anthracene	ND		4.3	0.93	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Benzo[g,h,i]perylene	**1.4**	**J B**	6.2	1.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Carbazole	ND		3.8	0.72	ng/L		09/22/12 12:15	10/11/12 23:10	1
Chrysene	ND		5.6	1.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/22/12 12:15	10/11/12 23:10	1
Dibenzofuran	ND		5.7	1.0	ng/L		09/22/12 12:15	10/11/12 23:10	1
Dibenzothiophene	**2.8**	**J**	4.1	0.99	ng/L		09/22/12 12:15	10/11/12 23:10	1
Fluoranthene	ND		4.6	1.7	ng/L		09/22/12 12:15	10/11/12 23:10	1
Fluorene	ND		4.1	0.85	ng/L		09/22/12 12:15	10/11/12 23:10	1
Indene	ND		4.7	3.3	ng/L		09/22/12 12:15	10/11/12 23:10	1
Indole	ND		4.7	1.7	ng/L		09/22/12 12:15	10/11/12 23:10	1
Indeno[1,2,3-cd]pyrene	**1.3**	**J**	5.4	1.3	ng/L		09/22/12 12:15	10/11/12 23:10	1
Naphthalene	**2.2**	**J B**	8.6	1.1	ng/L		09/22/12 12:15	10/11/12 23:10	1
Perylene	ND		3.8	3.8	ng/L		09/22/12 12:15	10/11/12 23:10	1
Phenanthrene	ND		6.3	3.2	ng/L		09/22/12 12:15	10/11/12 23:10	1
Pyrene	**12**		4.2	1.0	ng/L		09/22/12 12:15	10/11/12 23:10	1
Quinoline	ND		9.1	5.7	ng/L		09/22/12 12:15	10/11/12 23:10	1
Biphenyl	ND		5.6	1.1	ng/L		09/22/12 12:15	10/11/12 23:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*82*		*23 - 84*	*09/22/12 12:15*	*10/11/12 23:10*	*1*
Chrysene-d12 (Surr)	*51*		*28 - 101*	*09/22/12 12:15*	*10/11/12 23:10*	*1*
Naphthalene-d8 (Surr)	*85*		*22 - 97*	*09/22/12 12:15*	*10/11/12 23:10*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP6
Date Collected: 09/19/12 13:21
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-3
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	0.90	J	5.6	0.71	ng/L		09/22/12 12:15	10/11/12 23:48	1
2,3-Dihydroindene	59		5.2	0.73	ng/L		09/22/12 12:15	10/11/12 23:48	1
1-Methylnaphthalene	2.3	J	5.9	0.93	ng/L		09/22/12 12:15	10/11/12 23:48	1
2-Methylnaphthalene	1.5	J	6.2	1.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Acenaphthene	83		6.0	0.52	ng/L		09/22/12 12:15	10/11/12 23:48	1
Acenaphthylene	10		5.0	0.80	ng/L		09/22/12 12:15	10/11/12 23:48	1
Acridine	14	*	6.8	6.8	ng/L		09/22/12 12:15	10/11/12 23:48	1
Anthracene	3.3	J	4.4	0.84	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[a]anthracene	ND		4.5	0.96	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[e]pyrene	ND		4.5	1.2	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[b]fluoranthene	ND		4.9	1.5	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo(b)thiophene	12		5.4	0.78	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		09/22/12 12:15	10/11/12 23:48	1
Benzo[g,h,i]perylene	1.5	J B	6.5	1.2	ng/L		09/22/12 12:15	10/11/12 23:48	1
Carbazole	3.2	J	4.0	0.75	ng/L		09/22/12 12:15	10/11/12 23:48	1
Chrysene	ND		5.9	1.3	ng/L		09/22/12 12:15	10/11/12 23:48	1
Dibenz(a,h)anthracene	ND		6.2	1.1	ng/L		09/22/12 12:15	10/11/12 23:48	1
Dibenzofuran	ND		6.0	1.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Dibenzothiophene	2.4	J	4.3	1.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Fluoranthene	3.6	J	4.8	1.8	ng/L		09/22/12 12:15	10/11/12 23:48	1
Fluorene	ND		4.3	0.89	ng/L		09/22/12 12:15	10/11/12 23:48	1
Indene	7.5		4.9	3.4	ng/L		09/22/12 12:15	10/11/12 23:48	1
Indole	2.9	J	4.9	1.8	ng/L		09/22/12 12:15	10/11/12 23:48	1
Indeno[1,2,3-cd]pyrene	1.5	J	5.6	1.3	ng/L		09/22/12 12:15	10/11/12 23:48	1
Naphthalene	7.1	J B	9.0	1.2	ng/L		09/22/12 12:15	10/11/12 23:48	1
Perylene	ND		4.0	4.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Phenanthrene	ND		6.6	3.4	ng/L		09/22/12 12:15	10/11/12 23:48	1
Pyrene	6.2		4.4	1.0	ng/L		09/22/12 12:15	10/11/12 23:48	1
Quinoline	ND		9.4	5.9	ng/L		09/22/12 12:15	10/11/12 23:48	1
Biphenyl	ND		5.9	1.1	ng/L		09/22/12 12:15	10/11/12 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*92*	*X*	*23 - 84*	*09/22/12 12:15*	*10/11/12 23:48*	*1*
Chrysene-d12 (Surr)	*69*		*28 - 101*	*09/22/12 12:15*	*10/11/12 23:48*	*1*
Naphthalene-d8 (Surr)	*89*		*22 - 97*	*09/22/12 12:15*	*10/11/12 23:48*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP10T

Lab Sample ID: 280-33493-4

Date Collected: 09/19/12 08:13
Date Received: 09/20/12 09:30

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.3	0.67	ng/L		09/22/12 12:15	10/12/12 00:27	1
2,3-Dihydroindene	**35**		4.9	0.69	ng/L		09/22/12 12:15	10/12/12 00:27	1
1-Methylnaphthalene	**7.3**		5.5	0.88	ng/L		09/22/12 12:15	10/12/12 00:27	1
2-Methylnaphthalene	ND		5.8	0.96	ng/L		09/22/12 12:15	10/12/12 00:27	1
Acenaphthene	**42**		5.6	0.49	ng/L		09/22/12 12:15	10/12/12 00:27	1
Acenaphthylene	**1.8**	J	4.7	0.76	ng/L		09/22/12 12:15	10/12/12 00:27	1
Acridine	ND	*	6.4	6.4	ng/L		09/22/12 12:15	10/12/12 00:27	1
Anthracene	ND		4.1	0.79	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[a]anthracene	ND		4.2	0.91	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[e]pyrene	ND		4.2	1.1	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[b]fluoranthene	ND		4.6	1.4	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo(b)thiophene	**4.0**	J	5.1	0.74	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[k]fluoranthene	ND		4.0	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Benzo[g,h,i]perylene	**1.5**	J B	6.1	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Carbazole	**0.74**	J	3.7	0.71	ng/L		09/22/12 12:15	10/12/12 00:27	1
Chrysene	ND		5.5	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Dibenz(a,h)anthracene	ND		5.8	1.0	ng/L		09/22/12 12:15	10/12/12 00:27	1
Dibenzofuran	ND		5.6	0.97	ng/L		09/22/12 12:15	10/12/12 00:27	1
Dibenzothiophene	ND		4.0	0.96	ng/L		09/22/12 12:15	10/12/12 00:27	1
Fluoranthene	ND		4.5	1.7	ng/L		09/22/12 12:15	10/12/12 00:27	1
Fluorene	**2.8**	J	4.0	0.84	ng/L		09/22/12 12:15	10/12/12 00:27	1
Indene	**4.4**	J	4.6	3.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Indole	**3.0**	J	4.6	1.7	ng/L		09/22/12 12:15	10/12/12 00:27	1
Indeno[1,2,3-cd]pyrene	**1.4**	J	5.3	1.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Naphthalene	**2.0**	J B	8.5	1.1	ng/L		09/22/12 12:15	10/12/12 00:27	1
Perylene	ND		3.7	3.7	ng/L		09/22/12 12:15	10/12/12 00:27	1
Phenanthrene	ND		6.2	3.2	ng/L		09/22/12 12:15	10/12/12 00:27	1
Pyrene	ND		4.1	0.97	ng/L		09/22/12 12:15	10/12/12 00:27	1
Quinoline	ND		8.9	5.6	ng/L		09/22/12 12:15	10/12/12 00:27	1
Biphenyl	ND		5.5	1.0	ng/L		09/22/12 12:15	10/12/12 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*86*	*X*	*23 - 84*	*09/22/12 12:15*	*10/12/12 00:27*	*1*
Chrysene-d12 (Surr)	*61*		*28 - 101*	*09/22/12 12:15*	*10/12/12 00:27*	*1*
Naphthalene-d8 (Surr)	*89*		*22 - 97*	*09/22/12 12:15*	*10/12/12 00:27*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W48
Date Collected: 09/19/12 10:50
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-5
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.2	J	5.8	0.73	ng/L		09/22/12 12:15	10/12/12 01:06	1
2,3-Dihydroindene	5.6		5.4	0.75	ng/L		09/22/12 12:15	10/12/12 01:06	1
1-Methylnaphthalene	4.0	J	6.0	0.96	ng/L		09/22/12 12:15	10/12/12 01:06	1
2-Methylnaphthalene	2.5	J	6.3	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Acenaphthene	92		6.1	0.54	ng/L		09/22/12 12:15	10/12/12 01:06	1
Acenaphthylene	4.3	J	5.2	0.83	ng/L		09/22/12 12:15	10/12/12 01:06	1
Acridine	7.1	*	7.0	7.0	ng/L		09/22/12 12:15	10/12/12 01:06	1
Anthracene	4.2	J	4.5	0.86	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[a]anthracene	ND		4.6	0.99	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[b]fluoranthene	ND		5.1	1.5	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo(b)thiophene	12		5.6	0.61	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		09/22/12 12:15	10/12/12 01:06	1
Benzo[g,h,i]perylene	1.5	J B	6.7	1.3	ng/L		09/22/12 12:15	10/12/12 01:06	1
Carbazole	1.5	J	4.1	0.77	ng/L		09/22/12 12:15	10/12/12 01:06	1
Chrysene	ND		6.0	1.3	ng/L		09/22/12 12:15	10/12/12 01:06	1
Dibenz(a,h)anthracene	ND		6.3	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Dibenzofuran	ND		6.1	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Dibenzothiophene	1.3	J	4.4	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Fluoranthene	ND		4.9	1.8	ng/L		09/22/12 12:15	10/12/12 01:06	1
Fluorene	ND		4.4	0.91	ng/L		09/22/12 12:15	10/12/12 01:06	1
Indene	47		5.1	3.5	ng/L		09/22/12 12:15	10/12/12 01:06	1
Indole	2.3	J	5.1	1.9	ng/L		09/22/12 12:15	10/12/12 01:06	1
Indeno[1,2,3-cd]pyrene	1.5	J	5.8	1.4	ng/L		09/22/12 12:15	10/12/12 01:06	1
Naphthalene	6.3	J B	9.2	1.2	ng/L		09/22/12 12:15	10/12/12 01:06	1
Perylene	ND		4.1	4.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Phenanthrene	ND		6.8	3.5	ng/L		09/22/12 12:15	10/12/12 01:06	1
Pyrene	2.9	J	4.5	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Quinoline	ND		9.7	6.1	ng/L		09/22/12 12:15	10/12/12 01:06	1
Biphenyl	ND		6.0	1.1	ng/L		09/22/12 12:15	10/12/12 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*81*		*23 - 84*	*09/22/12 12:15*	*10/12/12 01:06*	*1*
Chrysene-d12 (Surr)	*25*	*X*	*28 - 101*	*09/22/12 12:15*	*10/12/12 01:06*	*1*
Naphthalene-d8 (Surr)	*82*		*22 - 97*	*09/22/12 12:15*	*10/12/12 01:06*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W119
Date Collected: 09/19/12 10:10
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-6
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.5	0.70	ng/L		09/25/12 18:36	10/15/12 14:48	1
2,3-Dihydroindene	5.3		5.1	0.72	ng/L		09/25/12 18:36	10/15/12 14:48	1
1-Methylnaphthalene	1.7	J	5.7	0.91	ng/L		09/25/12 18:36	10/15/12 14:48	1
2-Methylnaphthalene	1.6	J	6.1	1.0	ng/L		09/25/12 18:36	10/15/12 14:48	1
Acenaphthene	16		5.8	0.51	ng/L		09/25/12 18:36	10/15/12 14:48	1
Acenaphthylene	1.2	J	4.9	0.79	ng/L		09/25/12 18:36	10/15/12 14:48	1
Acridine	7.1	*	6.7	6.7	ng/L		09/25/12 18:38	10/15/12 14:48	1
Anthracene	3.0	J	4.3	0.82	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[a]anthracene	ND		4.4	0.94	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[b]fluoranthene	ND		4.8	1.4	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo(b)thiophene	4.6	J	5.3	0.77	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Benzo[g,h,i]perylene	1.7	J B	6.4	1.2	ng/L		09/25/12 18:36	10/15/12 14:48	1
Carbazole	1.3	J	3.9	0.74	ng/L		09/25/12 18:36	10/15/12 14:48	1
Chrysene	ND		5.7	1.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		09/25/12 18:36	10/15/12 14:48	1
Dibenzofuran	ND		5.8	1.0	ng/L		09/25/12 18:36	10/15/12 14:48	1
Dibenzothiophene	ND		4.2	1.0	ng/L		09/25/12 18:36	10/15/12 14:48	1
Fluoranthene	ND		4.7	1.7	ng/L		09/25/12 18:36	10/15/12 14:48	1
Fluorene	ND		4.2	0.87	ng/L		09/25/12 18:36	10/15/12 14:48	1
Indene	9.9	*	4.8	3.4	ng/L		09/25/12 18:36	10/15/12 14:48	1
Indole	ND		4.8	1.8	ng/L		09/25/12 18:36	10/15/12 14:48	1
Indeno[1,2,3-cd]pyrene	1.6	J B	5.5	1.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Naphthalene	5.5	J *	8.8	1.2	ng/L		09/25/12 18:36	10/15/12 14:48	1
Perylene	ND		3.9	3.9	ng/L		09/25/12 18:36	10/15/12 14:48	1
Phenanthrene	ND		6.5	3.3	ng/L		09/25/12 18:36	10/15/12 14:48	1
Pyrene	12		4.3	1.0	ng/L		09/25/12 18:36	10/15/12 14:48	1
Quinoline	ND		9.2	5.8	ng/L		09/25/12 18:36	10/15/12 14:48	1
Biphenyl	ND		5.7	1.1	ng/L		09/25/12 18:38	10/15/12 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*85*	*X*	*23 - 84*	*09/25/12 18:36*	*10/15/12 14:48*	*1*
Chrysene-d12 (Surr)	*28*		*28 - 101*	*09/25/12 18:36*	*10/15/12 14:48*	*1*
Naphthalene-d8 (Surr)	*85*		*22 - 97*	*09/25/12 18:36*	*10/15/12 14:48*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP4
Date Collected: 09/19/12 09:28
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-7
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.3	0.67	ng/L		09/25/12 18:36	10/15/12 15:27	1
2,3-Dihydroindene	**40**		4.9	0.69	ng/L		09/25/12 18:36	10/15/12 15:27	1
1-Methylnaphthalene	ND		5.5	0.87	ng/L		09/25/12 18:36	10/15/12 15:27	1
2-Methylnaphthalene	ND		5.8	0.96	ng/L		09/25/12 18:36	10/15/12 15:27	1
Acenaphthene	**56**		5.6	0.49	ng/L		09/25/12 18:36	10/15/12 15:27	1
Acenaphthylene	**4.2**	J	4.7	0.75	ng/L		09/25/12 18:36	10/15/12 15:27	1
Acridine	ND	*	6.4	6.4	ng/L		09/25/12 18:36	10/15/12 15:27	1
Anthracene	**2.0**	J	4.1	0.78	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[a]anthracene	ND		4.2	0.90	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[a]pyrene	ND		2.4	1.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[e]pyrene	ND		4.2	1.1	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[b]fluoranthene	ND		4.6	1.4	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo(b)thiophene	**6.3**		5.1	0.73	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[k]fluoranthene	ND		4.0	1.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Benzo[g,h,i]perylene	**1.6**	J B	6.1	1.1	ng/L		09/25/12 18:36	10/15/12 15:27	1
Carbazole	**5.5**		3.7	0.71	ng/L		09/25/12 18:36	10/15/12 15:27	1
Chrysene	ND		5.5	1.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Dibenz(a,h)anthracene	ND		5.8	1.0	ng/L		09/25/12 18:36	10/15/12 15:27	1
Dibenzofuran	**1.1**	J	5.6	0.97	ng/L		09/25/12 18:36	10/15/12 15:27	1
Dibenzothiophene	ND		4.0	0.96	ng/L		09/25/12 18:36	10/15/12 15:27	1
Fluoranthene	**2.3**	J	4.5	1.7	ng/L		09/25/12 18:36	10/15/12 15:27	1
Fluorene	**2.5**	J	4.0	0.83	ng/L		09/25/12 18:36	10/15/12 15:27	1
Indene	**4.0**	J *	4.6	3.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Indole	ND		4.6	1.7	ng/L		09/25/12 18:36	10/15/12 15:27	1
Indeno[1,2,3-cd]pyrene	**1.7**	J B	5.3	1.2	ng/L		09/25/12 18:36	10/15/12 15:27	1
Naphthalene	**3.9**	J *	8.4	1.1	ng/L		09/25/12 18:36	10/15/12 15:27	1
Perylene	ND		3.7	3.7	ng/L		09/25/12 18:36	10/15/12 15:27	1
Phenanthrene	**3.5**	J	6.2	3.1	ng/L		09/25/12 18:36	10/15/12 15:27	1
Pyrene	**9.2**		4.1	0.97	ng/L		09/25/12 18:36	10/15/12 15:27	1
Quinoline	ND		8.8	5.5	ng/L		09/25/12 18:36	10/15/12 15:27	1
Biphenyl	ND		5.5	1.0	ng/L		09/25/12 18:36	10/15/12 15:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*87*	*X*	*23 - 84*	*09/25/12 18:36*	*10/15/12 15:27*	*1*
Chrysene-d12 (Surr)	*69*		*28 - 101*	*09/25/12 18:36*	*10/15/12 15:27*	*1*
Naphthalene-d8 (Surr)	*84*		*22 - 97*	*09/25/12 18:36*	*10/15/12 15:27*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W23
Date Collected: 09/19/12 08:50
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-8
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	2.5	J	5.7	0.72	ng/L		09/25/12 18:36	10/15/12 16:07	1
Acenaphthylene	140		5.1	0.81	ng/L		09/25/12 18:36	10/15/12 16:07	1
Acridine	310	*	6.9	6.9	ng/L		09/25/12 18:36	10/15/12 16:07	1
Anthracene	210		4.4	0.84	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[a]anthracene	190		4.5	0.97	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[a]pyrene	10		2.6	1.3	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[e]pyrene	7.3		4.5	1.2	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[b]fluoranthene	23		5.0	1.5	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo(b)thiophene	83		5.5	0.79	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[k]fluoranthene	ND		4.3	1.3	ng/L		09/25/12 18:36	10/15/12 16:07	1
Benzo[g,h,i]perylene	2.1	J B	6.5	1.2	ng/L		09/25/12 18:36	10/15/12 16:07	1
Carbazole	170		4.0	0.76	ng/L		09/25/12 18:36	10/15/12 16:07	1
Chrysene	110		5.9	1.3	ng/L		09/25/12 18:36	10/15/12 16:07	1
Dibenz(a,h)anthracene	1.2	J	6.2	1.1	ng/L		09/25/12 18:36	10/15/12 16:07	1
Indene	55	*	5.0	3.5	ng/L		09/25/12 18:36	10/15/12 16:07	1
Indole	ND		5.0	1.8	ng/L		09/25/12 18:36	10/15/12 16:07	1
Indeno[1,2,3-cd]pyrene	2.2	J B	5.7	1.3	ng/L		09/25/12 18:36	10/15/12 16:07	1
Perylene	ND		4.0	4.0	ng/L		09/25/12 18:36	10/15/12 16:07	1
Quinoline	24		9.5	6.0	ng/L		09/25/12 18:36	10/15/12 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*88*	*X*	*23 - 84*	*09/25/12 18:36*	*10/15/12 16:07*	*1*
Chrysene-d12 (Surr)	*57*		*28 - 101*	*09/25/12 18:36*	*10/15/12 16:07*	*1*
Naphthalene-d8 (Surr)	*77*		*22 - 97*	*09/25/12 18:36*	*10/15/12 16:07*	*1*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Dihydroindene	410		53	7.4	ng/L		09/25/12 18:36	10/16/12 15:20	10
1-Methylnaphthalene	1200		59	9.4	ng/L		09/25/12 18:36	10/16/12 15:20	10
2-Methylnaphthalene	640		62	10	ng/L		09/25/12 18:36	10/16/12 15:20	10
Dibenzofuran	1000		60	10	ng/L		09/25/12 18:36	10/16/12 15:20	10
Dibenzothiophene	380		43	10	ng/L		09/25/12 18:36	10/16/12 15:20	10
Fluoranthene	1800		49	18	ng/L		09/25/12 18:36	10/16/12 15:20	10
Fluorene	2500		43	9.0	ng/L		09/25/12 18:36	10/16/12 15:20	10
Naphthalene	1600	*	91	12	ng/L		09/25/12 18:36	10/16/12 15:20	10
Phenanthrene	1300		66	34	ng/L		09/25/12 18:36	10/16/12 15:20	10
Pyrene	1700		44	10	ng/L		09/25/12 18:36	10/16/12 15:20	10
Biphenyl	520		59	11	ng/L		09/25/12 18:36	10/16/12 15:20	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*90*	*D*	*23 - 84*	*09/25/12 18:36*	*10/16/12 15:20*	*10*
Chrysene-d12 (Surr)	*59*	*D*	*28 - 101*	*09/25/12 18:36*	*10/16/12 15:20*	*10*
Naphthalene-d8 (Surr)	*81*	*D*	*22 - 97*	*09/25/12 18:36*	*10/16/12 15:20*	*10*

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	3100		120	11	ng/L		09/25/12 18:36	10/16/12 15:59	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*87*	*D*	*23 - 84*	*09/25/12 18:36*	*10/16/12 15:59*	*20*
Chrysene-d12 (Surr)	*49*	*D*	*28 - 101*	*09/25/12 18:36*	*10/16/12 15:59*	*20*
Naphthalene-d8 (Surr)	*77*	*D*	*22 - 97*	*09/25/12 18:36*	*10/16/12 15:59*	*20*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E7

Date Collected: 09/19/12 12:35
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-9

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.5	0.69	ng/L		09/25/12 18:36	10/15/12 16:46	1
2,3-Dihydroindene	3.8	J	5.1	0.71	ng/L		09/25/12 18:36	10/15/12 16:46	1
1-Methylnaphthalene	1.1	J	5.7	0.91	ng/L		09/25/12 18:36	10/15/12 16:46	1
2-Methylnaphthalene	ND		6.0	1.0	ng/L		09/25/12 18:36	10/15/12 16:46	1
Acenaphthene	8.6		5.8	0.51	ng/L		09/25/12 18:36	10/15/12 16:46	1
Acenaphthylene	ND		4.9	0.78	ng/L		09/25/12 18:36	10/15/12 16:46	1
Acridine	ND	*	6.6	6.6	ng/L		09/25/12 18:36	10/15/12 16:46	1
Anthracene	1.7	J	4.3	0.81	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[a]anthracene	1.5	J	4.4	0.94	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[a]pyrene	1.4	J	2.5	1.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[b]fluoranthene	2.0	J	4.8	1.4	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo(b)thiophene	3.1	J	5.3	0.76	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[k]fluoranthene	2.2	J	4.2	1.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Benzo[g,h,i]perylene	2.7	J B	6.3	1.2	ng/L		09/25/12 18:36	10/15/12 16:46	1
Carbazole	1.1	J	3.9	0.73	ng/L		09/25/12 18:36	10/15/12 16:46	1
Chrysene	1.9	J	5.7	1.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Dibenz(a,h)anthracene	2.3	J	6.0	1.1	ng/L		09/25/12 18:36	10/15/12 16:46	1
Dibenzofuran	ND		5.8	1.0	ng/L		09/25/12 18:36	10/15/12 16:46	1
Dibenzothiophene	ND		4.2	1.0	ng/L		09/25/12 18:36	10/15/12 16:46	1
Fluoranthene	2.3	J	4.7	1.7	ng/L		09/25/12 18:36	10/15/12 16:46	1
Fluorene	ND		4.2	0.87	ng/L		09/25/12 18:36	10/15/12 16:46	1
Indene	6.1	*	4.8	3.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Indole	ND		4.8	1.8	ng/L		09/25/12 18:36	10/15/12 16:46	1
Indeno[1,2,3-cd]pyrene	2.8	J B	5.5	1.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Naphthalene	4.1	J *	8.8	1.2	ng/L		09/25/12 18:36	10/15/12 16:46	1
Perylene	ND		3.9	3.9	ng/L		09/25/12 18:36	10/15/12 16:46	1
Phenanthrene	ND		6.4	3.3	ng/L		09/25/12 18:36	10/15/12 16:46	1
Pyrene	2.6	J	4.3	1.0	ng/L		09/25/12 18:36	10/15/12 16:46	1
Quinoline	ND		9.2	5.8	ng/L		09/25/12 18:36	10/15/12 16:46	1
Biphenyl	ND		5.7	1.1	ng/L		09/25/12 18:36	10/15/12 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*78*		*23 - 84*	*09/25/12 18:36*	*10/15/12 16:46*	*1*
Chrysene-d12 (Surr)	*49*		*28 - 101*	*09/25/12 18:36*	*10/15/12 16:46*	*1*
Naphthalene-d8 (Surr)	*80*		*22 - 97*	*09/25/12 18:36*	*10/15/12 16:46*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E7D
Date Collected: 09/19/12 12:35
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-10
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.9	0.74	ng/L		09/25/12 18:36	10/15/12 18:43	1
2,3-Dihydroindene	4.5	J	5.4	0.76	ng/L		09/25/12 18:36	10/15/12 18:43	1
1-Methylnaphthalene	1.5	J	6.1	0.97	ng/L		09/25/12 18:36	10/15/12 18:43	1
2-Methylnaphthalene	1.7	J	6.4	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Acenaphthene	9.6		6.2	0.54	ng/L		09/25/12 18:36	10/15/12 18:43	1
Acenaphthylene	ND		5.2	0.84	ng/L		09/25/12 18:36	10/15/12 18:43	1
Acridine	ND	*	7.1	7.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Anthracene	1.7	J	4.6	0.87	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[a]anthracene	1.0	J	4.7	1.0	ng/L		09/25/12 18:38	10/15/12 18:43	1
Benzo[a]pyrene	1.3	J	2.7	1.3	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[e]pyrene	ND		4.7	1.2	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[b]fluoranthene	ND		5.1	1.5	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo(b)thiophene	3.5	J	5.6	0.81	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[k]fluoranthene	1.5	J	4.4	1.3	ng/L		09/25/12 18:36	10/15/12 18:43	1
Benzo[g,h,i]perylene	2.3	J B	6.7	1.3	ng/L		09/25/12 18:36	10/15/12 18:43	1
Carbazole	1.2	J	4.1	0.78	ng/L		09/25/12 18:36	10/15/12 18:43	1
Chrysene	ND		6.1	1.3	ng/L		09/25/12 18:36	10/15/12 18:43	1
Dibenz(a,h)anthracene	1.5	J	6.4	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Dibenzofuran	ND		6.2	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Dibenzothiophene	ND		4.4	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Fluoranthene	1.8	J	5.0	1.8	ng/L		09/25/12 18:36	10/15/12 18:43	1
Fluorene	ND		4.4	0.92	ng/L		09/25/12 18:36	10/15/12 18:43	1
Indene	6.5	*	5.1	3.6	ng/L		09/25/12 18:36	10/15/12 18:43	1
Indole	ND		5.1	1.9	ng/L		09/25/12 18:36	10/15/12 18:43	1
Indeno[1,2,3-cd]pyrene	2.1	J B	5.9	1.4	ng/L		09/25/12 18:36	10/15/12 18:43	1
Naphthalene	6.8	J *	9.3	1.2	ng/L		09/25/12 18:36	10/15/12 18:43	1
Perylene	ND		4.1	4.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Phenanthrene	ND		6.8	3.5	ng/L		09/25/12 18:38	10/15/12 18:43	1
Pyrene	2.4	J	4.6	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Quinoline	ND		9.8	6.1	ng/L		09/25/12 18:36	10/15/12 18:43	1
Biphenyl	ND		6.1	1.1	ng/L		09/25/12 18:36	10/15/12 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*88*	*X*	*23 - 84*	*09/25/12 18:36*	*10/15/12 18:43*	*1*
Chrysene-d12 (Surr)	*60*		*28 - 101*	*09/25/12 18:36*	*10/15/12 18:43*	*1*
Naphthalene-d8 (Surr)	*89*		*22 - 97*	*09/25/12 18:36*	*10/15/12 18:43*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 E7FB
Date Collected: 09/19/12 12:35
Date Received: 09/20/12 09:30

Lab Sample ID: 280-33493-11
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		6.9	0.87	ng/L		09/25/12 18:36	10/15/12 19:22	1
2,3-Dihydroindene	ND		6.4	0.89	ng/L		09/25/12 18:36	10/15/12 19:22	1
1-Methylnaphthalene	ND		7.2	1.1	ng/L		09/25/12 18:36	10/15/12 19:22	1
2-Methylnaphthalene	ND		7.5	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Acenaphthene	ND		7.3	0.64	ng/L		09/25/12 18:36	10/15/12 19:22	1
Acenaphthylene	ND		6.1	0.98	ng/L		09/25/12 18:36	10/15/12 19:22	1
Acridine	ND	*	8.3	8.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Anthracene	ND		5.4	1.0	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[a]anthracene	ND		5.5	1.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[a]pyrene	ND		3.2	1.6	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[e]pyrene	ND		5.5	1.5	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[b]fluoranthene	ND		6.0	1.8	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo(b)thiophene	ND		6.8	0.96	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[k]fluoranthene	ND		5.2	1.6	ng/L		09/25/12 18:36	10/15/12 19:22	1
Benzo[g,h,i]perylene	**2.2**	**J B**	7.9	1.5	ng/L		09/25/12 18:36	10/15/12 19:22	1
Carbazole	ND		4.9	0.92	ng/L		09/25/12 18:36	10/15/12 19:22	1
Chrysene	ND		7.2	1.6	ng/L		09/25/12 18:36	10/15/12 19:22	1
Dibenz(a,h)anthracene	ND		7.5	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Dibenzofuran	ND		7.3	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Dibenzothiophene	ND		5.2	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Fluoranthene	ND		5.9	2.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Fluorene	ND		5.2	1.1	ng/L		09/25/12 18:36	10/15/12 19:22	1
Indene	ND	*	6.0	4.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Indole	ND		6.0	2.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Indeno[1,2,3-cd]pyrene	**1.9**	**J B**	6.9	1.6	ng/L		09/25/12 18:36	10/15/12 19:22	1
Naphthalene	**2.7**	**J ***	11	1.5	ng/L		09/25/12 18:36	10/15/12 19:22	1
Perylene	ND		4.9	4.9	ng/L		09/25/12 18:36	10/15/12 19:22	1
Phenanthrene	ND		8.0	4.1	ng/L		09/25/12 18:36	10/15/12 19:22	1
Pyrene	ND		5.4	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1
Quinoline	ND		11	7.2	ng/L		09/25/12 18:36	10/15/12 19:22	1
Biphenyl	ND		7.2	1.3	ng/L		09/25/12 18:36	10/15/12 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*73*		*23 - 84*	*09/25/12 18:36*	*10/15/12 19:22*	*1*
Chrysene-d12 (Surr)	*105*	*X*	*28 - 101*	*09/25/12 18:36*	*10/15/12 19:22*	*1*
Naphthalene-d8 (Surr)	*77*		*22 - 97*	*09/25/12 18:36*	*10/15/12 19:22*	*1*

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		FD10	sene-d12 (	thalene-d8
Lab Sample ID	Client Sample ID	(23-84)	(28-101)	(22-97)
280-33493-1	0987-09 W105	82	50	85
280-33493-2	0987-09 E13	82	51	85
280-33493-3	0987-09 SLP6	92 X	69	89
280-33493-4	0987-09 SLP10T	86 X	61	89
280-33493-5	0987-09 W48	81	25 X	82
280-33493-6	0987-09 W119	85 X	28	85
280-33493-7	0987-09 SLP4	87 X	69	84
280-33493-8	0987-09 W23	88 X	57	77
280-33493-8 - DL	0987-09 W23	90 D	59 D	81 D
280-33493-8 - DL2	0987-09 W23	87 D	49 D	77 D
280-33493-9	0987-09 E7	78	49	80
280-33493-9 MS	0987-09 E7	88 X	51	89
280-33493-9 MSD	0987-09 E7	87 X	72	86
280-33493-10	0987-09 E7D	88 X	60	89
280-33493-11	0987-09 E7FB	73	105 X	77
LCS 280-138557/2-A	Lab Control Sample	83	97	85
LCS 280-139011/2-A	Lab Control Sample	86 X	105 X	95
LCSD 280-138557/3-A	Lab Control Sample Dup	86 X	103 X	89
MB 280-138557/1-A	Method Blank	87 X	104 X	92
MB 280-139011/1-A	Method Blank	89 X	106 X	99 X

Surrogate Legend

FD10 = Fluorene-d10 (Surr)
Chrysene-d12 (Surr) = Chrysene-d12 (Surr)
Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-138557/1-A
Matrix: Water
Analysis Batch: 141615

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 138557

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/22/12 12:15	10/11/12 19:21	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		09/22/12 12:15	10/11/12 19:21	1
1-Methylnaphthalene	ND		5.6	0.89	ng/L		09/22/12 12:15	10/11/12 19:21	1
2-Methylnaphthalene	ND		5.9	0.98	ng/L		09/22/12 12:15	10/11/12 19:21	1
Acenaphthene	ND		5.7	0.50	ng/L		09/22/12 12:15	10/11/12 19:21	1
Acenaphthylene	ND		4.8	0.77	ng/L		09/22/12 12:15	10/11/12 19:21	1
Acridine	ND		6.5	6.5	ng/L		09/22/12 12:15	10/11/12 19:21	1
Anthracene	ND		4.2	0.80	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Benzo[g,h,i]perylene	1.25	J	6.2	1.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Carbazole	ND		3.8	0.72	ng/L		09/22/12 12:15	10/11/12 19:21	1
Chrysene	ND		5.6	1.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/22/12 12:15	10/11/12 19:21	1
Dibenzofuran	ND		5.7	0.99	ng/L		09/22/12 12:15	10/11/12 19:21	1
Dibenzothiophene	ND		4.1	0.98	ng/L		09/22/12 12:15	10/11/12 19:21	1
Fluoranthene	ND		4.6	1.7	ng/L		09/22/12 12:15	10/11/12 19:21	1
Fluorene	ND		4.1	0.85	ng/L		09/22/12 12:15	10/11/12 19:21	1
Indene	ND		4.7	3.3	ng/L		09/22/12 12:15	10/11/12 19:21	1
Indole	ND		4.7	1.7	ng/L		09/22/12 12:15	10/11/12 19:21	1
Indeno[1,2,3-cd]pyrene	ND		5.4	1.3	ng/L		09/22/12 12:15	10/11/12 19:21	1
Naphthalene	1.19	J	8.6	1.1	ng/L		09/22/12 12:15	10/11/12 19:21	1
Perylene	ND		3.8	3.8	ng/L		09/22/12 12:15	10/11/12 19:21	1
Phenanthrene	ND		6.3	3.2	ng/L		09/22/12 12:15	10/11/12 19:21	1
Pyrene	ND		4.2	0.99	ng/L		09/22/12 12:15	10/11/12 19:21	1
Quinoline	ND		9.0	5.7	ng/L		09/22/12 12:15	10/11/12 19:21	1
Biphenyl	ND		5.6	1.1	ng/L		09/22/12 12:15	10/11/12 19:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*87*	*X*	*23 - 84*	*09/22/12 12:15*	*10/11/12 19:21*	*1*
Chrysene-d12 (Surr)	*104*	*X*	*28 - 101*	*09/22/12 12:15*	*10/11/12 19:21*	*1*
Naphthalene-d8 (Surr)	*92*		*22 - 97*	*09/22/12 12:15*	*10/11/12 19:21*	*1*

Lab Sample ID: LCS 280-138557/2-A
Matrix: Water
Analysis Batch: 141615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 138557

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	62.9		ng/L		84	30 - 150
2,3-Dihydroindene	75.0	60.1		ng/L		80	30 - 150
1-Methylnaphthalene	75.0	63.2		ng/L		84	30 - 150
2-Methylnaphthalene	75.0	62.8		ng/L		84	25 - 95
3-Methylcholanthrene	75.0	51.9		ng/L		69	30 - 150
Acenaphthene	75.0	63.9		ng/L		85	30 - 150
Acenaphthylene	75.0	57.9		ng/L		77	30 - 150

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-138557/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 141615 — **Prep Batch: 138557**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acridine	75.0	50.6		ng/L		67	30 - 150
Anthracene	75.0	62.3		ng/L		83	30 - 150
Benzo[a]anthracene	75.0	71.1		ng/L		95	30 - 150
Benzo[a]pyrene	75.0	60.2		ng/L		80	30 - 150
Benzo[e]pyrene	75.0	67.3		ng/L		90	37 - 105
Benzo[b]fluoranthene	75.0	65.5		ng/L		87	30 - 150
Benzo(b)thiophene	75.0	64.4		ng/L		86	30 - 150
Benzo[k]fluoranthene	75.0	69.2		ng/L		92	30 - 150
Benzo[g,h,i]perylene	75.0	60.9		ng/L		81	30 - 150
Carbazole	75.0	65.0		ng/L		87	30 - 150
Chrysene	75.0	73.7		ng/L		98	20 - 136
Dibenz(a,h)anthracene	75.0	66.5		ng/L		89	30 - 150
Dibenzofuran	75.0	63.7		ng/L		85	30 - 150
Dibenzothiophene	75.0	65.7		ng/L		88	30 - 150
Fluorenthene	75.0	67.6		ng/L		90	30 - 150
Fluorene	75.0	64.8		ng/L		86	34 - 96
Indene	75.0	61.2		ng/L		82	22 - 86
Indole	75.0	55.2		ng/L		74	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	60.4		ng/L		81	30 - 150
Naphthalene	75.0	64.1		ng/L		85	27 - 95
Perylene	75.0	59.2		ng/L		79	30 - 150
Phenanthrene	75.0	65.9		ng/L		88	30 - 150
Pyrene	75.0	67.5		ng/L		90	30 - 150
Quinoline	75.0	61.7		ng/L		82	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	29.4		ng/L		39	30 - 150
Biphenyl	75.0	62.7		ng/L		84	30 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*83*		*23 - 84*
Chrysene-d12 (Surr)	*97*		*28 - 101*
Naphthalene-d8 (Surr)	*85*		*22 - 97*

Lab Sample ID: LCSD 280-138557/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 141615 — **Prep Batch: 138557**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3-Benzofuran	75.0	65.9		ng/L		88	30 - 150	5	50
2,3-Dihydroindene	75.0	62.8		ng/L		84	30 - 150	4	50
1-Methylnaphthalene	75.0	68.5		ng/L		91	30 - 150	8	50
2-Methylnaphthalene	75.0	68.3		ng/L		91	25 - 95	8	50
3-Methylcholanthrene	75.0	47.8		ng/L		64	30 - 150	8	50
Acenaphthene	75.0	68.4		ng/L		91	30 - 150	7	50
Acenaphthylene	75.0	65.2		ng/L		87	30 - 150	12	50
Acridine	75.0	9.57	*	ng/L		13	30 - 150	136	50
Anthracene	75.0	67.1		ng/L		89	30 - 150	7	50
Benzo[a]anthracene	75.0	75.4		ng/L		100	30 - 150	6	50
Benzo[a]pyrene	75.0	60.4		ng/L		81	30 - 150	0	50
Benzo[e]pyrene	75.0	69.6		ng/L		93	37 - 105	3	50

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCSD 280-138557/3-A
Matrix: Water
Analysis Batch: 141615

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 138557

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	75.0	68.7		ng/L		92	30 - 150	5	50
Benzo(b)thiophene	75.0	67.5		ng/L		90	30 - 150	5	50
Benzo[k]fluoranthene	75.0	70.4		ng/L		94	30 - 150	2	50
Benzo[g,h,i]perylene	75.0	60.2		ng/L		80	30 - 150	1	50
Carbazole	75.0	70.2		ng/L		94	30 - 150	8	50
Chrysene	75.0	77.9		ng/L		104	20 - 136	6	50
Dibenz(a,h)anthracene	75.0	62.9		ng/L		84	30 - 150	5	50
Dibenzofuran	75.0	68.1		ng/L		91	30 - 150	7	50
Dibenzothiophene	75.0	70.5		ng/L		94	30 - 150	7	50
Fluoranthene	75.0	72.2		ng/L		96	30 - 150	7	50
Fluorene	75.0	69.1		ng/L		92	34 - 96	6	50
Indene	75.0	64.0		ng/L		85	22 - 86	5	50
Indole	75.0	57.9		ng/L		77	30 - 150	5	50
Indeno[1,2,3-cd]pyrene	75.0	56.4		ng/L		78	30 - 150	3	50
Naphthalene	75.0	69.9		ng/L		93	27 - 95	9	50
Perylene	75.0	50.9		ng/L		68	30 - 150	15	50
Phenanthrene	75.0	70.7		ng/L		94	30 - 150	7	50
Pyrene	75.0	71.7		ng/L		96	30 - 150	6	50
Quinoline	75.0	45.1		ng/L		60	20 - 112	31	50
7,12-Dimethylbenz(a)anthracene	75.0	33.8		ng/L		45	30 - 150	14	50
Biphenyl	75.0	66.9		ng/L		89	30 - 150	7	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Fluorene-d10 (Surr)	*86*	*X*	*23 - 84*
Chrysene-d12 (Surr)	*103*	*X*	*28 - 101*
Naphthalene-d8 (Surr)	*89*		*22 - 97*

Lab Sample ID: MB 280-139011/1-A
Matrix: Water
Analysis Batch: 142187

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 139011

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		09/25/12 18:36	10/15/12 13:29	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		09/25/12 18:36	10/15/12 13:29	1
1-Methylnaphthalene	ND		5.6	0.89	ng/L		09/25/12 18:36	10/15/12 13:29	1
2-Methylnaphthalene	ND		5.9	0.98	ng/L		09/25/12 18:36	10/15/12 13:29	1
Acenaphthene	ND		5.7	0.50	ng/L		09/25/12 18:36	10/15/12 13:29	1
Acenaphthylene	ND		4.8	0.77	ng/L		09/25/12 18:36	10/15/12 13:29	1
Acridine	ND		6.5	6.5	ng/L		09/25/12 18:36	10/15/12 13:29	1
Anthracene	ND		4.2	0.60	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[a]anthracene	ND		4.3	0.92	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[b]fluoranthene	ND		4.7	1.4	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[k]fluoranthene	ND		4.1	1.2	ng/L		09/25/12 18:36	10/15/12 13:29	1
Benzo[g,h,i]perylene	2.04	J	6.2	1.2	ng/L		09/25/12 18:36	10/15/12 13:29	1
Carbazole	ND		3.8	0.72	ng/L		09/25/12 18:36	10/15/12 13:29	1
Chrysene	ND		5.6	1.2	ng/L		09/25/12 18:36	10/15/12 13:29	1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: MB 280-139011/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 142187 — **Prep Batch: 139011**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		5.9	1.0	ng/L		09/25/12 18:36	10/15/12 13:29	1
Dibenzofuran	ND		5.7	0.99	ng/L		09/25/12 18:36	10/15/12 13:29	1
Dibenzothiophene	ND		4.1	0.98	ng/L		09/25/12 18:36	10/15/12 13:29	1
Fluoranthene	ND		4.6	1.7	ng/L		09/25/12 18:36	10/15/12 13:29	1
Fluorene	ND		4.1	0.85	ng/L		09/25/12 18:36	10/15/12 13:29	1
Indene	ND		4.7	3.3	ng/L		09/25/12 18:36	10/15/12 13:29	1
Indole	ND		4.7	1.7	ng/L		09/25/12 18:36	10/15/12 13:29	1
Indeno[1,2,3-cd]pyrene	1.80	J	5.4	1.3	ng/L		09/25/12 18:36	10/15/12 13:29	1
Naphthalene	ND		8.6	1.1	ng/L		09/25/12 18:36	10/15/12 13:29	1
Perylene	ND		3.8	3.8	ng/L		09/25/12 18:36	10/15/12 13:29	1
Phenanthrene	ND		6.3	3.2	ng/L		09/25/12 18:36	10/15/12 13:29	1
Pyrene	ND		4.2	0.99	ng/L		09/25/12 18:36	10/15/12 13:29	1
Quinoline	ND		9.0	5.7	ng/L		09/25/12 18:38	10/15/12 13:29	1
Biphenyl	ND		5.6	1.1	ng/L		09/25/12 18:36	10/15/12 13:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*89*	*X*	*23 - 84*	*09/25/12 18:36*	*10/15/12 13:29*	*1*
Chrysene-d12 (Surr)	*108*	*X*	*28 - 101*	*09/25/12 18:36*	*10/15/12 13:29*	*1*
Naphthalene-d8 (Surr)	*99*	*X*	*22 - 97*	*09/25/12 18:36*	*10/15/12 13:29*	*1*

Lab Sample ID: LCS 280-139011/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 142187 — **Prep Batch: 139011**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	70.6		ng/L		94	30 - 150
2,3-Dihydroindene	75.0	68.8		ng/L		92	30 - 150
1-Methylnaphthalene	75.0	70.9		ng/L		94	30 - 150
2-Methylnaphthalene	75.0	71.6		ng/L		95	25 - 95
3-Methylcholanthrene	75.0	62.0		ng/L		83	30 - 150
Acenaphthene	75.0	69.9		ng/L		93	30 - 150
Acenaphthylene	75.0	62.2		ng/L		83	30 - 150
Acridine	75.0	15.2	*	ng/L		20	30 - 150
Anthracene	75.0	68.8		ng/L		92	30 - 150
Benzo[a]anthracene	75.0	81.2		ng/L		108	30 - 150
Benzo[a]pyrene	75.0	68.5		ng/L		91	30 - 150
Benzo[e]pyrene	75.0	75.1		ng/L		100	37 - 105
Benzo[b]fluoranthene	75.0	70.3		ng/L		94	30 - 150
Benzo(b)thiophene	75.0	70.9		ng/L		95	30 - 150
Benzo[k]fluoranthene	75.0	80.2		ng/L		107	30 - 150
Benzo[g,h,i]perylene	75.0	67.8		ng/L		90	30 - 150
Carbazole	75.0	73.1		ng/L		98	30 - 150
Chrysene	75.0	80.3		ng/L		107	20 - 136
Dibenz(a,h)anthracene	75.0	73.3		ng/L		98	30 - 150
Dibenzofuran	75.0	70.9		ng/L		95	30 - 150
Dibenzothiophene	75.0	73.9		ng/L		98	30 - 150
Fluoranthene	75.0	80.3		ng/L		107	30 - 150
Fluorene	75.0	70.8		ng/L		94	34 - 96
Indene	75.0	68.3	*	ng/L		91	22 - 86

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-139011/2-A
Matrix: Water
Analysis Batch: 142187

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 139011

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Indole	75.0	65.6		ng/L		87	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	66.8		ng/L		89	30 - 150
Naphthalene	75.0	76.0	*	ng/L		101	27 - 95
Perylene	75.0	68.1		ng/L		91	30 - 150
Phenanthrene	75.0	76.9		ng/L		103	30 - 150
Pyrene	75.0	80.0		ng/L		107	30 - 150
Quinoline	75.0	42.9		ng/L		57	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	19.2	*	ng/L		26	30 - 150
Biphenyl	75.0	70.2		ng/L		94	30 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*86*	*X*	*23 - 84*
Chrysene-d12 (Surr)	*105*	*X*	*28 - 101*
Naphthalene-d8 (Surr)	*95*		*22 - 97*

Lab Sample ID: 280-33493-9 MS
Matrix: Water
Analysis Batch: 142187

Client Sample ID: 0987-09 E7
Prep Type: Total/NA
Prep Batch: 139011

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		81.8	72.7		ng/L		89	30 - 150
2,3-Dihydroindene	3.8	J	81.8	72.6		ng/L		84	30 - 150
1-Methylnaphthalene	1.1	J	81.8	74.8		ng/L		90	30 - 150
2-Methylnaphthalene	ND		81.8	75.0		ng/L		92	25 - 95
3-Methylcholanthrene	ND		81.8	8.78	F	ng/L		11	30 - 150
Acenaphthene	6.6		81.8	83.3		ng/L		91	30 - 150
Acenaphthylene	ND		81.8	73.7		ng/L		90	30 - 150
Acridine	ND	*	81.8	83.7		ng/L		78	30 - 150
Anthracene	1.7	J	81.8	82.8		ng/L		99	30 - 150
Benzo[a]anthracene	1.5	J	81.8	41.9		ng/L		49	30 - 150
Benzo[a]pyrene	1.4	J	81.8	9.04	F	ng/L		9	30 - 150
Benzo[e]pyrene	ND		81.8	8.64	F	ng/L		11	37 - 105
Benzo[b]fluoranthene	2.0	J	81.8	10.8	F	ng/L		11	30 - 150
Benzo(b)thiophene	3.1	J	81.8	73.8		ng/L		86	30 - 150
Benzo[k]fluoranthene	2.2	J	81.8	10.1	F	ng/L		10	30 - 150
Benzo[g,h,i]perylene	2.7	J B	81.8	4.24	J F	ng/L		2	30 - 150
Carbazole	1.1	J	81.8	87.0		ng/L		105	30 - 150
Chrysene	1.9	J	81.8	42.2		ng/L		49	20 - 136
Dibenz(a,h)anthracene	2.3	J	81.8	3.53	J F	ng/L		1	30 - 150
Dibenzofuran	ND		81.8	74.9		ng/L		92	30 - 150
Dibenzothiophene	ND		81.8	80.2		ng/L		98	30 - 150
Fluoranthene	2.3	J	81.8	84.5		ng/L		101	30 - 150
Fluorene	ND		81.8	74.5		ng/L		91	34 - 96
Indene	6.1	*	81.8	76.8	F	ng/L		87	22 - 86
Indole	ND		81.8	71.2		ng/L		87	30 - 150
Indeno[1,2,3-cd]pyrene	2.8	J B	81.8	4.38	J F	ng/L		2	30 - 150
Naphthalene	4.1	J *	81.8	80.9		ng/L		94	27 - 95
Perylene	ND		81.8	9.25	F	ng/L		11	30 - 150
Phenanthrene	ND		81.8	80.6		ng/L		98	30 - 150

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-33493-9 MS — **Client Sample ID: 0987-09 E7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 142187 — **Prep Batch: 139011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyrene	2.6	J	81.8	84.3		ng/L		100	30 - 150
Quinoline	ND		81.8	72.9		ng/L		89	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		81.8	72.3		ng/L		88	30 - 150
Biphenyl	ND		81.8	72.1		ng/L		88	30 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*88*	*X*	*23 - 84*
Chrysene-d12 (Surr)	*51*		*28 - 101*
Naphthalene-d8 (Surr)	*89*		*22 - 97*

Lab Sample ID: 280-33493-9 MSD — **Client Sample ID: 0987-09 E7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 142187 — **Prep Batch: 139011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3-Benzofuran	ND		79.2	66.7		ng/L		84	30 - 150	9	50
2,3-Dihydroindene	3.8	J	79.2	66.5		ng/L		79	30 - 150	9	50
1-Methylnaphthalene	1.1	J	79.2	68.6		ng/L		85	30 - 150	9	50
2-Methylnaphthalene	ND		79.2	68.5		ng/L		86	25 - 95	9	50
3-Methylcholanthrene	ND		79.2	9.77	F	ng/L		12	30 - 150	11	50
Acenaphthene	8.6		79.2	80.1		ng/L		90	30 - 150	4	50
Acenaphthylene	ND		79.2	69.8		ng/L		88	30 - 150	5	50
Acridine	ND	*	79.2	67.5		ng/L		85	30 - 150	6	50
Anthracene	1.7	J	79.2	76.9		ng/L		95	30 - 150	7	50
Benzo[a]anthracene	1.5	J	79.2	57.2		ng/L		70	30 - 150	31	50
Benzo[a]pyrene	1.4	J	79.2	10.7	F	ng/L		12	30 - 150	17	50
Benzo[e]pyrene	ND		79.2	11.2	F	ng/L		14	37 - 105	26	50
Benzo[b]fluoranthene	2.0	J	79.2	13.1	F	ng/L		14	30 - 150	19	50
Benzo(b)thiophene	3.1	J	79.2	70.2		ng/L		85	30 - 150	5	50
Benzo[k]fluoranthene	2.2	J	79.2	12.3	F	ng/L		13	30 - 150	19	50
Benzo[g,h,i]perylene	2.7	J B	79.2	3.67	J F	ng/L		1	30 - 150	15	50
Carbazole	1.1	J	79.2	81.1		ng/L		101	30 - 150	7	50
Chrysene	1.9	J	79.2	56.9		ng/L		69	20 - 136	30	50
Dibenz(a,h)anthracene	2.3	J	79.2	2.90	J F	ng/L		0.7	30 - 150	20	50
Dibenzofuran	ND		79.2	71.0		ng/L		90	30 - 150	5	50
Dibenzothiophene	ND		79.2	74.4		ng/L		94	30 - 150	8	50
Fluoranthene	2.3	J	79.2	80.9		ng/L		99	30 - 150	4	50
Fluorene	ND		79.2	71.5		ng/L		90	34 - 96	4	50
Indene	6.1	*	79.2	70.9		ng/L		82	22 - 86	8	50
Indole	ND		79.2	68.9		ng/L		87	30 - 150	3	50
Indeno[1,2,3-cd]pyrene	2.8	J B	79.2	3.78	J F	ng/L		1	30 - 150	15	50
Naphthalene	4.1	J *	79.2	71.9		ng/L		86	27 - 95	12	50
Perylene	ND		79.2	11.9	F	ng/L		15	30 - 150	25	50
Phenanthrene	ND		79.2	75.0		ng/L		95	30 - 150	7	50
Pyrene	2.6	J	79.2	80.7		ng/L		99	30 - 150	4	50
Quinoline	ND		79.2	72.2		ng/L		91	20 - 112	1	50
7,12-Dimethylbenz(a)anthracene	ND		79.2	73.8		ng/L		93	30 - 150	2	50
Biphenyl	ND		79.2	68.1		ng/L		86	30 - 150	6	50

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-33493-9 MSD
Matrix: Water
Analysis Batch: 142187

Client Sample ID: 0987-09 E7
Prep Type: Total/NA
Prep Batch: 139011

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Fluorene-d10 (Surr)	*87*	*X*	*23 - 84*
Chrysene-d12 (Surr)	*72*		*28 - 101*
Naphthalene-d8 (Surr)	*86*		*22 - 97*

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

GC/MS Semi VOA

Prep Batch: 138557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-1	0987-09 W105	Total/NA	Water	3520C	
280-33493-2	0987-09 E13	Total/NA	Water	3520C	
280-33493-3	0987-09 SLP6	Total/NA	Water	3520C	
280-33493-4	0987-09 SLP10T	Total/NA	Water	3520C	
280-33493-5	0987-09 W48	Total/NA	Water	3520C	
LCS 280-138557/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-138557/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 280-138557/1-A	Method Blank	Total/NA	Water	3520C	

Prep Batch: 139011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-6	0987-09 W119	Total/NA	Water	3520C	
280-33493-7	0987-09 SLP4	Total/NA	Water	3520C	
280-33493-8	0987-09 W23	Total/NA	Water	3520C	
280-33493-8 - DL	0987-09 W23	Total/NA	Water	3520C	
280-33493-8 - DL2	0987-09 W23	Total/NA	Water	3520C	
280-33493-9	0987-09 E7	Total/NA	Water	3520C	
280-33493-9 MS	0987-09 E7	Total/NA	Water	3520C	
280-33493-9 MSD	0987-09 E7	Total/NA	Water	3520C	
280-33493-10	0987-09 E7D	Total/NA	Water	3520C	
280-33493-11	0987-09 E7FB	Total/NA	Water	3520C	
LCS 280-139011/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-139011/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 141615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-1	0987-09 W105	Total/NA	Water	8270C SIM	138557
280-33493-2	0987-09 E13	Total/NA	Water	8270C SIM	138557
280-33493-3	0987-09 SLP6	Total/NA	Water	8270C SIM	138557
280-33493-4	0987-09 SLP10T	Total/NA	Water	8270C SIM	138557
280-33493-5	0987-09 W48	Total/NA	Water	8270C SIM	138557
LCS 280-138557/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	138557
LCSD 280-138557/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	138557
MB 280-138557/1-A	Method Blank	Total/NA	Water	8270C SIM	138557

Analysis Batch: 142187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-6	0987-09 W119	Total/NA	Water	8270C SIM	139011
280-33493-7	0987-09 SLP4	Total/NA	Water	8270C SIM	139011
280-33493-8	0987-09 W23	Total/NA	Water	8270C SIM	139011
280-33493-9	0987-09 E7	Total/NA	Water	8270C SIM	139011
280-33493-9 MS	0987-09 E7	Total/NA	Water	8270C SIM	139011
280-33493-9 MSD	0987-09 E7	Total/NA	Water	8270C SIM	139011
280-33493-10	0987-09 E7D	Total/NA	Water	8270C SIM	139011
280-33493-11	0987-09 E7FB	Total/NA	Water	8270C SIM	139011
LCS 280-139011/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	139011
MB 280-139011/1-A	Method Blank	Total/NA	Water	8270C SIM	139011

Analysis Batch: 142406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-33493-8 - DL	0987-09 W23	Total/NA	Water	8270C SIM	139011
280-33493-8 - DL2	0987-09 W23	Total/NA	Water	8270C SIM	139011

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 W105

Lab Sample ID: 280-33493-1
Matrix: Water

Date Collected: 09/19/12 08:40
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3996.1 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/11/12 22:31	KGV	TAL DEN

Client Sample ID: 0987-09 E13

Lab Sample ID: 280-33493-2
Matrix: Water

Date Collected: 09/19/12 12:09
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3977.2 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/11/12 23:10	KGV	TAL DEN

Client Sample ID: 0987-09 SLP6

Lab Sample ID: 280-33493-3
Matrix: Water

Date Collected: 09/19/12 13:21
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3828.1 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/11/12 23:48	KGV	TAL DEN

Client Sample ID: 0987-09 SLP10T

Lab Sample ID: 280-33493-4
Matrix: Water

Date Collected: 09/19/12 08:13
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			4065.1 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/12/12 00:27	KGV	TAL DEN

Client Sample ID: 0987-09 W48

Lab Sample ID: 280-33493-5
Matrix: Water

Date Collected: 09/19/12 10:50
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3719.7 mL	1000 uL	138557	09/22/12 12:15	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			141615	10/12/12 01:06	KGV	TAL DEN

Client Sample ID: 0987-09 W119

Lab Sample ID: 280-33493-6
Matrix: Water

Date Collected: 09/19/12 10:10
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3900.2 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 14:48	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Client Sample ID: 0987-09 SLP4

Lab Sample ID: 280-33493-7
Matrix: Water

Date Collected: 09/19/12 09:28
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			4083.4 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 15:27	KGV	TAL DEN

Client Sample ID: 0987-09 W23

Lab Sample ID: 280-33493-8
Matrix: Water

Date Collected: 09/19/12 08:50
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3790.1 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 16:07	KGV	TAL DEN
Total/NA	Prep	3520C	DL		3790.1 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM	DL	10			142406	10/16/12 15:20	KGV	TAL DEN
Total/NA	Prep	3520C	DL2		3790.1 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM	DL2	20			142406	10/16/12 15:59	KGV	TAL DEN

Client Sample ID: 0987-09 E7

Lab Sample ID: 280-33493-9
Matrix: Water

Date Collected: 09/19/12 12:35
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3926.6 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 16:46	KGV	TAL DEN

Client Sample ID: 0987-09 E7D

Lab Sample ID: 280-33493-10
Matrix: Water

Date Collected: 09/19/12 12:35
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3687.5 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 18:43	KGV	TAL DEN

Client Sample ID: 0987-09 E7FB

Lab Sample ID: 280-33493-11
Matrix: Water

Date Collected: 09/19/12 12:35
Date Received: 09/20/12 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3131.2 mL	1000 uL	139011	09/25/12 18:36	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			142187	10/15/12 19:22	KGV	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-33493-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alabama	State Program	4	40730	09-30-12
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-12
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-12
Connecticut	State Program	1	PH-0686	09-30-12
Florida	NELAC	4	E87667	06-30-13
Georgia	State Program	4	N/A	06-30-12
Idaho	State Program	10	CO00026	09-30-12
Illinois	NELAC	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAC	7	E-10166	04-30-13
Louisiana	NELAC	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAC	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-30-13
New Hampshire	NELAC	1	205310	04-28-13
New Jersey	NELAC	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-12
New York	NELAC	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-13
Oklahoma	State Program	6	8614	08-31-13
Oregon	NELAC	10	CO200001	01-16-13
Pennsylvania	NELAC	3	68-00664	07-31-13
South Carolina	State Program	4	72002	06-30-13
Tennessee	State Program	4	TN02944	09-30-13
Texas	NELAC	6	T104704183-08-TX	09-30-13
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAC	8	QUAN5	06-30-13
Virginia	NELAC	3		06-14-13
Washington	State Program	10	C1284	08-03-13
West Virginia DEP	State Program	3	354	11-30-12
Wisconsin	State Program	5	999615430	08-31-13
Wyoming (UST)	A2LA	8		10-31-13

Chain of Custody Record

Sampler ID: IR#1

Temperature on Receipt: 1.3, 0.9, 0.5, 2.6, 1.4, 1.0, 1.6 9/19/12

Drinking Water? Yes ☐ No ☒

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Summit Envirosolutions LLC	Bill Gregg	9/19/12	156469
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 2**
1211 Bandana Blvd N.	(651) 262-4236		
City / State / Zip Code	**Site Contact / Lab Contact**		
St. Paul / MN / 55108			
Project Name and Location (State)	**Carrier/Waybill Number**		
SLP/Reilly Site			
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed): PAH

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	PAH
0987-09 W105	9/19/12	8:40		X			X						X
0987-09 E13	9/19/12	12:09		X			X						X
0987-09 SLP6	9/19/12	13:21		X			X						X
0987-09 SLP10T	9/19/12	8:13		X			X						X
0987-09 W48	9/19/12	10:50		X			X						X
0987-09 W119	9/19/12	10:10		X			X						X
0987-09 SLP 4	9/19/12	9:28		X			X						X
0987-09 W23	9/19/12	8:50		X			X						X
0987-09 E7	9/19/12	12:35		X			X						X
0987-09 E7D	9/19/12	12:35		X			X						X
0987-09 E7MS	9/19/12	12:35		X			X						X
0987-09 E7MSD	9/19/12	12:35		X			X						X

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Rebecca Eidin	9/19/12	14:30	1. Received By: [signature]	9/20/12	930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Summit Envirosolutions LLC	Bill Gregg	9/19/12	156470
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 2 of 2
	(651) 262-4236		

City	State	Zip Code	Site Contact	Lab Contact

Project Name and Location (State)

Carrier/Waybill Number

Contract/Purchase Order/Quote No.

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH		PAH											
0987-09 E7 FB	9/19/12	12:35		X				X							X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Rebecca Eden	9/19/12	1	1. Received By: [signature]	9/20/12	930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

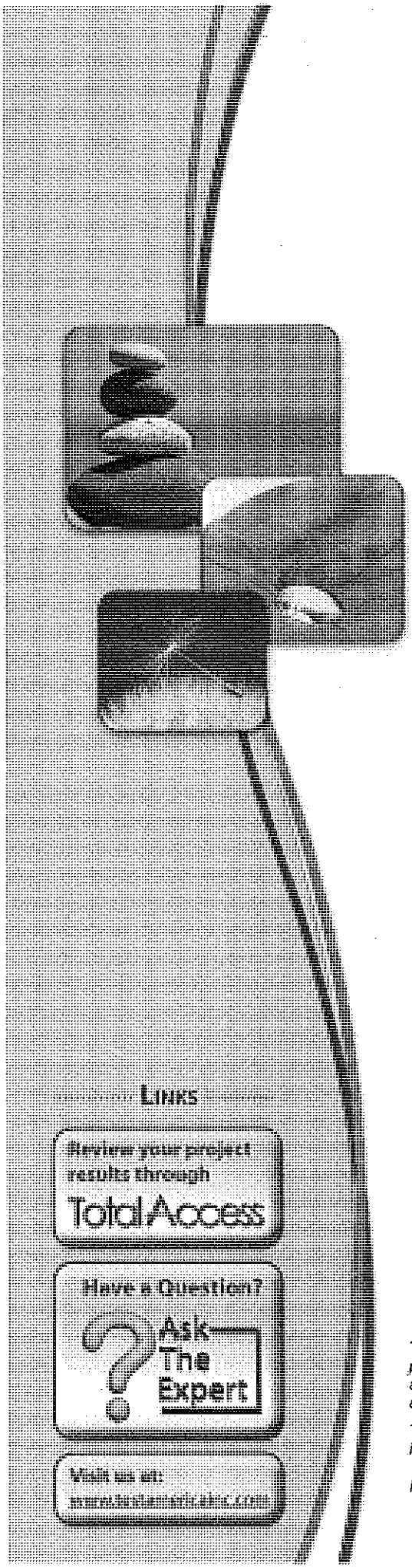
Login Number: 33493
List Number: 1
Creator: Cofold, Stephen T

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

FOURTH QUARTER

PAH ANALYSIS



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-36732-1
Client Project/Site: CSLP - Reilly Tar & Chemical

For:
Summit Envirosolutions Inc
1217 Bandana Blvd North
Saint Paul, Minnesota 55108

Attn: William M Gregg

Authorized for release by:
12/28/2012 2:58:09 PM

Lisa Uriell
Project Manager II
lisa.uriell@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 280-36732-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: City of St. Louis Park

Project: Reilly Tar & Chemical

Report Number: 280-36732-1

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 Receiving
Four samples, one field duplicate and one field blank were received under chain of custody on December 7, 2012. The samples were received at temperatures of 3.2°C, 3.4°C, 3.2°C and 2.8°C.

No anomalies were encountered during sample receipt.

GC/MS Semivolatiles, Method SW846 8270C SIM
All sample holding times were met.

The following samples exhibited surrogate recoveries outside the QC control limits, as detailed below. Matrix interference was not obvious. Upon re-aliquoting and reanalyzing, the surrogate recovery outliers were still present. Re-extraction was not possible due to insufficient remaining sample volume; therefore, the data is reported as is.

SLP10T-120612 (280-36732-1) recovered Chrysene-d12 at 15% (limits 28-101%)
SLP10TD-120612 (280-36732-2) recovered Chrysene-d12 at 16% (limits 28-101%)
SLP6-120612 (280-36732-4) recovered Chrysene-d12 at 13% (limits 28-101%)
W119-120612 (280-36732-5) recovered Chrysene-d12 at 25% (limits 28-101%)

Low levels of Benzo[a]anthracene, Benzo[g,h,i]perylene, Dibenz(a,h)anthracene, Fluoranthene, Indeno[,1,2,3-cd]pyrene and Pyrene are present in the method blank associated with prep batch 280-151568. The values should be considered estimates, and have been flagged "J". Because the concentrations in the method blank were not present at levels greater than the reporting limits, corrective action was deemed unnecessary. The associated positive results in the analytical report have been flagged with a "B". Usability of the sample data is not compromised.

Additionally, Benzo[b]fluoranthene, Benzo[k]fluoranthene and Chrysene were recovered above the reporting limits in the method blank associated with prep batch 280-151568. This is an indicator that the data may be biased high. As no detectable concentrations of Benzo[b]fluoranthene, Benzo[k]fluoranthene and Chrysene were present in the associated samples, corrective action is deemed unnecessary.

The LCS associated with prep batch 280-151568 exhibited percent recoveries outside the QC control limits for 3-Methylcholanthrene at 29% (limits 30-150%) and 7,12-Dimethylbenz(a)anthracene at 19% (limits 30-150%). 3-Methylcholanthrene and 7,12-Dimethylbenz(a)anthracene are not compounds of interest for this project. The LCS was re-aliquoted and re-analyzed with similar results. Re-extraction was not possible due to insufficient remaining sample volume. Therefore, the data is reported as is.

Job ID: 280-36732-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

The MS/MSD associated with prep batch 280-151568 was performed using sample SLP10T-120612 (280-36732-1), as requested. MS/MSD exhibited 13 of the 33 Matrix Spike compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. MS/MSD exhibited 11 of the 33 Matrix Spike Duplicate compound recoveries and 1 of the 3 surrogate recoveries outside the control limits. The MS/MSD exhibited percent recoveries outside the control limits for the compounds listed below. Details of the specific analyte recoveries can found in the Matrix Spike Sample Recovery and Data Reports.

3-Methylcholanthrene	Acridine	Benzo[a]anthracene
Benzo[a]pyrene	Benzo[e]pyrene	Benzo[b]fluoranthene
Benzo[k]fluoranthene	Benzo[ghi]perylene	Chrysene
Dibenzo(a,h)anthracene	Indeno[1,2,3-cd]pyrene	7,12-Dimethylbenz(a)anthracene
Perylene	Chrysene-d12	

No other anomalies were noted.

Data Completeness for Method 8270C SIM

The results contained in the report were reviewed relative to data acceptance criteria as specified in the 2008 QAPP, and the percent completeness was determined below. Note that the LCS and MS/MSD data were controlled based on the seven main spike compounds, including Indene, Naphthalene, Quinoline, 2-Methylnaphthalene, Fluorene, Chrysene and Benzo(e)pyrene.

DATA COMPLETENESS CALCULATION
JOB: 280-36732-1
ANALYSIS: SW846-8270C SIM

QC Parameter	Data Planned	Valid Data Obtained
Method Blank	31	28
MB Surrogates	3	3
LCS	7	7
LCS Surrogates	3	3
FB	31	31
MS	7	5
MS Surrogates	3	2
MSD	7	6
MSD Surrogates	3	2
MS/MSD RPD	7	7
Sample/Dup. RPD	31	30
Sample Surrogates	18	14
Samples and QC Internal Standard Area	30	30
TOTAL	**181**	**168**
% Completeness	**92.8%**	

Sample Duplicate Calculation for Method 8270C SIM

Sample Duplicate RPD					
JOB 280-36732-1					
Sample: SLP10T-120612		DUP: SLP10TD-120612			
Compound	Result	Compound	Result	RPD	RPD>50%
Acenaphthene	1.2	Acenaphthene	ND	NC	
Acenaphthylene	ND	Acenaphthylene	ND	0.0	
Acridine	ND	Acridine	ND	0.0	
Anthracene	ND	Anthracene	ND	0.0	
Benzo(a)anthracene	ND	Benzo(a)anthracene	ND	0.0	
Benzo(b)fluoranthene	ND	Benzo(b)fluoranthene	ND	0.0	
Benzo(k)fluoranthene	ND	Benzo(k)fluoranthene	ND	0.0	
2,3-Benzofuran	ND	2,3-Benzofuran	ND	0.0	
Benzo(ghi)perylene	ND	Benzo(ghi)perylene	ND	0.0	
Benzo(a)pyrene	ND	Benzo(a)pyrene	ND	0.0	
Benzo(e)pyrene	ND	Benzo(e)pyrene	ND	0.0	
Benzo(b)thiophene	ND	Benzo(b)thiophene	ND	0.0	
Biphenyl	ND	Biphenyl	ND	0.0	
Carbazole	ND	Carbazole	ND	0.0	
Chrysene	ND	Chrysene	ND	0.0	
Dibenz(a,h)anthracene	ND	Dibenz(a,h)anthracene	ND	0.0	
Dibenzofuran	ND	Dibenzofuran	ND	0.0	
Dibenzothiophene	ND	Dibenzothiophene	ND	0.0	
2,3-Dihydroindene	0.76	2,3-Dihydroindene	ND	NC	
Fluoranthene	ND	Fluoranthene	ND	0.0	
Fluorene	ND	Fluorene	ND	0.0	
Indene	ND	Indene	ND	0.0	
Indeno(1,2,3-cd)pyrene	ND	Indeno(1,2,3-cd)pyrene	ND	0.0	
Indole	ND	Indole	ND	0.0	
2-Methylnaphthalene	ND	2-Methylnaphthalene	ND	0.0	
1-Methylnaphthalene	ND	1-Methylnaphthalene	ND	0.0	
Naphthalene	2.5	Naphthalene	1.3	63.2	p
Perylene	ND	Perylene	ND	0.0	
Phenanthrene	ND	Phenanthrene	ND	0.0	
Pyrene	ND	Pyrene	ND	0.0	
Quinoline	ND	Quinoline	ND	0.0	

RPD = Relative Percent Difference
ND = Compound not detected in the sample
p = RPD is outside of control limits
*NC = RPD not calculated, one positive result and one ND.
Considered acceptable if the positive result is less than 4x the RL.

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits
B	Compound was found in the blank and sample.
*	LCS or LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percant Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Client Sample ID: SLP10T-120612 — Lab Sample ID: 280-36732-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	0.76	J	5.4	0.76	ng/L	1		8270C SIM	Total/NA
Acenaphthene	1.2	J	6.2	0.54	ng/L	1		8270C SIM	Total/NA
Naphthalene	2.5	J	9.3	1.2	ng/L	1		8270C SIM	Total/NA

Client Sample ID: SLP10TD-120612 — Lab Sample ID: 280-36732-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.3	J	8.9	1.2	ng/L	1		8270C SIM	Total/NA

Client Sample ID: SLP10TFB-120612 — Lab Sample ID: 280-36732-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	1.1	J	6.3	1.0	ng/L	1		8270C SIM	Total/NA
Acenaphthene	0.77	J	6.1	0.53	ng/L	1		8270C SIM	Total/NA
Naphthalene	3.0	J	9.1	1.2	ng/L	1		8270C SIM	Total/NA

Client Sample ID: SLP6-120612 — Lab Sample ID: 280-36732-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	41		5.3	0.75	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	1.3	J	6.0	0.95	ng/L	1		8270C SIM	Total/NA
Acenaphthene	56		6.1	0.53	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	6.1		5.1	0.82	ng/L	1		8270C SIM	Total/NA
Anthracene	1.7	J	4.5	0.85	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	7.5		5.5	0.80	ng/L	1		8270C SIM	Total/NA
Carbazole	1.7	J	4.1	0.77	ng/L	1		8270C SIM	Total/NA
Dibenzothiophene	1.4	J	4.4	1.0	ng/L	1		8270C SIM	Total/NA
Fluoranthene	1.9	J B	4.9	1.8	ng/L	1		8270C SIM	Total/NA
Fluorene	0.94	J	4.4	0.91	ng/L	1		8270C SIM	Total/NA
Indene	5.3		5.0	3.5	ng/L	1		8270C SIM	Total/NA
Naphthalene	4.1	J	9.2	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	3.0	J B	4.5	1.1	ng/L	1		8270C SIM	Total/NA

Client Sample ID: W119-120612 — Lab Sample ID: 280-36732-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2,3-Dihydroindene	5.0	J	5.1	0.71	ng/L	1		8270C SIM	Total/NA
1-Methylnaphthalene	1.7	J	5.7	0.91	ng/L	1		8270C SIM	Total/NA
2-Methylnaphthalene	1.4	J	6.0	1.0	ng/L	1		8270C SIM	Total/NA
Acenaphthene	39		5.8	0.51	ng/L	1		8270C SIM	Total/NA
Acenaphthylene	2.2	J	4.9	0.79	ng/L	1		8270C SIM	Total/NA
Acridine	7.6		6.6	6.6	ng/L	1		8270C SIM	Total/NA
Anthracene	3.4	J	4.3	0.82	ng/L	1		8270C SIM	Total/NA
Benzo(b)thiophene	7.2		5.3	0.77	ng/L	1		8270C SIM	Total/NA
Carbazole	1.3	J	3.9	0.73	ng/L	1		8270C SIM	Total/NA
Indene	18		4.8	3.3	ng/L	1		8270C SIM	Total/NA
Naphthalene	4.4	J	8.8	1.2	ng/L	1		8270C SIM	Total/NA
Pyrene	12	B	4.3	1.0	ng/L	1		8270C SIM	Total/NA

Client Sample ID: W48-120612 — Lab Sample ID: 280-36732-6

Sample Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-36732-1	SLP10T-120612	Water	12/06/12 08:50	12/07/12 09:30
280-36732-2	SLP10TD-120612	Water	12/06/12 08:50	12/07/12 09:30
280-36732-3	SLP10TFB-120612	Water	12/06/12 08:50	12/07/12 09:30
280-36732-4	SLP6-120612	Water	12/06/12 12:00	12/07/12 09:30
280-36732-5	W119-120612	Water	12/06/12 08:10	12/07/12 09:30
280-36732-6	W48-120612	Water	12/06/12 11:00	12/07/12 09:30

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Client Sample ID: SLP10T-120612
Date Collected: 12/06/12 08:50
Date Received: 12/07/12 09:30

Lab Sample ID: 280-36732-1
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.8	0.73	ng/L		12/11/12 13:50	12/20/12 23:01	1
2,3-Dihydroindene	0.76	J	5.4	0.76	ng/L		12/11/12 13:50	12/20/12 23:01	1
1-Methylnaphthalene	ND		6.0	0.96	ng/L		12/11/12 13:50	12/20/12 23:01	1
2-Methylnaphthalene	ND		6.4	1.1	ng/L		12/11/12 13:50	12/20/12 23:01	1
Acenaphthene	1.2	J	6.2	0.54	ng/L		12/11/12 13:50	12/20/12 23:01	1
Acenaphthylene	ND		5.2	0.83	ng/L		12/11/12 13:50	12/20/12 23:01	1
Acridine	ND		7.0	7.0	ng/L		12/11/12 13:50	12/20/12 23:01	1
Anthracene	ND		4.5	0.86	ng/L		12/11/12 13:50	12/20/12 23:01	1
Benzo[a]anthracene	ND		4.6	0.99	ng/L		12/11/12 13:50	12/20/12 23:01	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		12/11/12 13:50	12/20/12 23:01	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		12/11/12 13:50	12/20/12 23:01	1
Benzo[b]fluoranthene	ND		5.1	1.5	ng/L		12/11/12 13:50	12/20/12 23:01	1
Benzo(b)thiophene	ND		5.6	0.81	ng/L		12/11/12 13:50	12/20/12 23:01	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		12/11/12 13:50	12/20/12 23:01	1
Benzo[g,h,i]perylene	ND		6.7	1.3	ng/L		12/11/12 13:50	12/20/12 23:01	1
Carbazole	ND		4.1	0.78	ng/L		12/11/12 13:50	12/20/12 23:01	1
Chrysene	ND		6.0	1.3	ng/L		12/11/12 13:50	12/20/12 23:01	1
Dibenz(a,h)anthracene	ND		6.4	1.1	ng/L		12/11/12 13:50	12/20/12 23:01	1
Dibenzofuran	ND		6.2	1.1	ng/L		12/11/12 13:50	12/20/12 23:01	1
Dibenzothiophene	ND		4.4	1.1	ng/L		12/11/12 13:50	12/20/12 23:01	1
Fluoranthene	ND		5.0	1.8	ng/L		12/11/12 13:50	12/20/12 23:01	1
Fluorene	ND		4.4	0.92	ng/L		12/11/12 13:50	12/20/12 23:01	1
Indene	ND		5.1	3.5	ng/L		12/11/12 13:50	12/20/12 23:01	1
Indole	ND		5.1	1.9	ng/L		12/11/12 13:50	12/20/12 23:01	1
Indeno[1,2,3-cd]pyrene	ND		5.8	1.4	ng/L		12/11/12 13:50	12/20/12 23:01	1
Naphthalene	2.5	J	9.3	1.2	ng/L		12/11/12 13:50	12/20/12 23:01	1
Perylene	ND		4.1	4.1	ng/L		12/11/12 13:50	12/20/12 23:01	1
Phenanthrene	ND		6.8	3.5	ng/L		12/11/12 13:50	12/20/12 23:01	1
Pyrene	ND		4.5	1.1	ng/L		12/11/12 13:50	12/20/12 23:01	1
Quinoline	ND		9.7	6.1	ng/L		12/11/12 13:50	12/20/12 23:01	1
Biphenyl	ND		6.0	1.1	ng/L		12/11/12 13:50	12/20/12 23:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*84*		*23 - 84*	*12/11/12 13:50*	*12/20/12 23:01*	*1*
Chrysene-d12 (Surr)	*15*	*X*	*28 - 101*	*12/11/12 13:50*	*12/20/12 23:01*	*1*
Naphthalene-d8 (Surr)	*88*		*22 - 97*	*12/11/12 13:50*	*12/20/12 23:01*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Client Sample ID: SLP10TD-120612
Date Collected: 12/06/12 08:50
Date Received: 12/07/12 09:30

Lab Sample ID: 280-36732-2
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.6	0.70	ng/L		12/11/12 13:50	12/21/12 00:48	1
2,3-Dihydroindene	ND		5.2	0.72	ng/L		12/11/12 13:50	12/21/12 00:48	1
1-Methylnaphthalene	ND		5.8	0.92	ng/L		12/11/12 13:50	12/21/12 00:48	1
2-Methylnaphthalene	ND		6.1	1.0	ng/L		12/11/12 13:50	12/21/12 00:48	1
Acenaphthene	ND		5.9	0.52	ng/L		12/11/12 13:50	12/21/12 00:48	1
Acenaphthylene	ND		5.0	0.79	ng/L		12/11/12 13:50	12/21/12 00:48	1
Acridine	ND		6.7	6.7	ng/L		12/11/12 13:50	12/21/12 00:48	1
Anthracene	ND		4.3	0.83	ng/L		12/11/12 13:50	12/21/12 00:48	1
Benzo[a]anthracene	ND		4.4	0.95	ng/L		12/11/12 13:50	12/21/12 00:48	1
Benzo[a]pyrene	ND		2.6	1.3	ng/L		12/11/12 13:50	12/21/12 00:48	1
Benzo[e]pyrene	ND		4.4	1.2	ng/L		12/11/12 13:50	12/21/12 00:48	1
Benzo[b]fluoranthene	ND		4.9	1.4	ng/L		12/11/12 13:50	12/21/12 00:48	1
Benzo(b)thiophene	ND		5.4	0.77	ng/L		12/11/12 13:50	12/21/12 00:48	1
Benzo[k]fluoranthene	ND		4.2	1.3	ng/L		12/11/12 13:50	12/21/12 00:48	1
Benzo[g,h,i]perylene	ND		6.4	1.2	ng/L		12/11/12 13:50	12/21/12 00:48	1
Carbazole	ND		3.9	0.74	ng/L		12/11/12 13:50	12/21/12 00:48	1
Chrysene	ND		5.8	1.3	ng/L		12/11/12 13:50	12/21/12 00:48	1
Dibenz(a,h)anthracene	ND		6.1	1.1	ng/L		12/11/12 13:50	12/21/12 00:48	1
Dibenzofuran	ND		5.9	1.0	ng/L		12/11/12 13:50	12/21/12 00:48	1
Dibenzothiophene	ND		4.2	1.0	ng/L		12/11/12 13:50	12/21/12 00:48	1
Fluoranthene	ND		4.7	1.7	ng/L		12/11/12 13:50	12/21/12 00:48	1
Fluorene	ND		4.2	0.88	ng/L		12/11/12 13:50	12/21/12 00:48	1
Indene	ND		4.9	3.4	ng/L		12/11/12 13:50	12/21/12 00:48	1
Indole	ND		4.9	1.8	ng/L		12/11/12 13:50	12/21/12 00:48	1
Indeno[1,2,3-cd]pyrene	ND		5.6	1.3	ng/L		12/11/12 13:50	12/21/12 00:48	1
Naphthalene	1.3	J	8.9	1.2	ng/L		12/11/12 13:50	12/21/12 00:48	1
Perylene	ND		3.9	3.9	ng/L		12/11/12 13:50	12/21/12 00:48	1
Phenanthrene	ND		6.5	3.3	ng/L		12/11/12 13:50	12/21/12 00:48	1
Pyrene	ND		4.3	1.0	ng/L		12/11/12 13:50	12/21/12 00:48	1
Quinoline	ND		9.3	5.8	ng/L		12/11/12 13:50	12/21/12 00:48	1
Biphenyl	ND		5.8	1.1	ng/L		12/11/12 13:50	12/21/12 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*83*		*23 - 84*	*12/11/12 13:50*	*12/21/12 00:48*	*1*
Chrysene-d12 (Surr)	*15*	*X*	*28 - 101*	*12/11/12 13:50*	*12/21/12 00:48*	*1*
Naphthalene-d8 (Surr)	*89*		*22 - 97*	*12/11/12 13:50*	*12/21/12 00:48*	*1*

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Client Sample ID: SLP10TFB-120612
Date Collected: 12/06/12 08:50
Date Received: 12/07/12 09:30

Lab Sample ID: 280-36732-3
Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.7	0.72	ng/L		12/11/12 13:50	12/21/12 01:24	1
2,3-Dihydroindene	ND		5.3	0.74	ng/L		12/11/12 13:50	12/21/12 01:24	1
1-Methylnaphthalene	ND		5.9	0.95	ng/L		12/11/12 13:50	12/21/12 01:24	1
2-Methylnaphthalene	**1.1**	**J**	6.3	1.0	ng/L		12/11/12 13:50	12/21/12 01:24	1
Acenaphthene	**0.77**	**J**	6.1	0.53	ng/L		12/11/12 13:50	12/21/12 01:24	1
Acenaphthylene	ND		5.1	0.62	ng/L		12/11/12 13:50	12/21/12 01:24	1
Acridine	ND		6.9	6.9	ng/L		12/11/12 13:50	12/21/12 01:24	1
Anthracene	ND		4.5	0.85	ng/L		12/11/12 13:50	12/21/12 01:24	1
Benzo[a]anthracene	ND		4.6	0.98	ng/L		12/11/12 13:50	12/21/12 01:24	1
Benzo[a]pyrene	ND		2.7	1.3	ng/L		12/11/12 13:50	12/21/12 01:24	1
Benzo[e]pyrene	ND		4.6	1.2	ng/L		12/11/12 13:50	12/21/12 01:24	1
Benzo[b]fluoranthene	ND		5.0	1.5	ng/L		12/11/12 13:50	12/21/12 01:24	1
Benzo(b)thiophene	ND		5.5	0.80	ng/L		12/11/12 13:50	12/21/12 01:24	1
Benzo[k]fluoranthene	ND		4.4	1.3	ng/L		12/11/12 13:50	12/21/12 01:24	1
Benzo[g,h,i]perylene	ND		6.6	1.2	ng/L		12/11/12 13:50	12/21/12 01:24	1
Carbazole	ND		4.0	0.76	ng/L		12/11/12 13:50	12/21/12 01:24	1
Chrysene	ND		5.9	1.3	ng/L		12/11/12 13:50	12/21/12 01:24	1
Dibenz(a,h)anthracene	ND		6.3	1.1	ng/L		12/11/12 13:50	12/21/12 01:24	1
Dibenzofuran	ND		6.1	1.1	ng/L		12/11/12 13:50	12/21/12 01:24	1
Dibenzothiophene	ND		4.4	1.0	ng/L		12/11/12 13:50	12/21/12 01:24	1
Fluoranthene	ND		4.9	1.8	ng/L		12/11/12 13:50	12/21/12 01:24	1
Fluorene	ND		4.4	0.90	ng/L		12/11/12 13:50	12/21/12 01:24	1
Indene	ND		5.0	3.5	ng/L		12/11/12 13:50	12/21/12 01:24	1
Indole	ND		5.0	1.8	ng/L		12/11/12 13:50	12/21/12 01:24	1
Indeno[1,2,3-cd]pyrene	ND		5.7	1.3	ng/L		12/11/12 13:50	12/21/12 01:24	1
Naphthalene	**3.0**	**J**	9.1	1.2	ng/L		12/11/12 13:50	12/21/12 01:24	1
Perylene	ND		4.0	4.0	ng/L		12/11/12 13:50	12/21/12 01:24	1
Phenanthrene	ND		6.7	3.4	ng/L		12/11/12 13:50	12/21/12 01:24	1
Pyrene	ND		4.5	1.1	ng/L		12/11/12 13:50	12/21/12 01:24	1
Quinoline	ND		9.6	6.0	ng/L		12/11/12 13:50	12/21/12 01:24	1
Biphenyl	ND		5.9	1.1	ng/L		12/11/12 13:50	12/21/12 01:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*74*		*23 - 84*	*12/11/12 13:50*	*12/21/12 01:24*	*1*
Chrysene-d12 (Surr)	*85*		*28 - 101*	*12/11/12 13:50*	*12/21/12 01:24*	*1*
Naphthalene-d8 (Surr)	*79*		*22 - 97*	*12/11/12 13:50*	*12/21/12 01:24*	*1*

Surrogate Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FD10 (23-84)	sene-d12 (: (28-101)	thalene-d8 (22-97)
280-36732-1	SLP10T-120612	84	15 X	88
280-36732-1 MS	SLP10T-120612	80	18 X	82
280-36732-1 MSD	SLP10T-120612	78	23 X	80
280-36732-2	SLP10TD-120612	83	16 X	89
280-36732-3	SLP10TFB-120612	74	85	79
280-36732-4	SLP6-120612	58	13 X	60
280-36732-5	W119-120612	80	25 X	78
280-36732-6	W48-120612	83	43	75
LCS 280-151568/2-A	Lab Control Sample	57	69	63
MB 280-151568/1-A	Method Blank	67	80	77

Surrogate Legend

FD10 = Fluorene-d10 (Surr)
Chrysene-d12 (Surr) = Chrysene-d12 (Surr)
Naphthalene-d8 (Surr) = Naphthalene-d8 (Surr)

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL)

Lab Sample ID: MB 280-151568/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153241 — **Prep Batch: 151568**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	ND		5.4	0.68	ng/L		12/11/12 13:50	12/20/12 20:39	1
2,3-Dihydroindene	ND		5.0	0.70	ng/L		12/11/12 13:50	12/20/12 20:39	1
1-Methylnaphthalene	ND		5.6	0.89	ng/L		12/11/12 13:50	12/20/12 20:39	1
2-Methylnaphthalene	ND		5.9	0.98	ng/L		12/11/12 13:50	12/20/12 20:39	1
Acenaphthene	ND		5.7	0.50	ng/L		12/11/12 13:50	12/20/12 20:39	1
Acenaphthylene	ND		4.8	0.77	ng/L		12/11/12 13:50	12/20/12 20:39	1
Acridine	ND		6.5	6.5	ng/L		12/11/12 13:50	12/20/12 20:39	1
Anthracene	ND		4.2	0.80	ng/L		12/11/12 13:50	12/20/12 20:39	1
Benzo[a]anthracene	3.43	J	4.3	0.92	ng/L		12/11/12 13:50	12/20/12 20:39	1
Benzo[a]pyrene	ND		2.5	1.2	ng/L		12/11/12 13:50	12/20/12 20:39	1
Benzo[e]pyrene	ND		4.3	1.1	ng/L		12/11/12 13:50	12/20/12 20:39	1
Benzo[b]fluoranthene	5.62		4.7	1.4	ng/L		12/11/12 13:50	12/20/12 20:39	1
Benzo(b)thiophene	ND		5.2	0.75	ng/L		12/11/12 13:50	12/20/12 20:39	1
Benzo[k]fluoranthene	4.92		4.1	1.2	ng/L		12/11/12 13:50	12/20/12 20:39	1
Benzo[g,h,i]perylene	3.90	J	6.2	1.2	ng/L		12/11/12 13:50	12/20/12 20:39	1
Carbazole	ND		3.8	0.72	ng/L		12/11/12 13:50	12/20/12 20:39	1
Chrysene	6.16		5.6	1.2	ng/L		12/11/12 13:50	12/20/12 20:39	1
Dibenz(a,h)anthracene	4.05	J	5.9	1.0	ng/L		12/11/12 13:50	12/20/12 20:39	1
Dibenzofuran	ND		5.7	0.99	ng/L		12/11/12 13:50	12/20/12 20:39	1
Dibenzothiophene	ND		4.1	0.98	ng/L		12/11/12 13:50	12/20/12 20:39	1
Fluoranthene	3.76	J	4.6	1.7	ng/L		12/11/12 13:50	12/20/12 20:39	1
Fluorene	ND		4.1	0.85	ng/L		12/11/12 13:50	12/20/12 20:39	1
Indene	ND		4.7	3.3	ng/L		12/11/12 13:50	12/20/12 20:39	1
Indole	ND		4.7	1.7	ng/L		12/11/12 13:50	12/20/12 20:39	1
Indeno[1,2,3-cd]pyrene	4.73	J	5.4	1.3	ng/L		12/11/12 13:50	12/20/12 20:39	1
Naphthalene	ND		8.6	1.1	ng/L		12/11/12 13:50	12/20/12 20:39	1
Perylene	ND		3.8	3.8	ng/L		12/11/12 13:50	12/20/12 20:39	1
Phenanthrene	ND		6.3	3.2	ng/L		12/11/12 13:50	12/20/12 20:39	1
Pyrene	2.32	J	4.2	0.99	ng/L		12/11/12 13:50	12/20/12 20:39	1
Quinoline	ND		9.0	5.7	ng/L		12/11/12 13:50	12/20/12 20:39	1
Biphenyl	ND		5.6	1.1	ng/L		12/11/12 13:50	12/20/12 20:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*67*		*23 - 84*	*12/11/12 13:50*	*12/20/12 20:39*	*1*
Chrysene-d12 (Surr)	*80*		*28 - 101*	*12/11/12 13:50*	*12/20/12 20:39*	*1*
Naphthalene-d8 (Surr)	*77*		*22 - 97*	*12/11/12 13:50*	*12/20/12 20:39*	*1*

Lab Sample ID: LCS 280-151568/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153241 — **Prep Batch: 151568**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	75.0	46.4		ng/L		62	30 - 150
2,3-Dihydroindene	75.0	44.4		ng/L		59	30 - 150
1-Methylnaphthalene	75.0	45.9		ng/L		61	30 - 150
2-Methylnaphthalene	75.0	45.6		ng/L		61	25 - 95
3-Methylcholanthrene	75.0	21.5	*	ng/L		29	30 - 150
Acenaphthene	75.0	45.8		ng/L		61	30 - 150

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: LCS 280-151568/2-A
Matrix: Water
Analysis Batch: 153241

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 151568

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthylene	75.0	38.1		ng/L		51	30 - 150
Acridine	75.0	35.8		ng/L		48	30 - 150
Anthracene	75.0	42.6		ng/L		57	30 - 150
Benzo[a]anthracene	75.0	46.3		ng/L		62	30 - 150
Benzo[a]pyrene	75.0	37.1		ng/L		49	30 - 150
Benzo[e]pyrene	75.0	50.2		ng/L		67	37 - 105
Benzo[b]fluoranthene	75.0	45.6		ng/L		61	30 - 150
Benzo(b)thiophene	75.0	45.9		ng/L		61	30 - 150
Benzo[k]fluoranthene	75.0	47.9		ng/L		64	30 - 150
Benzo[g,h,i]perylene	75.0	38.1		ng/L		51	30 - 150
Carbazole	75.0	44.0		ng/L		59	30 - 150
Chrysene	75.0	53.1		ng/L		71	20 - 136
Dibenz(a,h)anthracene	75.0	44.1		ng/L		59	30 - 150
Dibenzofuran	75.0	47.2		ng/L		63	30 - 150
Dibenzothiophene	75.0	47.5		ng/L		63	30 - 150
Fluoranthene	75.0	47.6		ng/L		63	30 - 150
Fluorene	75.0	45.0		ng/L		60	34 - 96
Indene	75.0	44.6		ng/L		59	22 - 88
Indole	75.0	32.6		ng/L		43	30 - 150
Indeno[1,2,3-cd]pyrene	75.0	42.2		ng/L		56	30 - 150
Naphthalene	75.0	47.4		ng/L		63	27 - 95
Perylene	75.0	22.8		ng/L		30	30 - 150
Phenanthrene	75.0	49.3		ng/L		66	30 - 150
Pyrene	75.0	47.1		ng/L		63	30 - 150
Quinoline	75.0	40.9		ng/L		55	20 - 112
7,12-Dimethylbenz(a)anthracene	75.0	14.0	*	ng/L		19	30 - 150
Biphenyl	75.0	46.6		ng/L		62	30 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*57*		*23 - 84*
Chrysene-d12 (Surr)	*69*		*28 - 101*
Naphthalene-d8 (Surr)	*63*		*22 - 97*

Lab Sample ID: 280-36732-1 MS
Matrix: Water
Analysis Batch: 153241

Client Sample ID: SLP10T-120612
Prep Type: Total/NA
Prep Batch: 151568

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3-Benzofuran	ND		80.2	63.4		ng/L		79	30 - 150
2,3-Dihydroindene	0.76	J	80.2	60.6		ng/L		75	30 - 150
1-Methylnaphthalene	ND		80.2	65.4		ng/L		82	30 - 150
2-Methylnaphthalene	ND		80.2	64.7		ng/L		81	25 - 95
3-Methylcholanthrene	ND		80.2	ND	F	ng/L		0	30 - 150
Acenaphthene	1.2	J	80.2	66.8		ng/L		82	30 - 150
Acenaphthylene	ND		80.2	59.7		ng/L		74	30 - 150
Acridine	ND		80.2	11.6	F	ng/L		14	30 - 150
Anthracene	ND		80.2	59.7		ng/L		74	30 - 150
Benzo[a]anthracene	ND		80.2	10.2	F	ng/L		13	30 - 150

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-36732-1 MS — **Client Sample ID: SLP10T-120612**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153241 — **Prep Batch: 151568**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[a]pyrene	ND		80.2	2.49	J F	ng/L		3	30 - 150
Benzo[e]pyrene	ND		80.2	3.39	J F	ng/L		4	37 - 105
Benzo[b]fluoranthene	ND		80.2	4.63	J F	ng/L		6	30 - 150
Benzo(b)thiophene	ND		80.2	63.2		ng/L		79	30 - 150
Benzo[k]fluoranthene	ND		80.2	4.24	J F	ng/L		5	30 - 150
Benzo[g,h,i]perylene	ND		80.2	2.84	J F	ng/L		4	30 - 150
Carbazole	ND		80.2	62.0		ng/L		77	30 - 150
Chrysene	ND		80.2	13.6	F	ng/L		17	20 - 136
Dibenz(a,h)anthracene	ND		80.2	2.30	J F	ng/L		3	30 - 150
Dibenzofuran	ND		80.2	68.3		ng/L		85	30 - 150
Dibenzothiophene	ND		80.2	68.1		ng/L		85	30 - 150
Fluoranthene	ND		80.2	43.7		ng/L		54	30 - 150
Fluorene	ND		80.2	66.4		ng/L		83	34 - 98
Indene	ND		80.2	61.3		ng/L		76	22 - 86
Indole	ND		80.2	53.6		ng/L		67	30 - 150
Indeno[1,2,3-cd]pyrene	ND		80.2	2.53	J F	ng/L		3	30 - 150
Naphthalene	2.5	J	80.2	66.8		ng/L		80	27 - 95
Perylene	ND		80.2	ND	F	ng/L		0	30 - 150
Phenanthrene	ND		80.2	68.6		ng/L		86	30 - 150
Pyrene	ND		80.2	42.5		ng/L		53	30 - 150
Quinoline	ND		80.2	38.9		ng/L		48	20 - 112
7,12-Dimethylbenz(a)anthracene	ND		80.2	19.3	F	ng/L		24	30 - 150
Biphenyl	ND		80.2	66.7		ng/L		83	30 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Fluorene-d10 (Surr)	*80*		*23 - 84*
Chrysene-d12 (Surr)	*18*	*X*	*28 - 101*
Naphthalene-d8 (Surr)	*82*		*22 - 97*

Lab Sample ID: 280-36732-1 MSD — **Client Sample ID: SLP10T-120612**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153241 — **Prep Batch: 151568**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3-Benzofuran	ND		80.2	61.9		ng/L		77	30 - 150	2	50
2,3-Dihydroindene	0.76	J	80.2	58.9		ng/L		72	30 - 150	3	50
1-Methylnaphthalene	ND		80.2	63.6		ng/L		79	30 - 150	3	50
2-Methylnaphthalene	ND		80.2	63.2		ng/L		79	25 - 95	2	50
3-Methylcholanthrene	ND		80.2	ND	F	ng/L		0	30 - 150	NC	50
Acenaphthene	1.2	J	80.2	65.0		ng/L		80	30 - 150	3	50
Acenaphthylene	ND		80.2	57.7		ng/L		72	30 - 150	3	50
Acridine	ND		80.2	17.6	F	ng/L		22	30 - 150	41	50
Anthracene	ND		80.2	60.6		ng/L		76	30 - 150	2	50
Benzo[a]anthracene	ND		80.2	13.8	F	ng/L		17	30 - 150	31	50
Benzo[a]pyrene	ND		80.2	3.10	F	ng/L		4	30 - 150	22	50
Benzo[e]pyrene	ND		80.2	3.82	J F	ng/L		5	37 - 105	12	50
Benzo[b]fluoranthene	ND		80.2	5.67	F	ng/L		7	30 - 150	20	50
Benzo(b)thiophene	ND		80.2	63.0		ng/L		79	30 - 150	0	50

Method: 8270C SIM - Semivolatile Organic Compound (GC/MS SIM LL) (Continued)

Lab Sample ID: 280-36732-1 MSD — **Client Sample ID: SLP10T-120612**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153241 — **Prep Batch: 151568**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[k]fluoranthene	ND		80.2	4.80	F	ng/L		6	30 - 150	12	50
Benzo[g,h,i]perylene	ND		80.2	2.19	J F	ng/L		3	30 - 150	26	50
Carbazole	ND		80.2	65.4		ng/L		82	30 - 150	5	50
Chrysene	ND		80.2	19.1		ng/L		24	20 - 136	34	50
Dibenz(a,h)anthracene	ND		80.2	1.82	J F	ng/L		2	30 - 150	23	50
Dibenzofuran	ND		80.2	66.5		ng/L		83	30 - 150	3	50
Dibenzothiophene	ND		80.2	67.8		ng/L		85	30 - 150	0	50
Fluoranthene	ND		80.2	52.3		ng/L		65	30 - 150	18	50
Fluorene	ND		80.2	65.1		ng/L		81	34 - 96	2	50
Indene	ND		80.2	59.3		ng/L		74	22 - 86	3	50
Indole	ND		80.2	57.0		ng/L		71	30 - 150	6	50
Indeno[1,2,3-cd]pyrene	ND		80.2	2.05	J F	ng/L		3	30 - 150	21	50
Naphthalene	2.5	J	80.2	65.6		ng/L		79	27 - 95	2	50
Perylene	ND		80.2	ND	F	ng/L		0	30 - 150	NC	50
Phenanthrene	ND		80.2	69.8		ng/L		87	30 - 150	2	50
Pyrene	ND		80.2	51.5		ng/L		64	30 - 150	19	50
Quinoline	ND		80.2	48.2		ng/L		60	20 - 112	21	50
7,12-Dimethylbenz(a)anthracene	ND		80.2	31.8		ng/L		40	30 - 150	49	50
Biphenyl	ND		80.2	64.9		ng/L		81	30 - 150	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Fluorene-d10 (Surr)	*78*		*23 - 84*
Chrysene-d12 (Surr)	*23*	*X*	*28 - 101*
Naphthalene-d8 (Surr)	*80*		*22 - 97*

QC Association Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

GC/MS Semi VOA

Prep Batch: 151568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-36732-1	SLP10T-120612	Total/NA	Water	3520C	
280-36732-1 MS	SLP10T-120612	Total/NA	Water	3520C	
280-36732-1 MSD	SLP10T-120612	Total/NA	Water	3520C	
280-36732-2	SLP10TD-120612	Total/NA	Water	3520C	
280-36732-3	SLP10TFB-120612	Total/NA	Water	3520C	
280-36732-4	SLP6-120612	Total/NA	Water	3520C	
280-36732-5	W119-120612	Total/NA	Water	3520C	
280-36732-6	W48-120612	Total/NA	Water	3520C	
LCS 280-151568/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 280-151568/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 153241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-36732-1	SLP10T-120612	Total/NA	Water	8270C SIM	151568
280-36732-1 MS	SLP10T-120612	Total/NA	Water	8270C SIM	151568
280-36732-1 MSD	SLP10T-120612	Total/NA	Water	8270C SIM	151568
280-36732-2	SLP10TD-120612	Total/NA	Water	8270C SIM	151568
280-36732-3	SLP10TFB-120612	Total/NA	Water	8270C SIM	151568
280-36732-4	SLP6-120612	Total/NA	Water	8270C SIM	151568
280-36732-5	W119-120612	Total/NA	Water	8270C SIM	151568
280-36732-6	W48-120612	Total/NA	Water	8270C SIM	151568
LCS 280-151568/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	151568
MB 280-151568/1-A	Method Blank	Total/NA	Water	8270C SIM	151568

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Client Sample ID: SLP10T-120612 — Lab Sample ID: 280-36732-1

Date Collected: 12/06/12 08:50
Date Received: 12/07/12 09:30
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3703.6 mL	1000 uL	151568	12/11/12 13:50	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			153241	12/20/12 23:01	KGV	TAL DEN

Client Sample ID: SLP10TD-120612 — Lab Sample ID: 280-36732-2

Date Collected: 12/06/12 08:50
Date Received: 12/07/12 09:30
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3875.1 mL	1000 uL	151568	12/11/12 13:50	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			153241	12/21/12 00:48	KGV	TAL DEN

Client Sample ID: SLP10TFB-120612 — Lab Sample ID: 280-36732-3

Date Collected: 12/06/12 08:50
Date Received: 12/07/12 09:30
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3766.2 mL	1000 uL	151568	12/11/12 13:50	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			153241	12/21/12 01:24	KGV	TAL DEN

Client Sample ID: SLP6-120612 — Lab Sample ID: 280-36732-4

Date Collected: 12/06/12 12:00
Date Received: 12/07/12 09:30
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3749.9 mL	1000 uL	151568	12/11/12 13:50	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			153241	12/21/12 01:59	KGV	TAL DEN

Client Sample ID: W119-120612 — Lab Sample ID: 280-36732-5

Date Collected: 12/06/12 08:10
Date Received: 12/07/12 09:30
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3920.3 mL	1000 uL	151568	12/11/12 13:50	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			153241	12/21/12 02:35	KGV	TAL DEN

Client Sample ID: W48-120612 — Lab Sample ID: 280-36732-6

Date Collected: 12/06/12 11:00
Date Received: 12/07/12 09:30
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			3938.7 mL	1000 uL	151568	12/11/12 13:50	JJW	TAL DEN
Total/NA	Analysis	8270C SIM		1			153241	12/21/12 03:11	KGV	TAL DEN

Lab Chronicle

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-36732-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-13
A2LA	ISO/IEC 17025		2907.01	10-31-13
Alaska (UST)	State Program	10	UST-30	04-05-13
Arizona	State Program	9	AZ0713	12-19-13
Arkansas DEQ	State Program	6	88-0687	06-01-13
California	State Program	9	2513	08-31-14
Colorado	State Program	8	N/A	09-30-13
Connecticut	State Program	1	PH-0686	09-30-14
Florida	NELAP	4	E87667	06-30-13
Idaho	State Program	10	CO00026	09-30-13
Illinois	NELAP	5	200017	04-30-13
Iowa	State Program	7	370	12-01-12
Kansas	NELAP	7	E-10166	04-30-13
Louisiana	NELAP	6	30785	06-30-13
Maine	State Program	1	CO0002	03-03-13
Maryland	State Program	3	268	03-31-13
Minnesota	NELAP	5	8-999-405	12-31-12
Nevada	State Program	9	CO0026	07-30-13
New Hampshire	NELAP	1	205310	04-28-13
New Jersey	NELAP	2	CO004	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAP	2	11964	04-01-13
North Carolina DENR	State Program	4	358	12-31-12
North Dakota	State Program	8	R-034	06-30-13
Oklahoma	State Program	6	8614	08-31-13
Oregon	NELAP	10	CO200001	01-16-13
Pennsylvania	NELAP	3	68-00664	07-31-13
South Carolina	State Program	4	72002	06-30-13
Tennessee	State Program	4	TN02944	09-30-13
Texas	NELAP	6	T104704183-08-TX	09-30-13
USDA	Federal		P330-08-00036	02-08-14
Utah	NELAP	8	QUAN5	06-30-13
Virginia	NELAP	3	460232	06-14-13
Washington	State Program	10	C583	08-03-13
West Virginia DEP	State Program	3	354	11-30-13
Wisconsin	State Program	5	999615430	08-31-13
Wyoming (UST)	A2LA	8		10-31-13

Chain of Custody Record

Sampler ID _____

Temperature on Receipt 3.2 3.4 2.8 3.2 [illegible]

Drinking Water? Yes ☐ No ☐ 12/7/12 FP

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Summit Enviresolutions	Bill Gregg	12/06/12	156480
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
1217 Bandana Boulevard North	651-262-4236		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
St. Paul / MN / 55108			
Project Name and Location (State)	**Carrier/Waybill Number**		
Reilly Site (MN)			
Contract/Purchase Order/Quote No.			
0987-0009			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): PAH-PPT5	Special Instructions/ Conditions of Receipt
SLP10T-120612	12/06/12	8:50					6						X	
SLP10TD-120612	↓	8:50					6						X	
SLP10TMS-120612		8:50					6						X	
SLP10TMSD-120612		8:50					6						X	
SLP10TFB-120612		8:50					6						X	
SLP6-120612		12:00					6						X	
W119-120612		8:10					6						X	
W48-120612	↓	11:00					6						X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. Ryan Anderson	12/6/12	13:00	1. [signature]	12/7/12	930
2.			2.		
3.			3.		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Login Number: 36732
List Number: 1
Creator: Eichelberger, Elizabeth M

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Section 4

PAH FEED WATER ANALYSIS

RAP SECTION 4.3.3 (D)

RAP SECTION 4.3.3 (D)

PAH FEED WATER ANALYSIS

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLPFEED-062612
Date Collected: 06/25/12 13:45
Date Received: 06/27/12 09:45

Lab Sample ID: 280-30464-13
Matrix: Water

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3-Benzofuran	1.3	J	6.2	0.78	ng/L		07/01/12 08:40	07/22/12 01:58	1
2,3-Dihydroindene	280		5.7	0.80	ng/L		07/01/12 08:40	07/22/12 01:58	1
1-Methylnaphthalene	110	B	6.4	1.0	ng/L		07/01/12 08:40	07/22/12 01:58	1
2-Methylnaphthalene	ND		6.8	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Acenaphthylene	50		5.5	0.88	ng/L		07/01/12 08:40	07/22/12 01:58	1
Acridine	ND	*	7.5	7.5	ng/L		07/01/12 08:40	07/22/12 01:58	1
Anthracene	2.1	J	4.8	0.92	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[a]anthracene	ND		4.9	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[a]pyrene	ND		2.9	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[e]pyrene	ND		4.9	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[b]fluoranthene	ND		5.4	1.6	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo(b)thiophene	70		6.0	0.86	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[k]fluoranthene	ND		4.7	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Benzo[g,h,i]perylene	ND		7.1	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Carbazole	22		4.4	0.83	ng/L		07/01/12 08:40	07/22/12 01:58	1
Chrysene	ND		6.4	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenz(a,h)anthracene	ND		6.8	1.2	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenzofuran	22	B	6.5	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Dibenzothiophene	33		4.7	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Fluoranthene	63		5.3	1.9	ng/L		07/01/12 08:40	07/22/12 01:58	1
Fluorene	220		4.7	0.98	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indene	69		5.4	3.8	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indole	ND		5.4	2.0	ng/L		07/01/12 08:40	07/22/12 01:58	1
Indeno[1,2,3-cd]pyrene	ND		6.2	1.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Naphthalene	9.4	J	9.9	1.3	ng/L		07/01/12 08:40	07/22/12 01:58	1
Perylene	ND		4.4	4.4	ng/L		07/01/12 08:40	07/22/12 01:58	1
Phenanthrene	15		7.2	3.7	ng/L		07/01/12 08:40	07/22/12 01:58	1
Pyrene	56		4.8	1.1	ng/L		07/01/12 08:40	07/22/12 01:58	1
Quinoline	ND		10	6.5	ng/L		07/01/12 08:40	07/22/12 01:58	1
Biphenyl	6.1	J	8.4	1.2	ng/L		07/01/12 08:40	07/22/12 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*91*	*X*	*23 - 84*	*07/01/12 08:40*	*07/22/12 01:58*	*1*
Chrysene-d12 (Surr)	*50*		*28 - 101*	*07/01/12 08:40*	*07/22/12 01:58*	*1*
Naphthalene-d8 (Surr)	*90*		*22 - 97*	*07/01/12 08:40*	*07/22/12 01:58*	*1*

Method: 8270C - Semivolatile Organic Compound (GC/MS SIM LL) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	700	B	26	2.3	ng/L		07/01/12 08:40	07/24/12 12:37	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Fluorene-d10 (Surr)	*85*	*D*	*23 - 84*	*07/01/12 08:40*	*07/24/12 12:37*	*4*
Chrysene-d12 (Surr)	*42*	*D*	*28 - 101*	*07/01/12 08:40*	*07/24/12 12:37*	*4*
Naphthalene-d8 (Surr)	*97*	*D*	*22 - 97*	*07/01/12 08:40*	*07/24/12 12:37*	*4*

Section 5

ACID FRACTION ANALYSIS

RAP SECTION 4.3.4

RAP SECTION 4.3.4

ACID FRACTION ANALYSIS

Client Sample Results

Client: Summit Envirosolutions Inc
Project/Site: CSLP - Reilly Tar & Chemical

TestAmerica Job ID: 280-30464-1

Client Sample ID: SLP10TACID-062612

Lab Sample ID: 280-30464-12

Date Collected: 06/25/12 13:30
Date Received: 06/27/12 09:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		9.5	1.9	ug/L		06/28/12 15:05	07/03/12 18:11	1
2-Chlorophenol	ND		9.5	1.9	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dimethylphenol	ND		9.5	0.55	ug/L		06/28/12 15:05	07/03/12 18:11	1
2-Nitrophenol	ND		19	0.37	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dichlorophenol	ND		9.5	0.61	ug/L		06/28/12 15:05	07/03/12 18:11	1
4-Chloro-3-methylphenol	ND		19	2.3	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4,6-Trichlorophenol	ND		19	0.28	ug/L		06/28/12 15:05	07/03/12 18:11	1
2,4-Dinitrophenol	ND		57	9.5	ug/L		06/28/12 15:05	07/03/12 18:11	1
4-Nitrophenol	ND		48	1.2	ug/L		06/28/12 15:05	07/03/12 18:11	1
4,6-Dinitro-2-methylphenol	ND		57	3.8	ug/L		06/28/12 15:05	07/03/12 18:11	1
Pentachlorophenol	ND		57	19	ug/L		06/28/12 15:05	07/03/12 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*85*		*51 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*
Phenol-d5	*88*		*51 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*
Nitrobenzene-d5	*88*		*48 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*
2-Fluorobiphenyl	*73*		*38 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*
Terphenyl-d14	*98*		*50 - 120*	*06/28/12 15:05*	*07/03/12 18:11*	*1*

Section 6

DATA VALIDATION

FIRST QUARTER

DATA VALIDATION

1st QTR

ddms

DATA VALIDATION

FOR

GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-27039-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 26, 2013

St. Louis Park\280-27039PAH

EXECUTIVE SUMMARY

Validation of the semivolatile organics analysis data prepared by Test America for three aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-27039-1 in a single data package. The following samples were reported:

SLP10T-032612	W48-032612	W48D-032612
W48FB-032612		

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for benzo[b]fluoranthene and benzo[k]fluoranthene in W48D-032612 were qualified as estimated (UJ).
- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in SLP10T-032612, W48-032612, and W48FB-032612 and for benzo[a]pyrene, benzo[e]pyrene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in W48D-032612 were qualified as estimated low (L) for detects and rejected (R).
- Results for benzo [a] anthracene and chrysene in all field samples were qualified as estimated (UJ).
- Results for naphthalene in SLP10T-03262012, W48-03262012, and W48D-03262012 were qualified as not detected (U) at the reporting limit or reported concentration, whichever is greater.
- Results for acridine in W48-03262012 and W48D-03262012 were qualified as estimated low (L) and in W48FB-03262012 and SLP10T-03262012 were rejected (R).
- Results for benzo [a] anthracene, benzo [b] fluoranthene, benzo[k]fluoranthene, chrysene, and fluoranthene in W48D-03262012 were

qualified as not detected (U) at the analyte-specific RL or the reported concentration, whichever was greater.

- The results for acenaphthylene in SLP10T-032612; 2,3-benzofuran, 1-methylnaphthalene, and 2-methylnaphthalene in W48-032612; and 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, and phenanthrene in W48D-032612 were corrected to not detected (U) at the RL.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII. The data user is strongly encouraged to refer to this section for an understanding of the implication of any documentation problems.

This report should be considered part of the data package for all future distributions of the semivolatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format, however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semivolatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.

J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

MI = This flag applies when an compound has matrix interferences.

N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a "tentative identification".

NJ= The analysis indicates the presence of an compound that has been "tentatively identified" and the associated numerical value represent its approximate concentration.

UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.

R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of March 26, 2012. The samples were shipped via Federal Express and received by the laboratory on March 27, 2012. The temperature of the coolers on receipt at the laboratory was noted on the COC and was acceptable (2.6° C to 5.1° C; criteria 4.0° C ± 2.0° C). All samples were extracted on April 1, 2012, which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on April 17, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "MSS_F". Summary forms for two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Both of the performance checks were acceptable based on the summary form provided.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. No manual integrations were performed, based on documentation in the data package.

A. Initial Calibration (IC)

One 7-point IC was performed on April 17, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained

from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available." No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

No CC standards were analyzed in association with these samples.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. No target compounds were reported in the method blank. 2,3-Dihydroindene (0.80 ng/L) and naphthalene (5.3 ng/L) were reported in the field blank. Results for 2,3-dihydroindene in the field samples were sufficiently high that the amount of this analyte detected in the field blank would have no impact on the reported results. Results for naphthalene in SLP10T-03262012, W48-03262012, and W48D-03262012 were qualified as not detected (U) at the reporting limit or reported concentration, whichever is greater, due to sample concentrations detected within five-times the concentration found in the field blank. No other target analytes were detected in the blanks.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits with the exception of chrysene-d_{12} in W48-032612 (26%R; criteria 28-101%R). Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, perylene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h.i] perylene were qualified as estimated (L, UJ) and may be biased low due to the low recovery of chrysene-d_{12}.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample W48-03262012. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits %R (RPD)	Action (Detects/Non-detects)
Benzo [a] anthracene			42	30-150 (25)	J/UJ
Benzo[a]pyrene	12	9	32	30-150 (25)	L/R
Benzo[e]pyrene	11	10	31	37-105 (25)	L/R
Benzo[b]fluoranthene	14	11		30-150 (25)	L/R
Benzo[k]fluoranthene	14	10		30-150 (25)	L/R
Benzo[g,h,i]perylene	5	5		30-150 (25)	L/R
Chrysene			38	30-150 (25)	J/UJ
Dibenz[a,h]anthracene	6	6		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	6	6		30-150 (25)	L/R
Perylene	12	8	35	30-150 (25)	L/R

*based on amount recovered.

Results for benzo[b]fluoranthene and benzo[k]fluoranthene in W48D-032612 were qualified as estimated (UJ) because even though the MS/MSD recoveries warranted rejecting the data, the laboratory had detected the analytes in the sample, but the results were qualified as not detected (U) due to method blank contamination. Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in SLPT-032612, W48-032612, and W48FB-032612 and for benzo[a]pyrene, benzo[e]pyrene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recovery. Results for benzo [a] anthracene and chrysene in all field samples were qualified as estimated (J, UJ) due to the high %RSD results.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable with the exception of acridine, which was reported as not detected. Results for acridine in W48-03262012 and W48D-03262012 were qualified as estimated low (L), and results for acridine in SLP10T-032612 and W48FB-03262012 were rejected (R) due to unacceptable LCS recovery.

VII. Field Duplicate

Sample W48D-03262012 was collected as a field duplicate of sample W48-03262012. All RPDs were within quality control limits (≤ 25% if both samples are >5X RL) for both field duplicate samples. Benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, and fluoranthene were detected in W48D-03262012 but were not reported in the paired sample. Results were qualified as not detected (U)

at the analyte-specific RL or the reported concentration, whichever was greater in W48-03262012.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Ion chromatograms were not provided for any of the compounds reported in these samples. The data validation was completed on the assumption that all of the ratios for the paired ions were acceptable. The laboratory stated that they utilize an acceptance criteria of ± 20%D for the ration of the paired ions. For acenaphthylene in SLP10T-032612; 2,3-benzofuran, 1-methylnaphthalene, and 2-methylnaphthalene in W48-032612; and 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, and phenanthrene in W48D-032612, there is a "Q" qualifier on the quantitation report which indicates that the signal failed the ratio test, yet the analyte was reported by the laboratory. The results for acenaphthylene in SLP10T-032612; 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, and phenanthrene in W48-032612; and 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, and phenanthrene in W48D-032612 were corrected to not detected (U) at the RL on this basis.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). In most cases, the reporting limits were based on the project required reporting limits form the QAPP. All laboratory-reported MDLs were less than the project RL goals with the exception of acridine and perylene with the project RL goal equal to the MDL. The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution factor.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- A 7%R in the LCS was reported for acridine; however, the laboratory reported the compound as not detected.

- As noted in above, these samples were analyzed on a single instrument identified as MSS_F. Other samples reported for the St. Louis Park project were analyzed on a system identified as SMS_G5. All of the summary forms included in the data packages to support the FC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC-43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".

- No ratios or spectra were included in the data package to support the identification of the reported compounds.

Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for benzo[b]fluoranthene and benzo[k]fluoranthene in W48D-032612 were qualified as estimated (UJ) due to unacceptable MS/MSD recoveries.

- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in SLP10T-032612, W48-032612, and W48FB-032612 and for benzo[a]pyrene, benzo[e]pyrene, benzo[g,h,i]perylene, perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in W48D-

032612 were qualified as estimated low (L) for detects and rejected (R) for non-detects due to unacceptable MS/MSD recoveries.

- Results for benzo [a] anthracene and chrysene in all field samples were qualified as estimated (J, UJ) due to the high %RSD results.

- Results for benzo [a] anthracene, chrysene, benzo [b] fluoranthene, benzo [k] fluoranthene, benzo [e] pyrene, benzo [a] pyrene, perylene, indeno [1,2,3-cd] pyrene, dibenz (a,h) anthracene, and benzo [g,h,i] perylene in W48-03262012 were qualified as estimated (L, UJ) and may be biased low due to the low recovery of chrysene-d_{12}.

- Results for naphthalene in SLP10T-03262012, W48-03262012, and W48D-03262012 were qualified as not detected (U) at the reporting limit or reported concentration, whichever is greater, due to sample concentrations detected within five-times the concentration found in the field blank.

- Results for acridine in W48-03262012 and W48D-03262012 were qualified as estimated low (L), and results for acridine in SLP10T-032612 and W48FB-03262012 were rejected (R) due to unacceptable LCS recovery.

- Results for benzo [a] anthracene, benzo [b] fluoranthene, benzo[k]fluoranthene, chrysene, and fluoranthene in W48D-03262012 were qualified as not detected (U) at the analyte-specific RL or the reported concentration, whichever was greater, because they were detected in W48D-03262012 but were not detected in the paired sample.

- The results for acenaphthylene in SLP10T-032612; 2,3-benzofuran, 1-methylnaphthalene, and 2-methylnaphthalene in W48-032612; and 2,3-benzofuran, 1-methylnaphthalene, 2-methylnaphthalene, fluorene, and phenanthrene in W48D-032612 were corrected to not detected (U) at the RL because in each case the signal failed the ratio test.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered <u>part of the data package</u> for all future distributions of the semivolatiles data.

ddms

ATTACHMENT A

DATA SUMMARY FORMS
Laboratory Job No. 280-27039
PAHs in Water

DATA SUMMARY FORM: SEMIVOLATLES
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: March 26, 2012

Job No. 280-27039-1

ddms Project No. 2006-0022

Sample Location		SLP10T-032612		W48-032612		W48D-032612		W48FB-032612					
Lab Sample ID		280-27039-1		280-27039-2		280-27039-3FD		280-27039-4FB					
Initial Volume		3782.1		3567.2		3870.1		3803.1					
Dilution Factor		1.05		1.12		1.03		1.05					
RL													
5.4	2,3-Benzofuran				U		U						
5.0	2,3-Dihydroindene	24		4.6	J	4.2	J	0.80					
5.6	1-Methylnaphthalene	3.9	J		U		U						
5.9	2-Methylnaphthalene	2.2	J		U		U						
5.7	Acenaphthene	14		89		88	J						
4.8	Acenaphthylene		U	3.4	J	3.4	J						
6.5	Acridine	R		9.9	L	11	L	R					
4.2	Anthracene			5.8		7.4	J						
4.3	Benzo[a]anthracene		UJ		UJ		UJ		UJ				
2.5	Benzo[a]pyrene	R		R		R		R					
4.3	Benzo[e]pyrene	R		R		R		R					
4.7	Benzo[b]fluoranthene	R		R			UJ	R					
5.2	Benzo(b)thiopene	2.1	J	8.2		7.9	J						
4.1	Benzo[k]fluoranthene	R		R			UJ	R					
6.2	Benzo[g,h,i]perylene	R		R		R		R					
3.8	Carbazole			2.2	J	4.0	J						
5.6	Chrysene		UJ		UJ		UJ		UJ				
5.9	Dibenz(a,h)anthracene	R		R		R		R					
5.7	Dibenzofuran	1.6	J										
4.1	Dibenzothiophene												
4.6	Fluoranthene						U						
4.1	Fluorene	2.2	J				U						
4.7	Indene			26		25	J						
4.7	Indole	1.9	J										
5.4	Indeno[1,2,3-cd]pyrene	R		R		R		R					
8.6	Naphthalene	9.5	U		U		U						
3.8	Perylene	R		R		R		R					
6.3	Phenanthrene						U						
4.2	Pyrene		UJ		UJ	5.9	U		UJ				
9.0	Quinoline												
5.6	Biphenyl												

ddms

ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS
Laboratory Job No. 280-27039
PAHs in Water

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

Client Sample ID: **SLP10T-032612**

Lab Sample ID: 280-27039-1
Client Matrix: Water

Date Sampled: 03/26/2012 1220
Date Received: 03/27/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-116160	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-113850	Lab File ID:	F3907.D
Dilution:	1.0			Initial Weight/Volume:	3782.1 mL
Analysis Date:	04/17/2012 1744			Final Weight/Volume:	1000 uL
Prep Date:	04/01/2012 1300			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	24		0.74	5.3
1-Methylnaphthalene	3.9	J	0.94	5.9
2-Methylnaphthalene	2.2	J	1.0	6.2
Acenaphthene	14		0.53	6.0
Acenaphthylene	~~0.01~~	~~J~~ U	0.81	5.1
Acridine	R ~~ND~~		~~6.9~~	~~6.9~~
Anthracene	ND		0.85	4.4
Benzo[a]anthracene	ND	UJ	0.97	4.5
Benzo[a]pyrene	R ~~ND~~		~~1.3~~	~~2.6~~
Benzo[e]pyrene	R ~~ND~~		~~1.2~~	~~4.5~~
Benzo[b]fluoranthene	R ~~ND~~		~~1.5~~	~~5.0~~
Benzo(b)thiophene	2.1	J	0.79	5.5
Benzo[k]fluoranthene	R ~~ND~~		~~1.3~~	~~4.3~~
Benzo[g,h,i]perylene	R ~~ND~~		~~1.2~~	~~6.6~~
Carbazole	ND		0.76	4.0
Chrysene	ND	UJ	1.3	5.9
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.2~~
Dibenzofuran	1.6	J	1.0	6.0
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.9
Fluorene	2.2	J	0.90	4.3
Indene	ND		3.5	5.0
Indole	1.9	J	1.8	5.0
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.3~~	~~5.7~~
Naphthalene	9.5	U	1.2	9.1
Perylene	R ~~ND~~		~~4.0~~	~~4.0~~
Phenanthrene	ND		3.4	6.7
Pyrene	ND	UJ	1.0	4.4
Quinoline	ND		6.0	9.5
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	37		28 - 101
Naphthalene-d8 (Surr)	81		22 - 97

Polly S. Dewbold
3/26/2013

Client: Summit Envirosolutions Inc

Client Sample ID: W48-032612

Lab Sample ID: 280-27039-2

Client Matrix: Water

Date Sampled: 03/26/2012 1320

Date Received: 03/27/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method: 8270C

Prep Method: 3520C

Dilution: 1.0

Analysis Date: 04/17/2012 1820

Prep Date: 04/01/2012 1300

Analysis Batch: 280-116160

Prep Batch: 280-113850

Instrument ID: MSS_F

Lab File ID: F3908.D

Initial Weight/Volume: 3567.2 mL

Final Weight/Volume: 1000 uL

Injection Volume: 1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	~~1.5~~	~~J~~ U	0.76	6.1
2,3-Dihydroindene	4.6	J	0.78	5.6
1-Methylnaphthalene	~~2.2~~	~~J~~ U	1.0	6.3
2-Methylnaphthalene	~~2.2~~	~~J~~ U	1.1	6.6
Acenaphthene	89		0.56	6.4
Acenaphthylene	3.4	J	0.86	5.4
Acridine	9.9	~~J~~ L	7.3	7.3
Anthracene	5.8		0.90	4.7
Benzo[a]anthracene	ND	UJ	1.0	4.8
Benzo[a]pyrene	R ~~ND~~		~~1.4~~	~~2.8~~
Benzo[e]pyrene	R ~~ND~~		~~1.3~~	~~4.8~~
Benzo[b]fluoranthene	R ~~ND~~		~~1.6~~	~~5.3~~
Benzo(b)thiophene	8.2		0.84	5.8
Benzo[k]fluoranthene	R ~~ND~~		~~1.4~~	~~4.6~~
Benzo[g,h,i]perylene	R ~~ND~~		~~1.3~~	~~7.0~~
Carbazole	2.2	J	0.81	4.3
Chrysene	ND	UJ	1.4	6.3
Dibenz(a,h)anthracene	R ~~ND~~		~~1.2~~	~~6.6~~
Dibenzofuran	ND		1.1	6.4
Dibenzothiophene	ND		1.1	4.6
Fluoranthene	ND		1.9	5.2
Fluorene	ND		0.95	4.6
Indene	26		3.7	5.3
Indole	ND		1.9	5.3
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.4~~	~~6.1~~
Naphthalene	~~7.0~~	~~J~~ U	1.3	9.6
Perylene	R ~~ND~~		~~4.3~~	~~4.3~~
Phenanthrene	~~ND~~	U	3.6	7.1
Pyrene	~~3.9~~ 3.9	~~UJ~~ J	1.1	4.7
Quinoline	ND		6.3	10
Biphenyl	ND		1.2	6.3

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	26	X	28 - 101
Naphthalene-d8 (Surr)	78		22 - 97

Dolly S. Newbold
2/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

Client Sample ID: **W48D-032612**

Lab Sample ID: 280-27039-3FD

Client Matrix: Water

Date Sampled: 03/26/2012 1335

Date Received: 03/27/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-116160	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-113850	Lab File ID:	F3911.D
Dilution:	1.0			Initial Weight/Volume:	3870.1 mL
Analysis Date:	04/17/2012 2005			Final Weight/Volume:	1000 uL
Prep Date:	04/01/2012 1300			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	~~4.4~~	~~J~~ U	0.70	5.6
2,3-Dihydroindene	4.2	J	0.72	5.2
1-Methylnaphthalene	~~1.9~~	~~J~~ U	0.92	5.8
2-Methylnaphthalene	~~2.0~~	~~J~~ U	1.0	6.1
Acenaphthene	88	J	0.52	5.9
Acenaphthylene	3.4	J	0.80	5.0
Acridine	11	~~J~~ L	6.7	6.7
Anthracene	7.4	J	0.83	4.3
Benzo[a]anthracene	~~3.5~~	~~J~~ U	0.95	4.4
Benzo[a]pyrene	R ~~ND~~		~~1.3~~	~~2.6~~
Benzo[e]pyrene	R ~~ND~~		~~1.2~~	~~4.4~~
Benzo[b]fluoranthene	~~2.1~~	~~J~~ U	1.4	4.9
Benzo(b)thiophene	7.9	J	0.78	5.4
Benzo[k]fluoranthene	~~2.0~~	~~J~~ U	1.3	4.2
Benzo[g,h,i]perylene	R ~~ND~~		~~1.2~~	~~6.4~~
Carbazole	4.0	J	0.74	3.9
Chrysene	~~2.8~~	~~J~~ U	1.3	5.8
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.1~~
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	~~3.2~~	~~J~~ U	1.7	4.8
Fluorene	~~0.94~~	~~J~~ U	0.88	4.2
Indene	25	J	3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.3~~	~~5.6~~
Naphthalene	~~7.5~~	~~J~~ U	1.2	8.9
Perylene	R ~~ND~~		~~3.9~~	~~3.9~~
Phenanthrene	~~3.6~~	~~J~~ U	3.3	6.5
Pyrene	5.9	J	1.0	4.3
Quinoline	ND		5.8	9.3
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	39		28 - 101
Naphthalene-d8 (Surr)	71		22 - 97

Polly S. Necebold
2/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-27039-1

Client Sample ID: **W48FB-032612**

Lab Sample ID: 280-27039-4FB
Client Matrix: Water

Date Sampled: 03/26/2012 1340
Date Received: 03/27/2012 0900

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-116160	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-113850	Lab File ID:	F3912.D
Dilution:	1.0			Initial Weight/Volume:	3803.1 mL
Analysis Date:	04/17/2012 2040			Final Weight/Volume:	1000 uL
Prep Date:	04/01/2012 1300			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	0.80	J	0.74	5.3
1-Methylnaphthalene	ND		0.94	5.9
2-Methylnaphthalene	ND		1.0	6.2
Acenaphthene	ND		0.53	6.0
Acenaphthylene	ND		0.81	5.0
Acridine	R ~~ND~~		~~6.8~~	~~6.8~~
Anthracene	ND		0.84	4.4
Benzo[a]anthracene	ND	UJ	0.97	4.5
Benzo[a]pyrene	R ~~ND~~		~~1.3~~	~~2.6~~
Benzo[e]pyrene	R ~~ND~~		~~1.2~~	~~4.5~~
Benzo[b]fluoranthene	R ~~ND~~		~~1.5~~	~~4.9~~
Benzo(b)thiophene	ND		0.79	5.5
Benzo[k]fluoranthene	R ~~ND~~		~~1.3~~	~~4.3~~
Benzo[g,h,i]perylene	R ~~ND~~		~~1.2~~	~~6.5~~
Carbazole	ND		0.76	4.0
Chrysene	ND	UJ	1.3	5.9
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.2~~
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	ND		0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.3~~	~~5.7~~
Naphthalene	~~5.3~~ 5.3	J ~~U~~ J	1.2	9.0
Perylene	R ~~ND~~		~~4.0~~	~~4.0~~
Phenanthrene	ND		3.4	6.6
Pyrene	ND	UJ	1.0	4.4
Quinoline	ND		5.9	9.5
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	77		23 - 84
Chrysene-d12 (Surr)	83		28 - 101
Naphthalene-d8 (Surr)	75		22 - 97

Polly S. Newbold
3/26/2013

SECOND QUARTER

DATA VALIDATION

2nd QTR

ddms

DATA VALIDATION

FOR

GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-30464-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 26, 2103

SLP\280-30464PAH

EXECUTIVE SUMMARY

Validation of the semivolatile organics analysis data prepared by Test America for 12 aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). Eleven of the samples and the field blank were analyzed for selected ion monitoring (SIM) PAHs, and the remaining sample was analyzed for acid extractables. The data were reported by the laboratory under Job No. 280-30464-1 in a single data package. The following samples were reported:

MTKA6-062612	H6-062612	SLP16-062612
SLP6-062612	SLP13-062612	SLP14-062612
SLP10-062612	SLP10D-062612	SLP10FB-062612
SLP10T-062612	SLPFEED-062612	SLP10ACID-062612
SLP10EXTENDED-062612		

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- The result for naphthalene in MTKA6-062612 was qualified as not detected (U) at the reporting limit.
- Results for dibenzofuran in SLP6-062612, for acenaphthene in SLP14-062612, for 1-methylnaphthalene in H6-062612, SLP13-062612, SLP10T-062612, and SLP10EXTENDED-062612, and for 2-methylnaphthalene in H6-062612 and SLP13-062612 were qualified as not detected (U) at the analyte-specific reporting limit or the reported value, whichever was greater.
- Results for naphthalene in all samples except SLP10FB-062612 and for 2,3-dihydroindene in MTKA6-062612, H6-062612, SLP16-062612, and SLP13-062612 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater.
- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, and perylene in all samples were qualified as estimated (L, UJ).

- Results for benzo[g,h,i]perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in all samples and for 3-methylcholanthrene in SLP10EXTENDED-062612 were rejected (R) for non-detects.

- The result for acridine in MTKA6-062612 was rejected (R) and results for acridine in all other samples were qualified as estimated (L, UJ).

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII. The data user is strongly encouraged to refer to this section for an understanding of the implication of any documentation problems.

This report should be considered part of the data package for all future distributions of the semivolatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM (PAHs) and 8270C (acid extractables). This methodology does not stipulate a reporting format, however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semivolatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.

J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

MI = This flag applies when an compound has matrix interferences.

N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a "tentative identification".

NJ= The analysis indicates the presence of an compound that has been "tentatively identified" and the associated numerical value represent its approximate concentration.

UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.

R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

All qualifiers are reflected on the data summary forms included as Attachment A to this report, as well as the Organic Analyses Data Sheets (Form 1s) in Attachment B of this validation report to qualify the results, as appropriate, according to the review of the data package.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting sample collection dates of June 26, 2012. The samples were shipped via Federal Express and received by the laboratory on June 27, 2012. The temperatures of the coolers on receipt at the laboratory were noted on the COC and were acceptable (2.3° C to 5.1° C; criteria 4.0° C ± 2.0° C). Samples were extracted on June 28, 2012, and July 1, 2012, within the 7-day holding time for aqueous samples. All sample extracts were analyzed on July 21 and 22, 2012, within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

SIM Analyses

The samples were analyzed on one GC/MS system, identified as "MSS_F". Two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Both of the performance checks were acceptable based on the summary form provided.

Acid Extractables Analyses

A summary form was provided for one decafluorotriphenylphosphine (DFTPP) instrument performance check run on instrument "MISS_Y", representing the period during which the samples and associated standards were analyzed. The performance check was fully documented and acceptable.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. No manual integrations were performed, based on documentation in the data package.

A. Initial Calibration (IC)

One 7-point IC was performed on July 20, 2012, for most of the target PAH compounds. For three of the target compounds, the low level standard was omitted from the IC. Documentation of all individual IC standards was provided by the

laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available." No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

One 7-point IC was performed on May 7, 2012, for acid extractable compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values for all of the target analytes were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable.

B. Continuing Calibration (CC)

One CC was performed on July 3, 2012, in support of all the acid extractable target compounds. All %D results were within the acceptance limits (35%) as defined in the QAPP.

IV. Blanks

Three laboratory method blanks and one field blank were analyzed in support of these samples. Two of the laboratory blanks (June 28 and July 1, 2012) were associated with SIM analyses, and one of the laboratory blanks was associated with the acid extractables analyses. The following target compounds were reported in the method blank associated with the preparation performed on June 28, 2012:

Compound	Amount Reported (ng/L)
1-methylnaphthalene	1.60
2-methylnaphthalene	1.94
acenaphthene	0.855
anthracene	2.00
benzo [a] anthracene	16.9
benzo [a] pyrene	12.3
benzo [b] fluoroanthene	15.1
benzo [k] fluoroanthene	18.8
benzo (g,h,i) perylene	9.38
carbazole	0.795
chrysene	14.2
dibenz (a,h,) anthracene	11.2
dibenzofuran	0.994
fluoroanthene	2.27
indeno [1,2,3-cd] pyrene	16.1
naphthalene	1.35
pyrene	2.03

The result for naphthalene in MTKA6-062612 was qualified as not detected (U) at the reporting limit because the reported sample concentration was within five-times the concentration found in the method blank.

The following target compounds were reported in the method blank associated with the preparation performed on July 1, 2012:

Compound	Amount Reported (ng/L)
1-methylnaphthalene	1.34
2-methylnaphthalene	1.77
acenaphthene	0.908
dibenzofuran	1.37

Results for dibenzofuran in SLP6-062612, for acenaphthene in SLP14-062612, for 1-methylnaphthalene in H6-062612, SLP13-062612, SLP10T-062612, and SLP10EXTENDED-062612, and for 2-methylnaphthalene in H6-062612 and SLP13-062612 were qualified as not detected (U) at the analyte-specific reporting limit or the reported value, whichever was greater, because the reported sample concentration was less than five times the amount detected in the method blank.

Following qualification based on method blank contamination, 2,3-dihydroindene (2.7 ng/L) and naphthalene (5.3 ng/L) were reported in the field blank. Results for naphthalene in all samples except SLP10FB-062612 and for 2,3-dihydroindene in MTKA6-062612, H6-062612, SLP16-062612, and SLP13-062612 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to their presence in the field blank.

No acid extractable compounds were detected in the associated laboratory blank.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated, accurately reported, and within acceptance limits with the exception of fluorene-d_{10} in several samples with %R ranging from 85% to 91%R (criteria 23-84%). No results were qualified based on the fluorene-d_{10} excursions since the upper limit of the acceptance criteria is low and the percent recoveries did not excessively exceed the limit.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The narrative indicated that due to breakage, MS/MSD analyses could not be performed in support of the sample submitted for acid extractables. MS/MSD analyses were performed on sample SLP11-062512 (SDG# J30428) and on sample SLP10-062612 in support of the PAH analyses. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

SPL11-062512

Compound	MS %R	MSD %R	RPD*	QC limits %R (RPD)	Action (Detects/Non-detects)
Acridine	93	50	61	30-150 (25)	J/UJ
Benzo[a]pyrene	15	13		30-150 (25)	L/UJ
Benzo[e]pyrene	14	12		37-150 (25)	L/UJ
Benzo[b]fluoranthene	17	14		30-150 (25)	L/UJ
Benzo[k]fluoranthene	15	13		30-150 (25)	L/UJ
Benzo[g,h,i]perylene	5	4		30-150 (25)	L/R
Dibenz[a,h]anthracene	4	3		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	5	4		30-150 (25)	L/R
Perylene	14	12	35	30-150 (25)	L/UJ

*based on amount recovered.

SLP10-062612

Compound	MS %R	MSD %R	RPD*	QC limits %R (RPD)	Action (Detects/Non-detects)
3-Methylcholanthrene	17	12	33	30-150 (25)	L/UJ
Acridine	81	57	30	30-150 (25)	J/UJ
Benzo[a]anthracene	79	55	30	30-150 (25)	J/UJ
Benzo[a]pyrene	15	11	28	30-150 (25)	L/UJ
Benzo[e]pyrene	14	10	29	37-150 (25)	L/UJ
Benzo[b]fluoranthene	17	12		30-150 (25)	L/UJ
Benzo[k]fluoranthene	16	12	27	30-150 (25)	L/UJ
Benzo[g,h,i]perylene	5	4		30-150 (25)	L/R
Dibenz[a,h]anthracene	5	4		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	6	4		30-150 (25)	L/R
Perylene	14	10	25	30-150 (25)	L/UJ

*based on amount recovered.

Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, and perylene in all samples were qualified as estimated (L, UJ) due to the unacceptable MS/MSD recoveries. Results for benzo[g,h,i]perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in all samples and for 3-methylcholanthrene in SLP10EXTENDED-062612 were rejected (R) for non-detects due to unacceptable MS/MSD recoveries.

Results for acridine in all samples except MTKA6-062612 were qualified as estimated (L, UJ) due to the unacceptable RPD value. The result for acridine in

MTKA6-062612 warranted qualification on this basis but was subsequently rejected (R) due to the LCS results and the "R" qualifier takes precedence.

B. Laboratory Control Samples (LCS)

Results for two LCS in support of the PAH analyses and one LCS/LCSD pair in support of the acid extractables were provided in the data package. All recoveries were acceptable with the exception of acridine in each of the PAH LCS. Acridine was reported as not detected in the LCS associated with MTKA6-062612, and in the LCS associated with all other samples, acridine had a 28%R. The result for acridine in MTKA6-062612 was rejected (R) and results for acridine in all other samples were qualified as estimated (L, UJ) due to unacceptable LCS recovery.

VII. Field Duplicate

Sample SLP10D-062612 was collected as a field duplicate of sample SLP10-062612. Percent difference values between paired results were acceptable except for 2,3-dibenzofuran, which was detected (1.4 ng/L) in SLP10D-062612, but was not detected in SLP10-062612. The result for 2,3-dibenzofuran in SLP10D-062612 was qualified as not detected (U) at the analyte-specific RL on this basis.

No field duplicate was submitted in support of the acid extractables sample.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Ion chromatograms were not provided for any of the compounds reported in these samples. The data validation was completed on the assumption that all of the ratios for the paired ions were acceptable.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples with the exception of the reporting limits for fluoroanthene, pyrene, benzo [a] anthracene, and benzo [g,h,i] perylene. The reporting limits were equivalent to the concentration of the lowest calibration standard from the IC. However, the laboratory eliminated the low level standard from the IC for the analytes noted above but did not adjust the reporting limit on the organic analysis report sheets. The actual reporting limit was calculated by the validator and replaced on the report sheets. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goals with the exception of acridine and perylene with the project RL goal equal to the MDL. The analyte specific RL may be determined by multiplying the compound specific RL (far left column of the data summary form) by dilution the factor.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- The RLs for fluoroanthene, pyrene, benzo [a] anthracene, and benzo [g,h,i] perylene were reported incorrectly (section X).

- An 8%R in one of the LCS analyses was reported for acridine; however, the laboratory reported the compound as not detected.

- As noted in above, these samples were analyzed on a single instrument identified as MSS_F. Other samples reported for the St. Louis Park project were analyzed on a system identified as SMS_G5. All of the summary forms included in the data packages to support the FC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The

laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC-43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".

- No ratios or spectra were included in the data package to support the identification of the reported compounds. The validation was completed on the assumption that all of the ion ratios for the reported compounds were acceptable.

Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- The result for naphthalene in MTKA6-062612 was qualified as not detected (U) at the reporting limit because the sample concentration detected was within five-times the concentration found in the method blank.

- Results for dibenzofuran in SLP6-062612, for acenaphthene in SLP14-062612, for 1-methylnaphthalene in H6-062612, SLP13-062612, SLP10T-062612, and SLP10EXTENDED-062612, and for 2-methylnaphthalene in H6-062612, SLP10FB-062612, and SLP13-062612 were qualified as not detected (U) at the analyte-specific reporting limit or the reported value, whichever was greater, due to method blank contamination.

- Results for naphthalene in all samples except SLP10FB-062612 and for 2,3-dihydroindene in MTKA6-062612, H6-062612, SLP16-062612, and SLP13-062612 were qualified as not detected (U) at the reporting limit or the reported value, whichever was greater, due to their presence in the field blank.

- Results for benzo[a]pyrene, benzo[e]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, and perylene in all samples were qualified as estimated (L, UJ) due to the unacceptable MS/MSD recoveries.

- Results for benzo[g,h,i]perylene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene in all samples and for 3-methylcholanthrene in SLP10EXTENDED-062612 were rejected (R) for non-detects due to unacceptable MS/MSD recoveries.

- Results for acridine in all samples except MTKA6-062612 were qualified as estimated (L, UJ) due to the unacceptable RPD value between paired spike results.

- The result for acridine in MTKA6-062612 was rejected (R) and results for acridine in all other samples were qualified as estimated (L, UJ) due to unacceptable LCS recoveries.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered part of the data package for all future distributions of the semivolatiles data.

ddms

ATTACHMENT A

DATA SUMMARY FORMS
Laboratory Job No. 280-30464
PAHs in Water

DATA SUMMARY FORM: SEMIVOLATLES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: June 25 and 26, 2012

Job No. 280-30464-1

ddms Project No. 2006-0022

Sample Location		MTKA6-062612		H6-062612		SLP16-062612		SLP6-062612		SLP13-062612		SLP14-062612	
Lab Sample ID		280-30464-1		280-30464-2		280-30464-3		280-30464-4		280-30464-5		280-30464-6	
Initial Volume		3585.3		3812		3803.4		3903.6		3903.6		3484.82.4	
Dilution Factor		1.12		1.05		1.05		1.02		1.15		1.15	
RL													
5.4	2,3-Benzofuran							0.96	J			2.4	J
5.0	2,3-Dihydroindene		U		U		U	58			U		
5.6	1-Methylnaphthalene				U			10			U		
5.9	2-Methylnaphthalene				U		U	9.9			U		
5.7	Acenaphthene			28				88					U
4.8	Acenaphthylene			4.1	J			13				1.1	J
6.5	Acridine	R			UJ		UJ	9.0	L		UJ		UJ
4.2	Anthracene							4.0	J				
4.3	Benzo[a]anthracene												
2.5	Benzo[a]pyrene		UJ		UJ		UJ		UJ		UJ		UJ
4.3	Benzo[e]pyrene		UJ		UJ		UJ		UJ		UJ		UJ
4.7	Benzo[b]fluoranthene		UJ		UJ		UJ		UJ		UJ		UJ
5.2	Benzo(b)thiopene							12					
4.1	Benzo[k]fluoranthene		UJ		UJ		UJ		UJ		UJ		UJ
6.2	Benzo[g,h,i]perylene	R		R		R		R		R		R	
3.8	Carbazole							3.0	J				
5.6	Chrysene												
5.9	Dibenz(a,h)anthracene	R		R		R		R		R		R	
5.7	Dibenzofuran								U				
4.1	Dibenzothiophene			2.3	J			2.0	J				
4.6	Fluoranthene							3.3	J				
4.1	Fluorene			1.2	J			1.3	J				
4.7	Indene							8.3					
4.7	Indole												
5.4	Indeno[1,2,3-cd]pyrene	R		R		R		R		R		R	
8.6	Naphthalene		UJ		U		U	14	U		U		U
3.8	Perylene		UJ		UJ		UJ		UJ		UJ		UJ
6.3	Phenanthrene												
4.2	Pyrene			2.2	J			4.8				1.1	J
9.0	Quinoline												
5.6	Biphenyl												

DATA SUMMARY FORM: SEMIVOLATLES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: June 25 and 26, 2012

Job No. 280-30464-1

ddms Project No. 2006-0022

Sample Location		SLP10-062612		SLP10D-062612		SLP10FB-062612		SLP10T-062612		SLP10EXTENDED-062612		SLPFEED-062612	
Lab Sample ID		280-30464-7		280-30464-8FD		280-30464-9FB		280-30464-10		280-30464-11		280-30464-13	
Initial Volume		3764.3		3850.1		3803.4		3404.2		3638.4		3484.82.4	
Dilution Factor		1.06, 4.2		1.03, 4.1		1.05		1.18		1.10		1.15, 4.6	
RL													
5.4	2,3-Benzofuran				U							1.3	J
5.0	2,3-Dihydroindene	250		260		27	J	44		46		280	
5.6	1-Methylnaphthalene	110		110				6.1	U	6.2	U	110	
5.9	2-Methylnaphthalene						U						
5.0	3-Methylcholanthrene	NA		NA		NA		NA		R		NA	
5.7	Acenaphthene	730		780				31		32		700	
4.8	Acenaphthylene	75		77				1.6	J	1.7	J	50	
6.5	Acridine		UJ		UJ		UJ		UJ		UJ		UJ
4.2	Anthracene	5.9		6.3								2.1	J
4.3	Benzo[a]anthracene	2.1	J	2.0	J								
2.5	Benzo[a]pyrene		UJ		UJ		UJ		UJ		UJ		UJ
4.3	Benzo[e]pyrene		UJ		UJ		UJ		UJ		UJ		UJ
4.7	Benzo[b]fluoranthene		UJ		UJ		UJ		UJ		UJ		UJ
5.2	Benzo(b)thiopene	63		65				3.8	J	3.8	J	70	
4.1	Benzo[k]fluoranthene		UJ		UJ		UJ		UJ		UJ		UJ
6.2	Benzo[g,h,i]perylene	R		R		R		R		R		R	
3.8	Carbazole	34		33								22	
5.6	Chrysene												
5.9	Dibenz(a,h)anthracene	R		R		R		R		R		R	
5.7	Dibenzofuran	19		20								22	
4.1	Dibenzothiophene	34		34								33	
4.6	Fluoranthene	70		69								63	
4.1	Fluorene	200		210				2.6	J	2.6	J	220	
4.7	Indene	92		95						3.6	J	69	
4.7	Indole												
5.4	Indeno[1,2,3-cd]pyrene	R		R		R		R		R		R	
8.6	Naphthalene		U	9.5	U	5.3	J		U		U	9.4	U
3.8	Perylene		UJ		UJ		UJ		UJ		UJ		UJ
6.3	Phenanthrene	15		14								15	
4.2	Pyrene	90		90								56	
9.0	Quinoline												
2.8	7,12-Dimethylbenz(a)anthracene	NA		NA		NA		NA				NA	
5.6	Biphenyl	5.3	J	5.6	J							6.1	J

DATA SUMMARY FORM: SEMIVOLATLES (Acids)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: June 25 and 26, 2012

Job No. 280-30464-1

ddms Project No. 2006-0022

Sample Location		SLP10ACID-062512											
Lab Sample ID		280-30464-7											
Initial Volume		1050.5											
Dilution Factor		0.95											
RL													
10	Phenol												
10	2-Chlorophenol												
10	2,4-Dimethylphenol												
20	2-Nitrophenol												
10	2,4-Dichlorophenol												
20	4-Chloro-3-methylphenol												
20	2,4,6-Trichlorophenol												
60	2,4-Dinitrophenol												
50	4-Nitrophenol												
60	4,6-Dinitro-2-methylphenol												
60	Pentachlorophenol												

ddms

ATTACHMENT B

ORGANIC ANALYSIS REPORT SHEETS
Laboratory Job No. 280-30464
PAHs in Water

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP16-062612**

Lab Sample ID: 280-30464-3
Client Matrix: Water

Date Sampled: 06/26/2012 1120
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5293.D
Dilution:	1.0			Initial Weight/Volume:	3803.4 mL
Analysis Date:	07/21/2012 1929			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	~~0.95~~	~~J~~ U	0.74	5.3
1-Methylnaphthalene	ND		0.94	5.9
2-Methylnaphthalene	ND		1.0	6.2
Acenaphthene	ND		0.53	6.0
Acenaphthylene	ND		0.81	5.0
Acridine	~~ND~~	UJ	6.8	6.8
Anthracene	ND		0.84	4.4
Benzo[a]anthracene	ND		0.97	4.5
Benzo[a]pyrene	~~ND~~	UJ	1.3	2.6
Benzo[e]pyrene	~~ND~~		1.2	4.5
Benzo[b]fluoranthene	~~ND~~		1.5	4.9
Benzo(b)thiophene	ND		0.79	5.5
Benzo[k]fluoranthene	~~ND~~	UJ	1.3	4.3
Benzo[g,h,i]perylene	R ~~ND~~		~~1.2~~	~~6.5~~
Carbazole	ND		0.76	4.0
Chrysene	ND		1.3	5.9
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.2~~
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	ND		1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	ND		0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.3~~	~~5.7~~
Naphthalene	~~2.6~~	~~J~~ U	1.2	9.0
Perylene	~~ND~~	UJ	4.0	4.0
Phenanthrene	ND		3.4	6.6
Pyrene	ND		1.0	4.4
Quinoline	ND		5.9	9.5
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	43		28 - 101
Naphthalene-d8 (Surr)	86		22 - 97

Polly S Newbold 3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **MTKA6-062612**

Lab Sample ID: 280-30464-1
Client Matrix: Water

Date Sampled: 06/26/2012 0910
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126003	Lab File ID:	F5291.D
Dilution:	1.0			Initial Weight/Volume:	3585.3 mL
Analysis Date:	07/21/2012 1817			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1805			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.76	6.0
2,3-Dihydroindene	~~4.7~~	~~J~~ U	0.78	5.6
1-Methylnaphthalene	ND		0.99	6.2
2-Methylnaphthalene	ND		1.1	6.6
Acenaphthene	ND		0.56	6.4
Acenaphthylene	ND		0.86	5.4
Acridine	R ~~ND~~	~~*~~	~~7.3~~	~~7.3~~
Anthracene	ND		0.89	4.7
Benzo[a]anthracene	ND		1.0	4.8
Benzo[a]pyrene	~~ND~~	UJ	1.4	2.8
Benzo[e]pyrene	~~ND~~		1.3	4.8
Benzo[b]fluoranthene	~~ND~~		1.6	5.2
Benzo(b)thiophene	ND		0.84	5.8
Benzo[k]fluoranthene	~~ND~~	UJ	1.4	4.6
Benzo[g,h,i]perylene	R ~~ND~~		~~1.3~~	~~6.9~~
Carbazole	ND		0.80	4.2
Chrysene	ND		1.4	6.2
Dibenz(a,h)anthracene	R ~~ND~~		~~1.2~~	~~6.6~~
Dibenzofuran	ND		1.1	6.4
Dibenzothiophene	ND		1.1	4.6
Fluoranthene	ND		1.9	5.1
Fluorene	ND		0.95	4.6
Indene	ND		3.7	5.2
Indole	ND		1.9	5.2
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.4~~	~~6.0~~
Naphthalene	~~4.4~~	~~JB~~ UJ	1.3	9.6
Perylene	~~ND~~	UJ	4.3	4.3
Phenanthrene	ND		3.6	7.0
Pyrene	ND		1.1	4.7
Quinoline	ND		6.3	10
Biphenyl	ND		1.2	6.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	87	X	23 - 84
Chrysene-d12 (Surr)	52		28 - 101
Naphthalene-d8 (Surr)	87		22 - 97

Polly S. Neubold 3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **H6-062612**

Lab Sample ID: 280-30464-2
Client Matrix: Water

Date Sampled: 06/26/2012 0955
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F6292.D
Dilution:	1.0			Initial Weight/Volume:	3812 mL
Analysis Date:	07/21/2012 1853			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.71	5.7
2,3-Dihydroindene	~~1.9~~	~~J~~ U	0.73	5.2
1-Methylnaphthalene	~~4.0~~	~~J B~~	0.93	5.9
2-Methylnaphthalene	~~4.1~~	~~J B~~	1.0	6.2
Acenaphthene	28	~~B~~	0.52	6.0
Acenaphthylene	4.1	J	0.81	5.0
Acridine	~~ND~~	UJ	6.8	6.8
Anthracene	ND		0.84	4.4
Benzo[a]anthracene	ND		0.97	4.5
Benzo[a]pyrene	~~ND~~	UJ	1.3	2.6
Benzo[e]pyrene	~~ND~~		1.2	4.5
Benzo[b]fluoranthene	~~ND~~		1.5	4.9
Benzo(b)thiophene	ND		0.79	5.5
Benzo[k]fluoranthene	~~ND~~	UJ	1.3	4.3
Benzo[g,h,i]perylene	R ~~ND~~		~~1.2~~	~~6.5~~
Carbazole	ND		0.76	4.0
Chrysene	ND		1.3	5.9
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.2~~
Dibenzofuran	ND		1.0	5.0
Dibenzothiophene	2.3	J	1.0	4.3
Fluoranthene	ND		1.8	4.8
Fluorene	1.2	J	0.89	4.3
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.3~~	~~5.7~~
Naphthalene	~~4.4~~	~~J~~ U	1.2	9.0
Perylene	~~ND~~	UJ	4.0	4.0
Phenanthrene	ND		3.4	6.6
Pyrene	2.2	J	1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	39		28 - 101
Naphthalene-d8 (Surr)	83		22 - 97

Polly S. Newbold 3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP8-062612**

Lab Sample ID: 280-30464-4
Client Matrix: Water

Date Sampled: 06/26/2012 1150
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5294.D
Dilution:	1.0			Initial Weight/Volume:	3903.6 mL
Analysis Date:	07/21/2012 2004			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.96	J	0.70	5.5
2,3-Dihydroindene	58		0.72	5.1
1-Methylnaphthalene	10	~~B~~	0.91	5.7
2-Methylnaphthalene	9.9	~~B~~	1.0	6.0
Acenaphthene	88	~~B~~	0.51	5.8
Acenaphthylene	13		0.79	4.9
Acridine	9.0	~~J~~ L	6.7	6.7
Anthracene	4.0	J	0.82	4.3
Benzo[a]anthracene	ND		0.94	4.4
Benzo[a]pyrene	~~ND~~	UJ	1.3	2.6
Benzo[e]pyrene	~~ND~~		1.2	4.4
Benzo[b]fluoranthene	~~ND~~		1.4	4.8
Benzo(b)thiophene	12		0.77	5.3
Benzo[k]fluoranthene	~~ND~~	UJ	1.3	4.2
Benzo[g,h,i]perylene	R ~~ND~~		~~1.2~~	~~6.4~~
Carbazole	3.0	J	0.74	3.9
Chrysene	ND		1.3	5.7
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.0~~
Dibenzofuran	~~1.8~~	~~JB~~ U	1.0	5.8
Dibenzothiophene	2.0	J	1.0	4.2
Fluoranthene	3.3	J	1.7	4.7
Fluorene	1.3	J	0.87	4.2
Indene	8.3		3.4	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.3~~	~~5.5~~
Naphthalene	14	U	1.2	8.8
Perylene	~~ND~~	UJ	3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	4.8		1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	43		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Bailey S. Newbold
3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP13-062612**

Lab Sample ID: 280-30464-5
Client Matrix: Water

Date Sampled: 06/26/2012 1215
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5295.D
Dilution:	1.0			Initial Weight/Volume:	3473.1 mL
Analysis Date:	07/21/2012 2040			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.78	6.2
2,3-Dihydroindene	~~2.0~~	~~J~~ U	0.81	5.8
1-Methylnaphthalene	~~1.3~~	~~JB~~	1.0	6.4
2-Methylnaphthalene	~~1.8~~	~~JB~~	1.1	6.8
Acenaphthene	ND		0.58	6.6
Acenaphthylene	ND		0.89	5.5
Acridine	~~ND~~	UJ	7.5	7.5
Anthracene	ND		0.92	4.8
Benzo[a]anthracene	ND		1.1	5.0
Benzo[a]pyrene	~~ND~~	UJ	1.4	2.9
Benzo[e]pyrene	~~ND~~		1.3	5.0
Benzo[b]fluoranthene	~~ND~~		1.6	5.4
Benzo(b)thiophene	ND		0.86	6.0
Benzo[k]fluoranthene	~~ND~~	UJ	1.4	4.7
Benzo[g,h,i]perylene	R ~~ND~~		~~1.3~~	~~7.1~~
Carbazole	ND		0.83	4.4
Chrysene	ND		1.4	6.4
Dibenz(a,h)anthracene	R ~~ND~~		~~1.2~~	~~6.8~~
Dibenzofuran	ND		1.1	8.6
Dibenzothiophene	ND		1.1	4.7
Fluoranthene	ND		1.9	5.3
Fluorene	ND		0.98	4.7
Indene	ND		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.5~~	~~6.2~~
Naphthalene	~~6.1~~	~~J~~ U	1.3	9.9
Perylene	~~ND~~	UJ	4.4	4.4
Phenanthrene	ND		3.7	7.3
Pyrene	ND		1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	ND		1.2	6.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	75		23 - 84
Chrysene-d12 (Surr)	59		28 - 101
Naphthalene-d8 (Surr)	81		22 - 97

Polly J. Neuwald
3/20/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP14-062612**

Lab Sample ID: 280-30464-6
Client Matrix: Water

Date Sampled: 06/26/2012 1220
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5296.D
Dilution:	1.0			Initial Weight/Volume:	3484.8 mL
Analysis Date:	07/21/2012 2116			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.78	6.2
2,3-Dihydroindene	2.4	J	0.80	5.7
1-Methylnaphthalene	ND		1.0	6.4
2-Methylnaphthalene	ND		1.1	6.8
Acenaphthene	~~2.9~~	~~JB~~ U	0.57	6.5
Acenaphthylene	1.1	J	0.88	5.5
Acridine	~~ND~~	UJ	7.5	7.5
Anthracene	ND		0.92	4.8
Benzo[a]anthracene	ND		1.1	4.9
Benzo[a]pyrene	~~ND~~	UJ	1.4	2.9
Benzo[e]pyrene	~~ND~~		1.3	4.9
Benzo[b]fluoranthene	~~ND~~		1.6	5.4
Benzo(b)thiophene	ND		0.86	6.0
Benzo[k]fluoranthene	~~ND~~	UJ	1.4	4.7
Benzo[g,h,i]perylene	R ~~ND~~		~~1.3~~	~~7.1~~
Carbazole	ND		0.83	4.4
Chrysene	ND		1.4	6.4
Dibenz(a,h)anthracene	R ~~ND~~		~~1.2~~	~~6.8~~
Dibenzofuran	ND		1.1	6.5
Dibenzothiophene	ND		1.1	4.7
Fluoranthene	ND		1.9	5.3
Fluorene	ND		0.98	4.7
Indene	ND		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.4~~	~~6.2~~
Naphthalene	~~2.4~~	~~J~~ U	1.3	9.9
Perylene	~~ND~~	UJ	4.4	4.4
Phenanthrene	ND		3.7	7.2
Pyrene	1.1	J	1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	ND		1.2	6.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	75		23 - 84
Chrysene-d12 (Surr)	38		28 - 101
Naphthalene-d8 (Surr)	76		22 - 97

Polly S. Newbold
3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP10-062612**

Lab Sample ID: 280-30464-7
Client Matrix: Water

Date Sampled: 06/26/2012 1255
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5297.D
Dilution:	1.0			Initial Weight/Volume:	3764.3 mL
Analysis Date:	07/21/2012 2151			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	250		0.74	5.3
1-Methylnaphthalene	110	~~B~~	0.95	6.0
2-Methylnaphthalene	ND		1.0	6.3
Acenaphthylene	75		0.82	5.1
Acridine	ND	UJ	6.9	6.9
Anthracene	5.9		0.85	4.5
Benzo[a]anthracene	2.1	J	0.98	4.6
Benzo[a]pyrene	~~ND~~	UJ	1.3	2.7
Benzo[e]pyrene	~~ND~~		1.2	4.6
Benzo[b]fluoranthene	~~ND~~		1.5	5.0
Benzo(b)thiophene	63		0.80	5.5
Benzo[k]fluoranthene	~~ND~~	UJ	1.3	4.4
Benzo[g,h,i]perylene	R ~~ND~~		~~1.2~~	~~6.6~~
Carbazole	34		0.77	4.0
Chrysene	ND		1.3	6.0
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.3~~
Dibenzofuran	19	B	1.1	6.1
Dibenzothiophene	34		1.0	4.4
Fluoranthene	70		1.8	4.9
Fluorene	200		0.90	4.4
Indene	92		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.3~~	~~5.7~~
Naphthalene	~~8.0~~	~~J~~ UJ	1.2	9.1
Perylene	~~ND~~	UJ	4.0	4.0
Phenanthrene	15		3.4	6.7
Pyrene	90		1.1	4.5
Quinoline	ND		6.0	9.6
Biphenyl	5.3	J	1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	84		23 - 84
Chrysene-d12 (Surr)	55		28 - 101
Naphthalene-d8 (Surr)	80		22 - 97

Polly S. Newbold
2/20/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP10-062612**

Lab Sample ID: 280-30464-7
Client Matrix: Water

Date Sampled: 06/26/2012 1255
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5312.D
Dilution:	4.0			Initial Weight/Volume:	3764.3 mL
Analysis Date:	07/24/2012 1126	Run Type:	DL	Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
Acenaphthene	730	~~B~~	2.1	24

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	70	D	23 - 84
Chrysene-d12 (Surr)	41	D	28 - 101
Naphthalene-d8 (Surr)	78	D	22 - 97

Polly S. Heubold
3/26/2012

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP10D-062612**

Lab Sample ID: 280-30464-8FD
Client Matrix: Water

Date Sampled: 06/26/2012 1255
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5300.D
Dilution:	1.0			Initial Weight/Volume:	3850.1 mL
Analysis Date:	07/21/2012 2337			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	~~1.4~~	~~J~~ U	0.71	5.6
2,3-Dihydroindene	260		0.73	5.2
1-Methylnaphthalene	110	~~B~~	0.92	5.8
2-Methylnaphthalene	ND		1.0	6.1
Acenaphthylene	77		0.80	5.0
Acridine	ND	~~J~~ UJ	6.8	6.8
Anthracene	6.3		0.83	4.4
Benzo[a]anthracene	2.0	J	0.96	4.5
Benzo[a]pyrene	~~ND~~	UJ	1.3	2.6
Benzo[e]pyrene	~~ND~~		1.2	4.5
Benzo[b]fluoranthene	~~ND~~		1.4	4.9
Benzo(b)thiophene	65		0.78	5.4
Benzo[k]fluoranthene	~~ND~~	UJ	1.3	4.3
Benzo[g,h,i]perylene	R ~~ND~~		~~1.2~~	~~6.4~~
Carbazole	33		0.75	3.9
Chrysene	ND		1.3	5.8
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.1~~
Dibenzofuran	20	~~B~~	1.0	5.9
Dibenzothiophene	34		1.0	4.3
Fluoranthene	69		1.8	4.8
Fluorene	210		0.88	4.3
Indene	95		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.3~~	~~5.6~~
Naphthalene	9.5	U	1.2	8.9
Perylene	~~ND~~	UJ	4.0	4.0
Phenanthrene	14		3.3	6.5
Pyrene	90		1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	5.6	J	1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	86	X	23 - 84
Chrysena-d12 (Surr)	50		28 - 101
Naphthalene-d8 (Surr)	82		22 - 97

Polly S. Neubold
3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP10D-062612**

Lab Sample ID: 280-30464-8FD
Client Matrix: Water

Date Sampled: 06/26/2012 1255
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5313.D
Dilution:	4.0			Initial Weight/Volume:	3850.1 mL
Analysis Date:	07/24/2012 1202	Run Type:	DL	Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
Acenaphthene	780	~~B~~	2.1	24

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	75	D	23 - 84
Chrysene-d12 (Surr)	44	D	28 - 101
Naphthalene-d8 (Surr)	84	D	22 - 97

Polly S. Newbold
3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP10FB-062612**

Lab Sample ID: 280-30464-9FB
Client Matrix: Water

Date Sampled: 06/26/2012 1255
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	260-126251	Lab File ID:	F5301.D
Dilution:	1.0			Initial Weight/Volume:	3613.4 mL
Analysis Date:	07/22/2012 0012			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Quelifier	MDL	RL
2,3-Benzofuran	ND		0.75	6.0
2,3-Dihydroindene	2.7	J	0.77	5.5
1-Methylnaphthalene	ND		0.99	6.2
2-Methylnaphthalene	~~1.2~~	~~JB~~ U	1.1	6.5
Acenaphthene	ND		0.55	6.3
Acenaphthylene	ND		0.85	5.3
Acridine	~~ND~~	UJ	7.2	7.2
Anthracene	ND		0.89	4.6
Benzo[a]anthracene	ND		1.0	4.8
Benzo[a]pyrene	~~ND~~	UJ	1.4	2.8
Benzo[e]pyrene	~~ND~~		1.3	4.8
Benzo[b]fluoranthene	~~ND~~		1.5	5.2
Benzo(b)thiophene	ND		0.83	5.8
Benzo[k]fluoranthene	~~ND~~	UJ	1.4	4.5
Benzo[g,h,i]perylene	R ~~ND~~		~~1.3~~	~~6.9~~
Carbazole	ND		0.80	4.2
Chrysene	ND		1.4	6.2
Dibenz(a,h)anthracene	R ~~ND~~		~~1.2~~	~~6.5~~
Dibenzofuran	ND		1.1	6.3
Dibenzothiophene	ND		1.1	4.5
Fluoranthene	ND		1.9	5.1
Fluorene	ND		0.94	4.5
Indene	ND		3.6	5.2
Indole	ND		1.9	5.2
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.4~~	~~6.0~~
Naphthalene	5.3	J	1.3	9.5
Perylene	~~ND~~	UJ	4.2	4.2
Phenanthrene	ND		3.6	7.0
Pyrene	ND		1.1	4.6
Quinoline	ND		6.3	10
Biphenyl	ND		1.2	6.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	85	X	23 - 84
Chrysene-d12 (Surr)	87		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Bobby J. Newbold 3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP10T-062612**

Lab Sample ID: 280-30464-10
Client Matrix: Water

Date Sampled: 06/26/2012 1330
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5302.D
Dilution:	1.0			Initial Weight/Volume:	3404.2 mL
Analysis Date:	07/22/2012 0048			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.80	6.3
2,3-Dihydroindene	44		0.82	5.9
1-Methylnaphthalene	~~6.1~~	~~JB~~ Y	1.0	6.6
2-Methylnaphthalene	ND		1.2	6.9
Acenaphthene	31	~~B~~	0.59	6.7
Acenaphthylene	1.6	J	0.90	5.6
Acridine	~~ND~~	UJ	7.6	7.6
Anthracene	ND		0.94	4.9
Benzo[a]anthracene	ND		1.1	5.1
Benzo[a]pyrene	~~ND~~	UJ	1.5	2.9
Benzo[e]pyrene	~~ND~~		1.3	5.1
Benzo[b]fluoranthene	~~ND~~		1.6	5.5
Benzo(b)thiophene	3.8	J	0.88	6.1
Benzo[k]fluoranthene	~~ND~~	UJ	1.5	4.8
Benzo[g,h,i]perylene	R ~~ND~~		~~1.4~~	~~7.3~~
Carbazole	ND		0.85	4.5
Chrysene	ND		1.5	6.6
Dibenz(a,h)anthracene	R ~~ND~~		~~1.2~~	~~6.9~~
Dibenzofuran	ND		1.2	6.7
Dibenzothiophene	ND		1.2	4.8
Fluoranthene	ND		2.0	5.4
Fluorene	2.6	J	1.0	4.8
Indene	ND		3.9	5.5
Indole	ND		2.0	5.5
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.5~~	~~6.3~~
Naphthalene	~~3.6~~	~~J~~ Y	1.3	10
Perylene	~~ND~~	UJ	4.5	4.5
Phenanthrene	ND		3.8	7.4
Pyrene	ND		1.2	4.9
Quinoline	ND		6.6	11
Biphenyl	ND		1.2	6.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	86	X	23 - 84
Chrysene-d12 (Surr)	50		28 - 101
Naphthalene-d8 (Surr)	87		22 - 97

Polly J. Newbold
3/20/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP10TEXTENDED-062612**

Lab Sample ID: 280-30464-11
Client Matrix: Water

Date Sampled: 06/25/2012 1330
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5303.D
Dilution:	1.0			Initial Weight/Volume:	3638.4 mL
Analysis Date:	07/22/2012 0123			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.75	5.9
2,3-Dihydroindene	46		0.77	5.5
1-Methylnaphthalene	6.2	~~B~~ U	0.98	6.2
2-Methylnaphthalene	ND		1.1	6.5
3-Methylcholanthrene	R ~~ND~~		~~5.5~~	~~5.5~~
Acenaphthene	32	~~B~~	0.55	6.3
Acenaphthylene	1.7	J	0.85	5.3
Acridine	ND	UJ	7.1	7.1
Anthracene	ND		0.88	4.6
Benzo[a]anthracene	ND		1.0	4.7
Benzo[a]pyrene	~~ND~~	UJ	1.4	2.7
Benzo[e]pyrene	~~ND~~		1.3	4.7
Benzo[b]fluoranthene	~~ND~~		1.5	5.2
Benzo(b)thiophene	3.8	J	0.82	5.7
Benzo[k]fluoranthene	~~ND~~	UJ	1.4	4.5
Benzo[g,h,i]perylene	R ~~ND~~		~~1.3~~	~~6.8~~
Carbazole	ND		0.79	4.2
Chrysene	ND		1.4	6.2
Dibenz(a,h)anthracene	R ~~ND~~		~~1.1~~	~~6.5~~
Dibenzofuran	ND		1.1	6.3
Dibenzothiophene	ND		1.1	4.5
Fluoranthene	ND		1.9	5.1
Fluorene	2.6	J	0.93	4.5
Indene	3.6	J	3.6	5.2
Indole	ND		1.9	5.2
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.4~~	~~5.9~~
Naphthalene	~~3.8~~	~~J~~ U	1.3	9.5
Perylene	~~ND~~	UJ	4.2	4.2
Phenanthrene	ND		3.5	6.9
Pyrene	ND		1.1	4.6
Quinoline	ND		6.2	9.9
7,12-Dimethylbenz(a)anthracene	ND		2.5	3.1
Biphenyl	ND		1.2	6.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	87	X	23 - 84
Chrysene-d12 (Surr)	52		28 - 101
Naphthalene-d8 (Surr)	88		22 - 97

Polly S. Newbold
3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLP10TACID-062612**

Lab Sample ID: 280-30464-12
Client Matrix: Water

Date Sampled: 06/25/2012 1330
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270C	Analysis Batch:	280-126613	Instrument ID:	MSS_Y
Prep Method:	3520C	Prep Batch:	280-125974	Lab File ID:	Y8610.D
Dilution:	1.0			Initial Weight/Volume:	1050.5 mL
Analysis Date:	07/03/2012 1811			Final Weight/Volume:	1000 uL
Prep Date:	06/28/2012 1505			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Phenol	ND		1.9	9.5
2-Chlorophenol	ND		1.9	9.5
2,4-Dimethylphenol	ND		0.55	9.5
2-Nitrophenol	ND		0.37	19
2,4-Dichlorophenol	ND		0.61	9.5
4-Chloro-3-methylphenol	ND		2.3	19
2,4,6-Trichlorophenol	ND		0.28	19
2,4-Dinitrophenol	ND		9.5	57
4-Nitrophenol	ND		1.2	48
4,6-Dinitro-2-methylphenol	ND		3.8	57
Pentachlorophenol	ND		19	57

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorophenol	85		51 - 120
Phenol-d5	88		51 - 120
Nitrobenzene-d5	88		48 - 120
2-Fluorobiphenyl	73		38 - 120
Terphenyl-d14	98		50 - 120

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLPFEED-062612**

Lab Sample ID: 280-30464-13
Client Matrix: Water

Date Sampled: 06/25/2012 1345
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129124	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5304.D
Dilution:	1.0			Initial Weight/Volume:	3484.1 mL
Analysis Date:	07/22/2012 0158			Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	1.3	J	0.78	6.2
2,3-Dihydroindene	280		0.80	5.7
1-Methylnaphthalene	110	~~B~~	1.0	6.4
2-Methylnaphthalene	ND		1.1	6.8
Acenaphthylene	50		0.88	5.5
Acridine	~~ND~~	~~J~~ UJ	7.5	7.5
Anthracene	2.1	J	0.92	4.8
Benzo[a]anthracene	ND		1.1	4.9
Benzo[a]pyrene	~~ND~~	UJ	1.4	2.9
Benzo[e]pyrene	~~ND~~		1.3	4.9
Benzo[b]fluoranthene	~~ND~~		1.6	5.4
Benzo(b)thiophene	70		0.86	6.0
Benzo[k]fluoranthene	~~ND~~	UJ	1.4	4.7
Benzo[g,h,i]perylene	R ~~ND~~		~~1.3~~	~~7.1~~
Carbazole	22		0.83	4.4
Chrysene	ND		1.4	6.4
Dibenz(a,h)anthracene	R ~~ND~~		~~1.2~~	~~6.6~~
Dibenzofuran	22	~~B~~	1.1	6.5
Dibenzothiophene	33		1.1	4.7
Fluoranthene	63		1.9	5.3
Fluorene	220		0.98	4.7
Indene	69		3.8	5.4
Indole	ND		2.0	5.4
Indeno[1,2,3-cd]pyrene	R ~~ND~~		~~1.4~~	~~6.2~~
Naphthalene	~~9.4~~	~~J~~ U	1.3	9.9
Perylene	~~ND~~	UJ	4.4	4.4
Phenanthrene	15		3.7	7.2
Pyrene	56		1.1	4.8
Quinoline	ND		6.5	10
Biphenyl	6.1	J	1.2	6.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	91	X	23 - 84
Chrysene-d12 (Surr)	50		28 - 101
Naphthalene-d8 (Surr)	90		22 - 97

Bally S. Newbold
3/26/2013

Client: Summit Envirosolutions Inc

Job Number: 280-30464-1

Client Sample ID: **SLPFEED-062612**

Lab Sample ID: 280-30464-13
Client Matrix: Water

Date Sampled: 06/25/2012 1345
Date Received: 06/27/2012 0945

8270C Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C	Analysis Batch:	280-129495	Instrument ID:	MSS_F
Prep Method:	3520C	Prep Batch:	280-126251	Lab File ID:	F5314.D
Dilution:	4.0			Initial Weight/Volume:	3484.1 mL
Analysis Date:	07/24/2012 1237	Run Type:	DL	Final Weight/Volume:	1000 uL
Prep Date:	07/01/2012 0840			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
Acenaphthene	700	~~B~~	2.3	26

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	85	D	23 - 84
Chrysene-d12 (Surr)	42	D	28 - 101
Naphthalene-d8 (Surr)	97	D	22 - 97

Polly S. Newbold
3/26/2013

THIRD QUARTER

DATA VALIDATION

3rd qtr

ddms

DATA VALIDATION

FOR

GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-33493-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 28, 2013

Reilly\280-33493-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Test America for 10 aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-33493-1 in a single data package. The following samples were reported:

0987-09 W105	0987-09 E13	0987-09 SLP6
0987-09 SLP10T	0987-09 W48	0987-09 W119
0987-09 SLP4	0987-09 W23	0987-07 E7
0987-09 E7D	0987-09 E7 FB	

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Benzo[g,h,i]perylene in 0987-09 W105, 0987-09 E13, 0987-09 SLP10T, 0987-09 SLP6 and 0987-09 W48 were qualified as not detected at the reporting limit.
- Results for Naphthalene in 0987-09 E13 and 0987-09 SLP10T were qualified as not detected at the reporting limit.
- Results for Benzo[g,h,i]perylene and Indeno[1,2,3-cd]perylene in 0987-09 W119, 0987-09 SLP4, 0987-09 W23, 0987-07 E7, 0987-09 E7D and 0987-09 E7 FB were qualified as not detected at the reporting limit.
- Results for Acridine in all samples were qualified as estimated (L, UJ).
- Results for Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene and Perylene in all field samples were qualified as estimated (L, UJ).
- Results for Benzo [a] anthracene and Chrysene in all field samples were qualified as estimated (J, UJ).
- Results for Benzo[a]pyrene and, Dibenz[a,h]anthracene in all samples were qualified as rejected (R) for non-detects and estimated low (L,) for detects.

- Results for 2-Methylnaphthalene in 0987-09 E7D and Benzo[b]fluoranthene in 0987-09 E7 were qualified as not detected (U) at the analyte-specific RL.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII. The data user is strongly encouraged to refer to this section for an understanding of the implication of any documentation problems.

. This report should be considered part of the data package for all future distributions of the semi-volatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.

J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

MI = This flag applies when an compound has matrix interferences.

N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a "tentative identification".

NJ= The analysis indicates the presence of an compound that has been "tentatively identified" and the associated numerical value represent its approximate concentration.

UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.

R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of September 19, 2012. The samples were received by the laboratory on September 20, 2012. The temperatures of the coolers on receipt at the laboratory were noted on the COC and were acceptable (0.5° C to 2.6° C; criteria 4.0° C ± 2.0° C). All samples were extracted on September 22 and 25, 2012, which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on October 11, 12, 15 and 16, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "SMS_G5". Summary forms for three perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. The performance checks were acceptable based on the summary form provided. See Section XII. Documentation.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for Acridine in several standards. The data package included the manual integration results. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on October 11, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained

from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available." No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

Two CC standards were analyzed in association with these samples. The relative response factors (RRFs) as well as percent differences (%Ds) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %D values were below the maximum acceptance limit of 35 percent as defined in the QAPP.

IV. Blanks

Two laboratory method blanks and one field blank were analyzed in support of these samples. Benzo[g,h,i]perylene (1.25 ng/L) and Naphthalene (1.19 ng/L) were detected in method blank 280-138557/1-A. Results for Benzo[g,h,i]perylene in 0987-09 W105, 0987-09 E13, 0987-09 SLP10T, 0987-09 SLP6 and 0987-09 W48 were qualified as not detected (U) at the reporting limit. Results for Naphthalene in 0987-09 E13 and 0987-09 SLP10T were qualified as not detected (U) at the reporting limit. Benzo[g,h,i]perylene (2.04 ng/L) and Indeno[1,2,3-cd]pyrene (1.80 ng/L) were detected in method blank 280-139011/1-A. Results for Benzo[g,h,i]perylene and Indeno[1,2,3-cd]pyrene in 0987-09 W119, 0987-09 SLP4, 0987-09 W23, 0987-07 E7, 0987-09 E7D and 0987-09 E7 FB were qualified as not detected (U) at the reporting limit.

Naphthalene (2.7 ng/L) was detected in the field blank. Following qualification based on method blank, results for Naphthalene in 0987-09 SLP6, 0987-09 W48, 0987-09 W119, 0987-09 SLP4, 0987-07 E7 and 0987-09 E7D were qualified as not detected (U) at the reporting limit.

V. Surrogate Compound Recovery

Recoveries of all of the surrogate compounds were correctly calculated and accurately reported. Percent recoveries were acceptable except as detailed below:

Sample	Fluorene-d10 %Recovery Limits (23-84%)	Chrysene-d12 % Recovery Limits (28-101%)
MB 280 138557/1-A	87	104
MB 280 139077/1-A	89	108
LCS 280 139011/2-A	86	105
LCSD	86	103
280 33493-9 MS	88	
280 33493-9 MSD	87	
0987-09 SLP6	92	
0987-09 SLP10T	86	
0987-09 W119	85	
0987-09 SLP4	87	
0987-09 W23	88	
0987-09 E7D	88	

The recoveries of Fluorene-d10, even though they are outside laboratory QC limits, are acceptable; therefore, based on professional judgment, no qualification of data were made based on the exceedances.

The recovery of Chrysene-d12 was low, outside acceptance limits (28-101%) in 0987-09 W48 (25%R) and 0987-09 W119 (28%R). Results for Benzo [a] anthracene, Chrysene, Benzo [b] fluoranthene, Benzo [k] fluoranthene, Benzo [e] pyrene, Benzo [a] pyrene, Perylene, Indeno [1,2,3-cd] pyrene, Dibenz (a,h) anthracene, and Benzo [g,h.i] perylene in 0987-09 W48 and 0987-09 W119 were not qualified because they were subsequently qualified based on MS/MSD recoveries.

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample 0987-09 E7. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits %R (RPD)	Action (Detects/Non-detects)
Benzo[a]pyrene	9	12		30-150 (25)	L/R
Benzo[e]pyrene	11	14	26	37-105 (25)	L/UJ
Benzo[b]fluoranthene	11	14		30-150 (25)	L/UJ
Benzo[k]fluoranthene	10	13		30-150 (25)	L/UJ
Benzo[g,h,i]perylene	2	1		30-150 (25)	L/R
Dibenz[a,h]anthracene	1	0.7		30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	2	1		30-150 (25)	L/R
Perylene	11	15		30-150 (25)	L/UJ
Benzo[a]anthracene			31	30-150 (25)	L/UJ
Chrysene			30	30-150 (25)	L/UJ

*based on amount recovered.

Results for Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene and Perylene in all field samples were qualified as estimated (L, UJ) due to unacceptable MS/MSD recoveries. Results may be biased low. Results for Benzo [a] anthracene and Chrysene in all field samples were qualified as estimated (J, UJ) due to the high RPD. Results for Benzo[a]pyrene and Dibenz[a,h]anthracene were qualified as rejected (R) for non-detects in all field samples were qualified as estimated (L,) due to unacceptable MS/MSD recoveries.

B. Laboratory Control Sample (LCS)

Results for one LCS and one LCS/LCSD were provided in the data package. All recoveries were acceptable with the exception of Acridine (20%R) in LCS 280-139011/2-A. Results for Acridine in 0987-09 W119, 0987-09 SLP4, 0987-09 W23, 0987-09 E7 and 0987-09 E7D were qualified as estimated (L, UJ) due to an unacceptable LCS recovery.

Results for 0987-09 W105, 0987-09 E13, 0987-09 SLP6, 0987-09 SLP10T and 0987-09 W48 were qualified as estimated (L, UJ) for Acridine due to unacceptable recovery of Acridine (13%) in LCSD 280 138557/3-A and the RPD (136%) between the LCS and LCSD %R for Acridine.

VII. Field Duplicate

Sample 0987-09 E7D was collected as a field duplicate of sample 0987-09 E7. All RPDs were within quality control limits (≤ 25% if both samples are >5X RL) for paired samples. 2-Methylnaphthalene was detected in 0987-09 E7D but not in 0987-09 E7, and Benzo[b]fluoranthene was detected in 0987-09 E7 but not in 0987-09 E7D. Results for 2-Methylnaphthalene in 0987-09 E7D and Benzo[b]fluoranthene in 0987-09 E7 were qualified as not detected (U) at the analyte-specific RL.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples with the exception of the reporting limit for pyrene. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goals with the exception of Acridine and Perylene with the project RL goal at 6.5 and 3.8ng/L and the MDL at 6.7 and 3.9 ng/L respectively.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- Response factors (RF) for the 10 ng/L and 20 ng/L standards in the IC could not be reproduced. This did not affect the final sample results.

- The tune procedure used for the analysis of these samples is not an injection. The instrument is manufactured with a vial of the tuning compound (PC-43) that is directly accessible to the mass spectrometer. Opening the tuning valve results in this compound entering the mass spectrometer without going through any parts of the gas chromatograph. As a result, there is no raw data to support the summary form documenting the successful tuning of the instrument.

- As noted in above, these samples were analyzed on a single instrument identified as SMS_G5. Other samples reported for the St. Louis Park project were analyzed on a system identified as MSS_F. All of the summary forms included in the data packages to support the PC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC43 tune does not process through the laboratory chromatography software, it is a printout handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".

Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Benzo[g,h,i]perylene in 0987-09 W105, 0987-09 E13, 0987-09 SLP10T, 0987-09 SLP6 and 0987-09 W48 were qualified as not detected at the reporting limit due to method blank contamination.

- Results for Naphthalene in 0987-09 E13 and 0987-09 SLP10T were qualified as not detected at the reporting limit due to method blank contamination.

- Results for Benzo[g,h,i]perylene and Indeno[1,2,3-cd]perylene in 0987-09 W119, 0987-09 SLP4, 0987-09 W23, 0987-07 E7, 0987-09 E7D and

0987-09 E7 FB were qualified as not detected at the reporting limit due to method blank contamination.

- Results for Acridine in all samples were qualified as estimated (L, UJ) due to unacceptable LCS recovery and unacceptable LCS/LCSD RPD.

- Results for Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene and Perylene in all field samples were qualified as estimated (L, UJ) due to unacceptable MS/MSD recovery.

- Results for Benzo [a] anthracene and Chrysene in all field samples were qualified as estimated (J, UJ) due to the high MS/MSD RPD.

- Results for Benzo[a]pyrene, Dibenz[a,h]anthracene in all samples were qualified as rejected (R) for non-detects and estimated low (L,) for detects due to unacceptable MS/MSD recoveries.

- Results for 2-Methylnaphthalene in 0987-09 E7D and Benzo[b]fluoranthene in 0987-09 E7 were qualified as not detected (U) at the analyte-specific RL due to imprecision in field duplicate samples.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered <u>part of the data package</u> for all future distributions of the semi volatiles data.

ddms

APPENDIX B

PAHs in Water

Laboratory Form 1s

DATA SUMMARY FORM: SEMIVOLATLES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: September 19, 2012

Job No. 280-33493-1

ddms Project No. 2006-0022

Sample Location		0987-09 SLP4		0987-09 W23		0987-09 E7		0987-09 E7D		0987-09 E7 FB			
Lab Sample ID		280-33493-7		280-33493-8		280-33493-9		280-33493-10		280-33493-11			
Initial Volume		4083.4		3790.1		3926.6		3687.5		3131.2			
Dilution Factor		0.98		1.06, 10.6		1.02		1.08		1.28			
RL													
5.4	2,3-Dibenzofuran			2.5	J								
5.0	2,3-Dihydroindene	40		410		3.8	J	4.5	J				
5.6	1-Methylnaphthalene			1200		1.1	J	1.5	J				
5.9	2-Methylnaphthalene			640					U				
5.7	Acenaphthene	56		3100		8.6		9.6					
4.8	Acenaphthylene	4.2	J	140									
6.5	Acridine		UJ	310	L		UJ		UJ		UJ		
4.2	Anthracene	2.0	J	210		1.7	J	1.7	J				
4.3	Benzo[a]anthracene		UJ	190	J	1.5	J	1.0	J				
2.5	Benzo[a]pyrene		R	10	L	1.4	L	1.3	L		R		
4.3	Benzo[e]pyrene		UJ	7.3	L		UJ		UJ		UJ		
4.7	Benzo[b]fluoranthene		UJ	23	L		U		UJ		UJ		
5.2	Benzo(b)thiopene	6.3		83		3.1	J	3.5	J				
4.1	Benzo[k]fluoranthene		UJ		UJ	2.2	L	1.5	L		UJ		
6.2	Benzo[g,h,i]perylene		UJ		UJ		UJ		UJ		UJ		
3.8	Carbazole	5.5		170		1.1	J	1.2	J				
5.6	Chrysene		UJ	110	J		UJ		UJ		UJ		
5.9	Dibenz(a,h)anthracene		R	1.2	L	2.3	L	1.5	L		R		
5.7	Dibenzofuran	1.1	J	1000									
4.1	Dibenzothiophene			380									
4.6	Fluoranthene	2.3	J	1800		2.3	J	1.8	J				
4.1	Fluorene	2.5	J	2500									
4.7	Indene	4.0	J	55		6.1		6.5					
4.7	Indole												
5.4	Indeno[1,2,3-cd]pyrene		U		U		U		U		U		
8.6	Naphthalene		U	1600			U		U	2.7	J		
3.8	Perylene		UJ		UJ		UJ		UJ		UJ		
6.3	Phenanthrene	3.5	J	1300									
4.2	Pyrene	9.2		1700		2.6	J	2.4	J				
9.0	Quinoline					24							
5.6	Biphenyl			520									

ddms

APPENDIX A

PAHs in Water

Data Summary Forms

DATA SUMMARY FORM: SEMIVOLATLES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: September 19, 2012

Job No. 280-33493-1

ddms Project No. 2006-0022

Sample Location		0987-09 W105		0987-09 E13		0987-09 SLP6		0987-09 SLP10T		0987-09 W48		0987-09 W119	
Lab Sample ID		280-33493-1		280-33493-2		280-33493-3		280-33493-4		280-33493-5		280-33493-6	
Initial Volume		3996.1		3977.2		3828.1		4065.1		3719.7		3900.2	
Dilution Factor		1		1		1.04		0.98		1.08		1.03	
RL													
5.4	2,3-Dibenzofuran					0.90	J			1.2	J		
5.0	2,3-Dihydroindene	53		6.3		59		35		5.6		5.3	
5.6	1-Methylnaphthalene	32				2.3	J	7.3		4.0	J	1.7	J
5.9	2-Methylnaphthalene	16				1.5	J			2.5	J	1.6	J
5.7	Acenaphthene	110		120		83		42		92		16	
4.8	Acenaphthylene	10		9.4		10		1.8	J	4.3	J	1.2	J
6.5	Acridine		UJ		UJ	14	L		UJ	7.1	L	7.1	L
4.2	Anthracene	15				3.3	J			4.2		3.0	J
4.3	Benzo[a]anthracene	18	J		UJ		UJ		UJ		UJ		UJ
2.5	Benzo[a]pyrene	1.6	L		R		R		R		R		R
4.3	Benzo[e]pyrene	1.1	L		UJ		UJ		UJ		UJ		UJ
4.7	Benzo[b]fluoranthene	1.9	L		UJ		UJ		UJ		UJ		UJ
5.2	Benzo(b)thiopene	12				12		4.0	J	12		4.6	J
4.1	Benzo[k]fluoranthene		UJ		UJ		UJ		UJ		UJ		UJ
6.2	Benzo[g,h,i]perylene		U		U		U		U		U		U
3.8	Carbazole	9.3				3.2	J	0.74	J	1.5	J	1.3	J
5.6	Chrysene	11	J		UJ		UJ		UJ		UJ		UJ
5.9	Dibenz(a,h)anthracene		R		R		R		R		R		R
5.7	Dibenzofuran	30											
4.1	Dibenzothiophene	11		2.8	J	2.4	J			1.3	J		
4.6	Fluoranthene	240				3.6	J						
4.1	Fluorene	73						2.8	J				
4.7	Indene	5.3				7.5		4.4	J	47		9.9	
4.7	Indole					2.9	J	3.0	J	2.3	J		
5.4	Indeno[1,2,3-cd]pyrene	1.3	L	1.3	L	1.5	L	1.4	L	1.5	L		UJ
8.6	Naphthalene	35	L		U		U		U		U		U
3.8	Perylene		UJ		UJ		UJ		UJ		UJ		UJ
6.3	Phenanthrene	67											
4.2	Pyrene	200		12		6.2				2.9	J	12	
9.0	Quinoline												
5.6	Biphenyl	24											

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W105

Lab Sample ID: 280-33493-1
Client Matrix: Water

Date Sampled: 09/19/2012 0840
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7907.D
Dilution:	1.0			Initial Weight/Volume:	3996.1 mL
Analysis Date:	10/11/2012 2231			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.68	5.4
2,3-Dihydroindene	53		0.70	5.0
1-Methylnaphthalene	32		0.89	5.6
2-Methylnaphthalene	16		0.98	5.9
Acenaphthene	110		0.50	5.7
Acenaphthylene	10		0.77	4.8
Acridine	ND UJ	J	6.5	6.5
Anthracene	16		0.80	4.2
Benzo[a]anthracene	18 ~~J~~		0.92	4.3
Benzo[a]pyrene	1.6 L	~~J~~	1.2	2.5
Benzo[e]pyrene	1.1 L	~~J~~	1.1	4.3
Benzo[b]fluoranthene	1.9 L	~~J~~	1.4	4.7
Benzo(b)thiophene	12		0.75	5.2
Benzo[k]fluoranthene	ND UJ		1.2	4.1
Benzo[g,h,i]perylene	~~1.3~~ U	~~JB~~	1.2	6.2
Carbazole	9.3		0.72	3.8
Chrysene	11 J		1.2	5.6
Dibenz(a,h)anthracene	~~ND~~ R		1.0	5.9
Dibenzofuran	30		0.99	5.7
Dibenzothiophene	11		0.98	4.1
Fluoranthene	240		1.7	4.6
Fluorene	73		0.85	4.1
Indene	5.3		3.3	4.7
Indole	ND		1.7	4.7
Indeno[1,2,3-cd]pyrene	1.3 L	~~J~~	1.3	5.4
Naphthalene	35 L	~~B~~	1.1	8.6
Perylene	ND UJ		3.8	3.6
Phenanthrene	67		3.2	6.3
Pyrene	200		0.99	4.2
Quinoline	ND		5.7	9.0
Biphenyl	24		1.1	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	50		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

JL Rose
2/26/13

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: **0987-09 E13**

Lab Sample ID: 280-33493-2
Client Matrix: Water

Date Sampled: 09/19/2012 1209
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7908.D
Dilution:	1.0			Initial Weight/Volume:	3977.2 mL
Analysis Date:	10/11/2012 2310			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.68	5.4
2,3-Dihydroindene	6.3		0.70	5.0
1-Methylnaphthalene	ND		0.90	5.6
2-Methylnaphthalene	ND		0.99	5.9
Acenaphthene	120		0.60	5.7
Acenaphthylene	9.4		0.77	4.8
Acridine	ND UJ		6.5	6.5
Anthracene	ND		0.80	4.2
Benzo[a]anthracene	ND UJ		0.93	4.3
Benzo[a]pyrene	~~ND~~ R		1.2	2.5
Benzo[e]pyrene	ND UJ		1.1	4.3
Benzo[b]fluoranthene	ND UJ		1.4	4.7
Benzo(b)thiophene	ND		0.75	5.2
Benzo[k]fluoranthene	ND UJ		1.2	4.1
Benzo[g,h,i]perylene	~~1.4~~ U	~~J~~ B	1.2	6.2
Carbazole	ND		0.72	3.8
Chrysene	ND UJ		1.2	5.6
Dibenz(a,h)anthracene	~~ND~~ R		1.0	5.9
Dibenzofuran	ND		1.0	5.7
Dibenzothiophene	2.8 J	J	0.99	4.1
Fluoranthene	ND		1.7	4.6
Fluorene	ND		0.85	4.1
Indene	ND		3.3	4.7
Indole	ND		1.7	4.7
Indeno[1,2,3-cd]pyrene	1.3 L	J	1.3	5.4
Naphthalene	~~2.2~~ U	J B	1.1	8.6
Perylene	ND UJ		3.8	3.8
Phenanthrene	ND		3.2	6.3
Pyrene	12		1.0	4.2
Quinoline	ND		5.7	9.1
Biphenyl	ND		1.1	5.6

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	82		23 - 84
Chrysene-d12 (Surr)	51		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

JM Rossi
2/26/13

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 SLP6

Lab Sample ID: 280-33493-3
Client Matrix: Water

Date Sampled: 09/19/2012 1321
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7909.D
Dilution:	1.0			Initial Weight/Volume:	3828.1 mL
Analysis Date:	10/11/2012 2348			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.90	J	0.71	5.6
2,3-Dihydroindene	59		0.73	5.2
1-Methylnaphthalene	2.3	J	0.93	5.9
2-Methylnaphthalene	1.5	J	1.0	6.2
Acenaphthene	83		0.52	6.0
Acenaphthylene	10		0.80	5.0
Acridine	14 L	~~J~~	6.8	6.8
Anthracene	3.3 J	~~J~~	0.84	4.4
Benzo[a]anthracene	ND UJ		0.96	4.5
Benzo[a]pyrene	~~ND~~ R		1.3	2.6
Benzo[e]pyrene	ND UJ		1.2	4.5
Benzo[b]fluoranthene	ND UJ		1.5	4.9
Benzo(b)thiophene	12		0.78	5.4
Benzo[k]fluoranthene	ND UJ		1.3	4.3
Benzo[g,h,i]perylene	~~1.5~~ U	~~JB~~	1.2	6.5
Carbazole	3.2	J	0.75	4.0
Chrysene	~~ND~~ UJ		1.3	5.9
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.2
Dibenzofuran	ND		1.0	6.0
Dibenzothiophene	2.4	J	1.0	4.3
Fluoranthene	3.6	J	1.8	4.8
Fluorene	ND		0.89	4.3
Indene	7.5		3.4	4.9
Indole	2.9	J	1.8	4.9
Indeno[1,2,3-cd]pyrene	1.5 L	~~J~~	1.3	5.6
Naphthalene	~~7.1~~ U	~~J~~ JB	1.2	9.0
Perylene	ND UJ		4.0	4.0
Phenanthrene	ND		3.4	6.6
Pyrene	6.2		1.0	4.4
Quinoline	ND		5.9	9.4
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	92	X	23 - 84
Chrysene-d12 (Surr)	69		28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

Jill Rossi
2/26/13

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: **0987-09 SLP10T**

Lab Sample ID: 280-33493-4
Client Matrix: Water

Date Sampled: 09/19/2012 0813
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7910.D
Dilution:	1.0			Initial Weight/Volume:	4065.1 mL
Analysis Date:	10/12/2012 0027			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.67	5.3
2,3-Dihydroindene	35		0.69	4.9
1-Methylnaphthalene	7.3		0.88	5.5
2-Methylnaphthalene	ND		0.96	5.8
Acenaphthene	42		0.49	5.6
Acenaphthylene	1.8	J	0.76	4.7
Acridine	ND UJ	/	6.4	6.4
Anthracene	ND		0.79	4.1
Benzo[a]anthracene	ND UJ		0.91	4.2
Benzo[a]pyrene	~~ND~~ R		1.2	2.5
Benzo[e]pyrene	ND UJ		1.1	4.2
Benzo[b]fluoranthene	ND UJ		1.4	4.6
Benzo(b)thiophene	4.0	J	0.74	5.1
Benzo[k]fluoranthene	ND UJ		1.2	4.0
Benzo[g,h,i]perylene	~~1.5~~ U	~~J B~~	1.2	6.1
Carbazole	0.74	J	0.71	3.7
Chrysene	ND UJ		1.2	5.5
Dibenz(a,h)anthracene	ND R		1.0	5.8
Dibenzofuran	ND		0.97	5.6
Dibenzothiophene	ND		0.96	4.0
Fluoranthene	ND		1.7	4.5
Fluorene	2.8	J	0.84	4.0
Indene	4.4	J	3.2	4.6
Indole	3.0	J	1.7	4.6
Indeno[1,2,3-cd]pyrene	1.4	J	1.2	5.3
Naphthalene	~~2.0~~ U	~~J B~~	1.1	8.5
Perylene	ND		3.7	3.7
Phenanthrene	ND		3.2	6.2
Pyrene	ND		0.97	4.1
Quinoline	ND		5.6	8.9
Biphenyl	ND		1.0	5.5

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	86	X	23 - 84
Chrysene-d12 (Surr)	61		28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

JU Rossi
2/~~28~~/13
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Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W48

Lab Sample ID: 280-33493-5
Client Matrix: Water

Date Sampled: 09/19/2012 1050
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-141615	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-138557	Lab File ID:	G5_7911.D
Dilution:	1.0			Initial Weight/Volume:	3719.7 mL
Analysis Date:	10/12/2012 0106			Final Weight/Volume:	1000 uL
Prep Date:	09/22/2012 1215			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	1.2	J	0.73	5.8
2,3-Dihydroindene	5.6		0.75	5.4
1-Methylnaphthalene	4.0	J	0.96	6.0
2-Methylnaphthalene	2.5	J	1.1	6.3
Acenaphthene	92		0.54	6.1
Acenaphthylene	4.3	J	0.83	5.2
Acridine	7.1 L	~~J~~	7.0	7.0
Anthracene	4.2	J	0.86	4.5
Benzo[a]anthracene	ND UJ		0.99	4.6
Benzo[a]pyrene	~~ND~~ R		1.3	2.7
Benzo[e]pyrene	ND UJ		1.2	4.6
Benzo[b]fluoranthene	ND UJ		1.5	5.1
Benzo(b)thiophene	12		0.81	5.6
Benzo[k]fluoranthene	ND UJ		1.3	4.4
Benzo[g,h,i]perylene	~~1.5~~ U	~~JB~~	1.3	6.7
Carbazole	1.5	J	0.77	4.1
Chrysene	ND UJ		1.3	6.0
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	1.3	J	1.1	4.4
Fluoranthene	ND		1.8	4.9
Fluorene	ND		0.91	4.4
Indene	47		3.5	5.1
Indole	2.3	J	1.9	5.1
Indeno[1,2,3-cd]pyrene	1.5 L	~~J~~	1.4	5.8
Naphthalene	~~6.3~~ U	~~JB~~	1.2	9.2
Perylene	ND UJ		4.1	4.1
Phenanthrene	ND		3.5	6.8
Pyrene	2.9	J	1.1	4.5
Quinoline	ND		6.1	9.7
Biphenyl	ND		1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	81		23 - 84
Chrysene-d12 (Surr)	25	X	28 - 101
Naphthalene-d8 (Surr)	82		22 - 97

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2/28/13

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: **0987-09 W119**

Lab Sample ID: 280-33493-6
Client Matrix: Water

Date Sampled: 09/19/2012 1010
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7920.D
Dilution:	1.0			Initial Weight/Volume:	3900.2 mL
Analysis Date:	10/15/2012 1448			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.70	5.5
2,3-Dihydroindene	5.3		0.72	5.1
1-Methylnaphthalene	1.7	J	0.91	5.7
2-Methylnaphthalene	1.6	J	1.0	6.1
Acenaphthene	16		0.51	5.8
Acenaphthylene	1.2	J	0.79	4.9
Acridine	7.1 L	✓	6.7	6.7
Anthracene	3.0	J	0.82	4.3
Benzo[a]anthracene	ND UJ		0.94	4.4
Benzo[a]pyrene	~~ND~~ R		1.3	2.6
Benzo[e]pyrene	ND UJ		1.2	4.4
Benzo[b]fluoranthene	ND UJ		1.4	4.8
Benzo(b)thiophene	4.6	J	0.77	5.3
Benzo[k]fluoranthene	ND UJ		1.3	4.2
Benzo[g,h,i]perylene	~~1.7~~ U	~~JB~~	1.2	6.4
Carbazole	1.3	J	0.74	3.9
Chrysene	ND UJ		1.3	5.7
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.1
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.87	4.2
Indene	9.9	✓	3.4	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	~~1.6~~ UJ	~~JB~~	1.3	5.5
Naphthalene	~~5.5~~ U	J	1.2	8.8
Perylene	ND UJ		3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	12		1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	85	X	23 - 84
Chrysene-d12 (Surr)	28		28 - 101
Naphthalene-d8 (Surr)	85		22 - 97

Gli Rossi
2/26/13

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: **0987-09 SLP4**

Lab Sample ID: 280-33493-7
Client Matrix: Water

Date Sampled: 09/19/2012 0928
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7921.D
Dilution:	1.0			Initial Weight/Volume:	4083.4 mL
Analysis Date:	10/15/2012 1527			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.67	5.3
2,3-Dihydroindene	40		0.69	4.9
1-Methylnaphthalene	ND		0.87	5.5
2-Methylnaphthalene	ND		0.96	5.8
Acenaphthene	56		0.49	5.6
Acenaphthylene	4.2	J	0.75	4.7
Acridine	ND UJ		6.4	6.4
Anthracene	2.0	J	0.78	4.1
Benzo[a]anthracene	ND UJ		0.90	4.2
Benzo[a]pyrene	ND R		1.2	2.4
Benzo[e]pyrene	ND UJ		1.1	4.2
Benzo[b]fluoranthene	ND UJ		1.4	4.6
Benzo(b)thiophene	6.3		0.73	5.1
Benzo[k]fluoranthene	ND UJ		1.2	4.0
Benzo[g,h,i]perylene	~~1.6~~ UJ	~~J B~~	1.1	6.1
Carbazole	5.5		0.71	3.7
Chrysene	ND UJ		1.2	5.5
Dibenz(a,h)anthracene	~~ND~~ R		1.0	5.8
Dibenzofuran	1.1	J	0.97	5.6
Dibenzothiophene	ND		0.96	4.0
Fluoranthene	2.3	J	1.7	4.5
Fluorene	2.5	J	0.83	4.0
Indene	4.0	J*	3.2	4.6
Indole	ND		1.7	4.6
Indeno[1,2,3-cd]pyrene	~~1.7~~ U	~~J B~~	1.2	5.3
Naphthalene	3.9	J *	1.1	8.4
Perylene	ND UJ		3.7	3.7
Phenanthrene	3.5	J	3.1	6.2
Pyrene	9.2		0.97	4.1
Quinoline	ND		5.5	8.8
Biphenyl	ND		1.0	5.5

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	87	X	23 - 84
Chrysene-d12 (Surr)	69		28 - 101
Naphthalene-d8 (Surr)	84		22 - 97

Eli Rossi
2/26/13

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: **0987-09 W23**

Lab Sample ID: 280-33493-8
Client Matrix: Water

Date Sampled: 09/19/2012 0850
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7922.D
Dilution:	1.0			Initial Weight/Volume:	3790.1 mL
Analysis Date:	10/15/2012 1607			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	2.5	J	0.72	5.7
Acenaphthylene	140		0.81	5.1
Acridine	310 L		6.9	6.9
Anthracene	210		0.84	4.4
Benzo[a]anthracene	190 J		0.97	4.5
Benzo[a]pyrene	10 L		1.3	2.6
Benzo[e]pyrene	7.3 L		1.2	4.5
Benzo[b]fluoranthene	23 L		1.5	5.0
Benzo(b)thiophene	83		0.79	5.5
Benzo[k]fluoranthene	ND UJ		1.3	4.3
Benzo[g,h,i]perylene	~~2.1~~ UJ	~~J B~~	1.2	6.5
Carbazole	170		0.76	4.0
Chrysene	110 J		1.3	5.9
Dibenz(a,h)anthracene	1.2 L		1.1	6.2
Indene	55		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	~~2.2~~ U	~~J B~~	1.3	5.7
Perylene	ND UJ		4.0	4.0
Quinoline	24		6.0	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	57		28 - 101
Naphthalene-d8 (Surr)	77		22 - 97

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2/26/13

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: **0987-09 W23**

Lab Sample ID: 280-33493-8

Client Matrix: Water

Date Sampled: 09/19/2012 0850

Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142406	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7935.D
Dilution:	10			Initial Weight/Volume:	3790.1 mL
Analysis Date:	10/16/2012 1520	Run Type:	DL	Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Dihydroindene	410		7.4	53
1-Methylnaphthalene	1200		9.4	59
2-Methylnaphthalene	640		10	62
Dibenzofuran	1000		10	60
Dibenzothiophene	380		10	43
Fluoranthene	1800		18	49
Fluorene	2500		9.0	43
Naphthalene	1600		12	91
Phenanthrene	1300		34	66
Pyrene	1700		10	44
Biphenyl	520		11	59

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	90	D	23 - 84
Chrysene-d12 (Surr)	59	D	28 - 101
Naphthalene-d8 (Surr)	81	D	22 - 97

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Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 W23

Lab Sample ID: 280-33493-8
Client Matrix: Water

Date Sampled: 09/19/2012 0850
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142406	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7936.D
Dilution:	20			Initial Weight/Volume:	3790.1 mL
Analysis Date:	10/16/2012 1559	Run Type:	DL2	Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
Acenaphthene	3100		11	120

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	87	D	23 - 84
Chrysene-d12 (Surr)	49	D	28 - 101
Naphthalene-d8 (Surr)	77	D	22 - 97

Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: **0987-09 E7**

Lab Sample ID: 280-33493-9
Client Matrix: Water

Date Sampled: 09/19/2012 1235
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7923.D
Dilution:	1.0			Initial Weight/Volume:	3926.6 mL
Analysis Date:	10/15/2012 1646			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.69	5.5
2,3-Dihydroindene	3.8	J	0.71	5.1
1-Methylnaphthalene	1.1	J	0.91	5.7
2-Methylnaphthalene	ND		1.0	6.0
Acenaphthene	8.6		0.51	5.8
Acenaphthylene	ND		0.78	4.9
Acridine	ND UJ		6.6	6.6
Anthracene	1.7	J	0.81	4.3
Benzo[a]anthracene	1.5	J	0.94	4.4
Benzo[a]pyrene	1.4 L		1.3	2.5
Benzo[e]pyrene	ND UJ		1.2	4.4
Benzo[b]fluoranthene	~~2.0~~ U		1.4	4.8
Benzo(b)thiophene	3.1	J	0.76	5.3
Benzo[k]fluoranthene	2.2 L		1.3	4.2
Benzo[g,h,i]perylene	~~2.7~~ UJ	~~JB~~	1.2	6.3
Carbazole	1.1	J	0.73	3.9
Chrysene	~~1.9~~ UJ		1.3	5.7
Dibenz(a,h)anthracene	2.3 L		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	2.3	J	1.7	4.7
Fluorene	ND		0.87	4.2
Indene	6.1	*	3.3	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	~~2.8~~ U	~~JB~~	1.3	5.5
Naphthalene	~~4.1~~ U		1.2	8.8
Perylene	ND UJ		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	2.6	J	1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	78		23 - 84
Chrysene-d12 (Surr)	49		28 - 101
Naphthalene-d8 (Surr)	80		22 - 97

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Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: 0987-09 E7D

Lab Sample ID: 280-33493-10FD
Client Matrix: Water

Date Sampled: 09/19/2012 1235
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7926.D
Dilution:	1.0			Initial Weight/Volume:	3687.5 mL
Analysis Date:	10/15/2012 1843			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.74	5.9
2,3-Dihydroindene	4.5	J	0.76	5.4
1-Methylnaphthalene	1.5	J	0.97	6.1
2-Methylnaphthalene	~~1.7~~ U	~~J~~	1.1	6.4
Acenaphthene	9.6		0.54	6.2
Acenaphthylene	ND		0.84	5.2
Acridine	ND UJ		7.1	7.1
Anthracene	1.7	J	0.87	4.6
Benzo[a]anthracene	1.0	J	1.0	4.7
Benzo[a]pyrene	1.3 L	~~J~~	1.3	2.7
Benzo[e]pyrene	ND UJ		1.2	4.7
Benzo[b]fluoranthene	ND UJ		1.5	5.1
Benzo(b)thiophene	3.5	J	0.81	5.6
Benzo[k]fluoranthene	1.5 L	~~J~~	1.3	4.4
Benzo[g,h,i]perylene	~~2.3~~ UJ	~~J~~	1.3	6.7
Carbazole	1.2	J	0.78	4.1
Chrysene	ND UJ		1.3	6.1
Dibenz(a,h)anthracene	1.5 L	~~J~~	1.1	6.4
Dibenzofuran	ND		1.1	6.2
Dibenzothiophene	ND		1.1	4.4
Fluoranthene	1.8	J	1.8	5.0
Fluorene	ND		0.92	4.4
Indene	6.5		3.6	5.1
Indole	ND		1.9	5.1
Indeno[1,2,3-cd]pyrene	~~2.1~~ U	~~J B~~	1.4	5.9
Naphthalene	~~6.8~~ U	~~J*~~	1.2	9.3
Perylene	ND UJ		4.1	4.1
Phenanthrene	ND		3.6	6.8
Pyrene	2.4	J	1.1	4.6
Quinoline	ND		6.1	9.8
Biphenyl	ND		1.1	6.1

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	88	X	23 - 84
Chrysene-d12 (Surr)	60		28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

GU Rossi
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Client: Summit Envirosolutions Inc

Job Number: 280-33493-1

Client Sample ID: **0987-09 E7FB**

Lab Sample ID: 280-33493-11FB
Client Matrix: Water

Date Sampled: 09/19/2012 1235
Date Received: 09/20/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-142187	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-139011	Lab File ID:	G5_7927.D
Dilution:	1.0			Initial Weight/Volume:	3131.2 mL
Analysis Date:	10/15/2012 1922			Final Weight/Volume:	1000 uL
Prep Date:	09/25/2012 1836			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.87	6.9
2,3-Dihydroindene	ND		0.89	6.4
1-Methylnaphthalene	ND		1.1	7.2
2-Methylnaphthalene	ND		1.3	7.5
Acenaphthene	ND		0.64	7.3
Acenaphthylene	ND		0.98	6.1
Acridine	ND UJ	✓	8.3	8.3
Anthracene	ND		1.0	5.4
Benzo[a]anthracene	ND UJ		1.2	5.5
Benzo[a]pyrene	~~ND~~ R		1.6	3.2
Benzo[e]pyrene	ND UJ		1.5	5.5
Benzo[b]fluoranthene	ND UJ		1.8	6.0
Benzo(b)thiophene	ND		0.96	6.6
Benzo[k]fluoranthene	ND UJ		1.6	5.2
Benzo[g,h,i]perylene	~~2.2~~ UJ	~~J B~~	1.5	7.9
Carbazole	ND		0.92	4.9
Chrysene	ND UJ		1.6	7.2
Dibenz(a,h)anthracene	~~ND~~ R		1.3	7.5
Dibenzofuran	ND		1.3	7.3
Dibenzothiophene	ND		1.3	5.2
Fluoranthene	ND		2.2	5.9
Fluorene	ND		1.1	5.2
Indene	ND	*	4.2	6.0
Indole	ND		2.2	6.0
Indeno[1,2,3-cd]pyrene	~~1.9~~ U	~~J B~~	1.6	6.9
Naphthalene	2.7 ~~2.7~~ U J	~~J*~~	1.5	11
Perylene	ND UJ		4.9	4.9
Phenanthrene	ND		4.1	8.0
Pyrene	ND		1.3	5.4
Quinoline	ND		7.2	11
Biphenyl	ND		1.3	7.2

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	73		23 - 84
Chrysene-d12 (Surr)	105	X	28 - 101
Naphthalene-d8 (Surr)	77		22 - 97

JCL Rasse
2/26/13

FOURTH QUARTER

DATA VALIDATION

4Q GTR

ddms

DATA VALIDATION

FOR

GROUNDWATER and GAC TREATMENT SYSTEM MONITORING
REILLY N.P.L. SITE
SAINT LOUIS PARK, MINNESOTA

ORGANIC ANALYSIS DATA
PAHs in Water
Laboratory Job No. 280-36732-1

Analyses Performed

By:

Test America Denver
Arvada, Colorado

For:

Summit Envirosolutions, Inc.
1217 Bandana Boulevard North
St. Paul, Minnesota 55108

Data Validation By:

ddms, inc.
St. Paul, Minnesota

February 27, 2013

Reilly\280-36732-1SV

EXECUTIVE SUMMARY

Validation of the semi-volatile organics analysis data prepared by Test America for five aqueous samples and one field blank from the Reilly N.P.L. Site has been completed by ddms, inc. (ddms). The data were reported by the laboratory under Job No. 280-35162-1 in a single data package. The following samples were reported:

SLP10T-120612	SLP10TD-126012	SLP10TFB-102612
SLP6-120612	W119-120612	W48-120612

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Pyrene in W48-120612 and Pyrene and Fluoranthene in SLP6-120612 were qualified as not detected (U) at the reporting limit (RL).
- Results for 2-Methylnaphthalene and Naphthalene in W48-120612, W119-120612 and SLP10T-120612 and results for Naphthalene in SLP6-120612, SLP10T-120612 and SLP10TD-120612 were qualified as not detected (U) at the RL.
- Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, Indeno[1,2,3,cd]pyrene and Perylene in all field samples were qualified as rejected (R) for non-detects. Results for Acridine, Chrysene and Benzo[a]anthracene in all field samples were qualified as estimate (UJ, J).
- Results for 2, 3-Dihydrdoindene in SLP10T-120612 were qualified as not detected (U) at the RL.

Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report. Brief explanations of the reasons for the actions taken above can be found in Section XIII.

Documentation issues are discussed in Section XII.

This report should be considered <u>part of the data package</u> for all future distributions of the semi-volatiles data.

INTRODUCTION

Analyses were performed in accordance with USEPA Method 8270C SIM. This methodology does not stipulate a reporting format; however, upon request the laboratory provided a "CLP-type" data package. ddms' review was performed in accordance with the EPA's Region 5 Document "Standard Operating Procedure For Data Review Of Semi-volatile Organic Compound Analysis By Gas Chromatography/Mass Spectrometry (GC/MS); CRL Method GEN010 / Version 9.0" and the Quality Assurance Project Plan (QAPP) for Sampling and Analysis – Groundwater and GAC Treatment System Monitoring for the Reilly N.P.L. Site, St. Louis Park, Minnesota" June 2010. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. An initial assumption is that the data package is presented in accordance with the CLP requirements (or "CLP-like," as in this case). It is also assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the EPA Region 5 document as follows:

U = The compound was analyzed for, but was not detected above the reported sample quantitation limit.

J = The compound was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

K = The identification of the compound is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

L = The identification of the compound is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

MI = This flag applies when an compound has matrix interferences.

N = The analysis indicates the presence of an compound for which there is presumptive evidence to make a "tentative identification".

NJ= The analysis indicates the presence of an compound that has been "tentatively identified" and the associated numerical value represent its approximate concentration.

UJ= The compound was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.

R= The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence of absence of the compound cannot be verified.

Two facts should be noted by all data users. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the compound is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, **no concentration is guaranteed to be accurate even if all associated quality control is acceptable.** Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

A copy of the applicable chain of custody (COC) record was included in the data package, documenting a sample collection date of December, 6, 2012. The samples were received by the laboratory on December 7, 2012. The temperatures of the coolers on receipt at the laboratory were noted on the COC and were acceptable (2.8° C to 3.4° C; criteria 4.0° C $\pm$ 2.0° C). All samples were extracted on December 11, 2012, which is within the 7-day holding time for aqueous samples. All sample extracts were analyzed on December 20 and 21, 2012, which is within the 40-day holding time for sample extracts.

II. GC/MS Instrument Performance Check

The samples were analyzed on one GC/MS system, identified as "SMS_G5". Two perfluorotributylamine (FC-43) instrument performance checks were run in association with these samples, representing each 12-hour period during which the samples or associated standards were analyzed. Both of the performance checks were acceptable based on the summary form provided. See Section XII Documentation.

III. Calibration

There were significantly more compounds in the standards than target compounds. Only the data supporting those compounds reported in the Form Is were reviewed by the validator. Manual integration was performed for Acridine in several standards. The data package included the manual integration results. All manual integrations were acceptable.

A. Initial Calibration (IC)

One 7-point IC was performed on December 20, 2012, for all of the target compounds. Documentation of all individual IC standards was provided by the laboratory and relative response factors (RRFs) as well as percent relative standard deviation (%RSD) values were correctly calculated and accurately reported. All reported RRF values were greater than the method-specific minimum acceptance criterion of 0.05, and all %RSD values were below the maximum acceptance limit of 30 percent as defined in the QAPP. An initial calibration verification standard was analyzed immediately after the IC. All percent difference (%D) values and RRFs were acceptable. It should be noted that the ICV contained only 21 of the 31 target compounds. The laboratory was contacted. They replied, "The second source is prepared in accordance with the CSLP QAPP. See section 9.2 noting that not all compounds are available. Section 11.4.1 notes the ICV must contain the cPAHs". It should be noted that NELAC Certification requires "all initial instrument calibrations shall be verified with a standard obtained from a second manufacturer or from a different lot. Traceability shall be to a national standard, when commercially available." No data were qualified on this basis; however, this could be problematic if the data are used in litigation.

B. Continuing Calibration (CC)

No CC standards were analyzed in association with these samples.

IV. Blanks

One laboratory method blank and one field blank were analyzed in support of these samples. Benzo[a]anthracene (3.43 ng/L), Benzo[b]fluoranthene (5.62 ng/L),

Benzo[k]fluoranthene (4.92 ng/L), Benzo[g,h,i]perylene (3.90 ng/L), Chrysene (6.16 ng/L), Dibenz[a,h]anthracene (4.05 ng/L), Fluoranthene (3.76 ng/L), Indeno[1,2,3,c,d]pyrene and Pyrene (2.32 ng/L) were detected in the method blank. Results for Pyrene in W48-120612 and Pyrene and Fluoranthene in SLP6-120612 were qualified as not detected (U) at the reporting limit (RL) due to sample concentrations detected within five-times the concentration found in the method blank.

2-Methylnaphthalene (1.1 ng/L), Acenaphthene (0.77 ng/L) and Naphthalene (3.0 ng/L were detected in the field blank. Results for 2-Methylnaphthalene and Naphthalene in W48-120612 and W119-120612 and results for Naphthalene in SLP6-120612, SLP10T-120612 and SLP10TD-120612 were qualified as not detected (U) at the RL or reported concentration, whichever is greater due to sample concentrations detected within five-times the concentration found in the field blank. The remaining compounds in the field samples were not detected or sufficiently high that the amount detected in the field blank would have no impact on the reported results.

V. Surrogate Compound Recovery

Recoveries of all surrogate compounds were correctly calculated, accurately reported. Percent recoveries (%R) were within acceptance limits with the exception of Chrysene-d12 in SLP6-120612 (13%R), SLP10T-120612 (16%R), SLP10TD-120612 (15%R) and W119-120612 (25%R). Results for Benzo [a] anthracene, Chrysene, Benzo [b] fluoranthene, Benzo [k] fluoranthene, Benzo [e] pyrene, Benzo [a] pyrene, Perylene, Indeno [1,2,3-cd] pyrene, Dibenz (a,h) anthracene, and Benzo [g,h.i] perylene in SLP6-120612, SLP10TD-120612, SLP10T-120612 and W119-120612 were not qualified on this basis because all analytes were subsequently qualified based on unacceptable MS/MSD percent recoveries (%R).

VI. Spike Analysis

A. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD analyses were performed on sample SLP10T-1206012. Percent recoveries (%R) and RPD values were acceptable except as summarized below:

Compound	MS %R	MSD %R	RPD*	QC limits %R (RPD)	Action (Detects/Non-detects)
Acridine	14	22	41	30-150 (25)	L/UJ
Benzo[a]anthracene	13	17	31	30-150 (25)	L/UJ
Benzo[a]pyrene	3	4	22	30-150 (25)	L/R
Benzo[e]pyrene	4	5	12	30-150 (25)	L/R
Benzo[b]fluoranthene	6	7	20	30-150 (25)	L/R
Benzo[k]fluoranthene	5	6	12	30-150 (25)	L/R
Benzo[g,h,i]perylene	4	3	26	30-150 (25)	L/R
Chrysene	17	24	34	20-136 (25)	L/UJ
Dibenz[a,h]anthracene	3	2	23	30-150 (25)	L/R
Indeno[1,2,3-cd]pyrene	3	3	21	30-150 (25)	L/R
Perylene	0	0	na	30-150 (25)	R

*based on amount recovered.

Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, Indeno[1,2,3,cd]pyrene and Perylene in all field samples were qualified as rejected (R) for non-detects due to unacceptable MS/MSD recoveries (<10%R). Results for Acridine, Chrysene and Benzo[a]anthracene in all field samples were qualified as estimate (UJ, J) due to low MS/MSD recovery.

B. Laboratory Control Sample (LCS)

Results for one LCS were provided in the data package. All recoveries were acceptable.

VII. Field Duplicate

Sample SLP10TD-120612 was collected as a field duplicate of sample SLP10T-120612. All RPDs were within quality control limits (≤ 25% if both samples are >5X RL) for both field duplicate pairs. 2,3-Dihydroindene was detected in SLP10T-120612 but was not reported in the paired sample. Results for 2, 3-Dihydrdoindene in SLP10TD-120612 were qualified as not detected (U) at the analyte-specific RL on this basis.

VIII. Internal Standard Performance

All internal standard areas and retention times were within quality control limits for the applicable analyses.

IX. Target Compound Identification

Acceptable ion chromatograms were provided for each of the compounds detected in these samples.

X. Compound Quantitation and Reporting Limits (RL)

Target compound concentrations and reporting limits were correctly calculated and accurately reported for all samples. The reporting limit was equivalent to the concentration of the lowest calibration standard from the IC. The laboratory appropriately applied "J" qualifiers to concentrations that were less than the reporting limit but greater than the method detection limit (MDL). All laboratory-reported MDLs were less than the project RL goal with the exception of Perylene in SLP10T-120612 and SLP6-120612 with the project RL goal at 4.0 ng/L and the MDL at 4.1 ng/L in both samples.

XI. System Performance

The analytical system appears to have been working satisfactorily at the time of these analyses, based on evaluation of the available raw data.

XII. Documentation

The chain-of-custody record was present and accurately completed for the samples reported in this data package. The following documentation issues were observed:

- Response factors (RF) for the 10 ng/L and 20 ng/L standards in the IC could not be reproduced. This did not affect the final sample results.

- The tune procedure used for the analysis of these samples is not an injection. The instrument is manufactured with a vial of the tuning compound (PC-43) that is directly accessible to the mass spectrometer. Opening the tuning valve results in this compound entering the mass spectrometer without going through any parts of the gas chromatograph. As a result, there is no raw data to support the summary form documenting the successful tuning of the instrument.

- As noted in above, these samples were analyzed on a single instrument identified as SMS_G5. Other samples reported for the St. Louis Park project were analyzed on a system identified as MSS_F. All of the summary forms included in the data packages to support the PC-43 tune have "System Verification for Instrument #1" in the footer with no link to an instrument. The laboratory was contacted and stated, "The instrument ID is correctly reflected on the run log and raw data. The FC43 tune does not process through the laboratory chromatography software, it is a printout

handled directly from the instrument PC. We have corrected the identification of the instrument in the auto-tune method file so that going forward this is correct, but we cannot correct the previous packages".

Some of the issues discussed above affect the validity of the reported data, and all of these issues may be problematic if the data are used in litigation.

XIII. Overall Assessment

Based on the validation effort, all results were determined to be valid as reported, with the following exceptions:

- Results for Pyrene in W48-120612 and Pyrene and Fluoranthene in SLP6-120612 were qualified as not detected (U) at the reporting limit (RL) due to sample concentrations detected within five-times the concentration found in the method blank.

- Results for 2-Methylnaphthalene and Naphthalene in W48-120612 and W119-120612 results for Naphthalene in SLP6-120612, SLP10T-120612 and SLP10TD-120612 were qualified as not detected (U) at the RL due to sample concentrations detected within five-times the concentration found in the field blank.

- Results for Benzo[a]pyrene, Benzo[e]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[g,h,i]perylene, Dibenz[a,h]anthracene, Indeno[1,2,3,cd]pyrene and Perylene in all field samples were qualified as rejected (R) for non-detects due to unacceptable MS/MSD recoveries (<10%R). Results for Acridine, Chrysene and Benzo[a]anthracene in all field samples were qualified as estimate (UJ, J) due to low MS/MSD recovery.

- Results for 2, 3-Dihydrdoindene in SLP10T-120612 were qualified as not detected (U) at the RL due to imprecision in field duplicate samples.

Documentation issues observed in the data package are described in Section XII.

This validation report should be considered <u>part of the data package</u> for all future distributions of the semi-volatiles data.

ddms

APPENDIX A

PAHs in Water

Data Summary Forms

DATA SUMMARY FORM: SEMIVOLATLES (PAH - SIM)
WATER SAMPLES
(ng/L)

Site Name: St. Louis Park

Sampling Date: December 6, 2012

Job No. 280-36732-1

ddms Project No. 2006-0022

Sample Location		SLP10T-120612		SLP-10TD-120612		SLP10TFB-120612		SLP6-120612		W119-120612		W48-120612	
Lab Sample ID		280-36732-1		280-36732-2		280-36732-3		280-36732-4		280-36732-5		280-36732-6	
Initial Volume		3703.6		3875.1		3766.2		3749.9		3920.3		3938.7	
Dilution Factor		1.08		1.03		1.06		1.07		1.02		1.02	
RL													
5.4	2,3-Dibenzofuran											0.89	J
5.0	2,3-Dihydroindene		U					41	J	5	J	5.1	
5.6	1-Methylnaphthalene							1.3	J	1.7	J	3.2	J
5.9	2-Methylnaphthalene					1.1	J				U		U
5.7	Acenaphthene	1.2	J			0.77	J	56	J	39		96	
4.8	Acenaphthylene							6.1	J	2.2	J	4.1	J
6.5	Acridine		UJ		UJ		UJ		UJ	7.6	L	13	L
4.2	Anthracene							1.7	J	3.4	J	5.4	
4.3	Benzo[a]anthracene		UJ		UJ		UJ		UJ		UJ		UJ
2.5	Benzo[a]pyrene		R		R		R		R		R		R
4.3	Benzo[e]pyrene		R		R		R		R		R		R
4.7	Benzo[b]fluoranthene		R		R		R		R		R		R
5.2	Benzo(b)thiopene							7.5	J	7.2		12	
4.1	Benzo[k]fluoranthene		R		UJ		R		UJ		UJ		R
6.2	Benzo[g,h,i]perylene		R		UJ		R		UJ		UJ		R
3.8	Carbazole							1.7	J	1.3	J	1.7	J
5.6	Chrysene		UJ		UJ		UJ		UJ		UJ		UJ
5.9	Dibenz(a,h)anthracene		R		R		R		R		R		R
5.7	Dibenzofuran												
4.1	Dibenzothiophene							1.4	J				
4.6	Fluoranthene								U				
4.1	Fluorene							0.94	J				
4.7	Indene							5.3		18		47	
4.7	Indole											2.1	J
5.4	Indeno[1,2,3-cd]pyrene		R		R		R		R		R		R
8.6	Naphthalene		U		U	3.0	J		U		U		U
3.8	Perylene		R		R		R		R		R		R
6.3	Phenanthrene												
4.2	Pyrene									12			U
9.0	Quinoline												
5.6	Biphenyl												

ddms

APPENDIX B

PAHs in Water

Laboratory Form 1s

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: **SLP10T-120612**

Lab Sample ID: 280-36732-1
Client Matrix: Water

Date Sampled: 12/06/2012 0850
Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-163241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8732.D
Dilution:	1.0			Initial Weight/Volume:	3703.6 mL
Analysis Date:	12/20/2012 2301			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	~~0.76~~ U	~~J~~	0.76	5.4
1-Methylnaphthalene	ND		0.96	6.0
2-Methylnaphthalene	ND		1.1	6.4
Acenaphthene	1.2	J	0.54	6.2
Acenaphthylene	ND		0.83	5.2
Acridine	ND UJ		7.0	7.0
Anthracene	ND		0.86	4.5
Benzo[a]anthracene	ND UJ		0.99	4.6
Benzo[a]pyrene	~~ND~~ R		1.3	2.7
Benzo[e]pyrene	~~ND~~ R		1.2	4.6
Benzo[b]fluoranthene	~~ND~~ R		1.5	5.1
Benzo(b)thiophene	ND		0.81	5.6
Benzo[k]fluoranthene	~~ND~~ R		1.3	4.4
Benzo[g,h,i]perylene	~~ND~~ R		1.3	6.7
Carbazole	ND		0.78	4.1
Chrysene	ND UJ		1.3	6.0
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.4
Dibenzofuran	ND		1.1	6.2
Dibenzothiophene	ND		1.1	4.4
Fluoranthene	ND		1.8	5.0
Fluorene	ND		0.92	4.4
Indene	ND		3.5	5.1
Indole	ND		1.9	5.1
Indeno[1,2,3-cd]pyrene	~~ND~~ R		1.4	5.8
Naphthalene	~~2.5~~ U	~~J~~	1.2	9.3
Perylene	~~ND~~ R		4.1	4.1
Phenanthrene	ND		3.5	6.8
Pyrene	ND		1.1	4.5
Quinoline	ND		6.1	9.7
Biphenyl	ND		1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	84		23 - 84
Chrysene-d12 (Surr)	15	X	28 - 101
Naphthalene-d8 (Surr)	88		22 - 97

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Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: **SLP10TD-120612**

Lab Sample ID: 280-36732-2FD
Client Matrix: Water

Date Sampled: 12/06/2012 0850
Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8735.D
Dilution:	1.0			Initial Weight/Volume:	3875.1 mL
Analysis Date:	12/21/2012 0048			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.70	5.6
2,3-Dihydroindene	ND		0.72	5.2
1-Methylnaphthalene	ND		0.92	5.8
2-Methylnaphthalene	ND		1.0	6.1
Acenaphthene	ND		0.52	5.9
Acenaphthylene	ND		0.79	5.0
Acridine	ND UJ		6.7	6.7
Anthracene	ND		0.83	4.3
Benzo[a]anthracene	ND UJ		0.95	4.4
Benzo[a]pyrene	~~ND~~ R		1.3	2.6
Benzo[e]pyrene	~~ND~~ R		1.2	4.4
Benzo[b]fluoranthene	~~ND~~ R		1.4	4.9
Benzo(b)thiophene	ND		0.77	5.4
Benzo[k]fluoranthene	ND UJ		1.3	4.2
Benzo[g,h,i]perylene	ND UJ		1.2	6.4
Carbazole	ND		0.74	3.9
Chrysene	ND UJ		1.3	5.8
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.1
Dibenzofuran	ND		1.0	5.9
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.88	4.2
Indene	ND		3.4	4.9
Indole	ND		1.8	4.9
Indeno[1,2,3-cd]pyrene	~~ND~~ R		1.3	5.6
Naphthalene	~~1.3~~ U	J	1.2	8.9
Perylene	~~ND~~ R		3.9	3.9
Phenanthrene	ND		3.3	6.5
Pyrene	ND		1.0	4.3
Quinoline	ND		5.8	9.3
Biphenyl	ND		1.1	5.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	16	X	28 - 101
Naphthalene-d8 (Surr)	89		22 - 97

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Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: **SLP10TFB-120612**

Lab Sample ID: 280-36732-3FB
Client Matrix: Water

Date Sampled: 12/06/2012 0850
Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8736.D
Dilution:	1.0			Initial Weight/Volume:	3766.2 mL
Analysis Date:	12/21/2012 0124			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.72	5.7
2,3-Dihydroindene	ND		0.74	5.3
1-Methylnaphthalene	ND		0.95	5.9
2-Methylnaphthalene	1.1	J	1.0	6.3
Acenaphthene	0.77	J	0.53	6.1
Acenaphthylene	ND		0.82	5.1
Acridine	ND UJ		6.9	6.9
Anthracene	ND		0.85	4.5
Benzo[a]anthracene	ND UJ		0.98	4.6
Benzo[a]pyrene	~~ND~~ R		1.3	2.7
Benzo[e]pyrene	~~ND~~ R		1.2	4.6
Benzo[b]fluoranthene	~~ND~~ R		1.5	5.0
Benzo(b)thiophene	ND		0.80	5.5
Benzo[k]fluoranthene	~~ND~~ R		1.3	4.4
Benzo[g,h,i]perylene	~~ND~~ R		1.2	6.6
Carbazole	ND		0.76	4.0
Chrysene	ND UJ		1.3	5.9
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	ND		1.0	4.4
Fluoranthene	ND		1.8	4.9
Fluorene	ND		0.90	4.4
Indene	ND		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	~~ND~~ R		1.3	5.7
Naphthalene	~~3.0~~ U	J	1.2	9.1
Perylene	~~ND~~ R		4.0	4.0
Phenanthrene	ND		3.4	6.7
Pyrene	ND		1.1	4.5
Quinoline	ND		6.0	9.6
Biphenyl	ND		1.1	5.9

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	74		23 - 84
Chrysene-d12 (Surr)	85		28 - 101
Naphthalene-d8 (Surr)	79		22 - 97

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Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: **SLP6-120612**

Lab Sample ID: 280-36732-4
Client Matrix: Water

Date Sampled: 12/06/2012 1200
Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8737.D
Dilution:	1.0			Initial Weight/Volume:	3749.9 mL
Analysis Date:	12/21/2012 0159			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.73	5.8
2,3-Dihydroindene	41		0.75	5.3
1-Methylnaphthalene	1.3	J	0.95	6.0
2-Methylnaphthalene	ND		1.0	6.3
Acenaphthene	56		0.53	6.1
Acenaphthylene	6.1		0.82	5.1
Acridine	ND UJ		6.9	6.9
Anthracene	1.7	J	0.85	4.5
Benzo[a]anthracene	ND UJ		0.98	4.6
Benzo[a]pyrene	~~ND~~ R		1.3	2.7
Benzo[e]pyrene	~~ND~~ R		1.2	4.6
Benzo[b]fluoranthene	~~ND~~ R		1.5	5.0
Benzo(b)thiophene	7.5		0.80	5.5
Benzo[k]fluoranthene	ND UJ		1.3	4.4
Benzo[g,h,i]perylene	ND UJ		1.2	6.6
Carbazole	1.7	J	0.77	4.1
Chrysene	ND UJ		1.3	6.0
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.3
Dibenzofuran	ND		1.1	6.1
Dibenzothiophene	1.4	J	1.0	4.4
Fluoranthene	~~1.9~~ U	~~J B~~	1.8	4.9
Fluorene	0.94	J	0.91	4.4
Indene	5.3		3.5	5.0
Indole	ND		1.8	5.0
Indeno[1,2,3-cd]pyrene	ND R		1.3	5.8
Naphthalene	~~4.1~~ U	~~J~~	1.2	9.2
Perylene	ND R		4.1	4.1
Phenanthrene	ND		3.4	6.7
Pyrene	~~3.0~~ U	~~J B~~	1.1	4.5
Quinoline	ND		6.0	9.6
Biphenyl	ND		1.1	6.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	58		23 - 84
Chrysene-d12 (Surr)	13	X	28 - 101
Naphthalene-d8 (Surr)	60		22 - 97

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2/27/13

Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: **W119-120612**

Lab Sample ID: 280-36732-5
Client Matrix: Water

Date Sampled: 12/06/2012 0810
Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8738.D
Dilution:	1.0			Initial Weight/Volume:	3920.3 mL
Analysis Date:	12/21/2012 0235			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	ND		0.69	5.5
2,3-Dihydroindene	5.0	J	0.71	5.1
1-Methylnaphthalene	1.7	J	0.91	5.7
2-Methylnaphthalene	~~1.4~~ U	~~J~~	1.0	6.0
Acenaphthene	39		0.51	5.8
Acenaphthylene	2.2	J	0.79	4.9
Acridine	7.6 L		6.6	6.6
Anthracene	3.4	J	0.82	4.3
Benzo[a]anthracene	ND UJ		0.94	4.4
Benzo[a]pyrene	~~ND~~ R		1.3	2.6
Benzo[e]pyrene	~~ND~~ R		1.2	4.4
Benzo[b]fluoranthene	~~ND~~ R		1.4	4.8
Benzo(b)thiophene	7.2		0.77	5.3
Benzo[k]fluoranthene	ND UJ		1.3	4.2
Benzo[g,h,i]perylene	ND UJ		1.2	6.3
Carbazole	1.3	J	0.73	3.9
Chrysene	ND UJ		1.3	5.7
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.87	4.2
Indene	18		3.3	4.8
Indole	ND		1.8	4.8
Indeno[1,2,3-cd]pyrene	~~ND~~ R		1.3	5.5
Naphthalene	~~4.4~~ U	~~J~~	1.2	8.8
Perylene	~~ND~~ R		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	12	~~B~~	1.0	4.3
Quinoline	ND		5.8	9.2
Biphenyl	ND		1.1	5.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	80		23 - 84
Chrysene-d12 (Surr)	25	X	28 - 101
Naphthalene-d8 (Surr)	78		22 - 97

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Client: Summit Envirosolutions Inc

Job Number: 280-36732-1

Client Sample ID: **W48-120612**

Lab Sample ID: 280-36732-6
Client Matrix: Water

Date Sampled: 12/06/2012 1100
Date Received: 12/07/2012 0930

8270C SIM Semivolatile Organic Compound (GC/MS SIM LL)

Analysis Method:	8270C SIM	Analysis Batch:	280-153241	Instrument ID:	SMS_G5
Prep Method:	3520C	Prep Batch:	280-151568	Lab File ID:	G5_8739.D
Dilution:	1.0			Initial Weight/Volume:	3938.7 mL
Analysis Date:	12/21/2012 0311			Final Weight/Volume:	1000 uL
Prep Date:	12/11/2012 1350			Injection Volume:	1 uL

Analyte	Result (ng/L)	Qualifier	MDL	RL
2,3-Benzofuran	0.89	J	0.69	5.5
2,3-Dihydroindene	5.1		0.71	5.1
1-Methylnaphthalene	3.2	J	0.90	5.7
2-Methylnaphthalene	~~1.8~~ U	~~J~~	1.0	6.0
Acenaphthene	96		0.51	5.8
Acenaphthylene	4.1	J	0.78	4.9
Acridine	13 L		6.6	6.6
Anthracene	5.4		0.81	4.3
Benzo[a]anthracene	ND UJ		0.93	4.4
Benzo[a]pyrene	~~ND~~ R		1.3	2.5
Benzo[e]pyrene	~~ND~~ R		1.2	4.4
Benzo[b]fluoranthene	~~ND~~ R		1.4	4.8
Benzo(b)thiophene	12		0.76	5.3
Benzo[k]fluoranthene	~~ND~~ R		1.3	4.2
Benzo[g,h,i]perylene	~~ND~~ R		1.2	6.3
Carbazole	1.7	J	0.73	3.9
Chrysene	ND UJ		1.3	5.7
Dibenz(a,h)anthracene	~~ND~~ R		1.1	6.0
Dibenzofuran	ND		1.0	5.8
Dibenzothiophene	ND		1.0	4.2
Fluoranthene	ND		1.7	4.7
Fluorene	ND		0.86	4.2
Indene	47		3.3	4.8
Indole	2.1	J	1.8	4.8
Indeno[1,2,3-cd]pyrene	~~ND~~ R		1.3	5.5
Naphthalene	~~5.2~~ U	~~J~~	1.2	8.7
Perylene	~~ND~~ R		3.9	3.9
Phenanthrene	ND		3.3	6.4
Pyrene	~~3.6~~ U	~~J B~~	1.0	4.3
Quinoline	ND		5.7	9.1
Biphenyl	ND		1.1	5.7

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluorene-d10 (Surr)	83		23 - 84
Chrysene-d12 (Surr)	43		28 - 101
Naphthalene-d8 (Surr)	75		22 - 97

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