



Legend

● Origin ● Soil Sample Location — Spill Path ▨ Spill Areas

0 80 160

1 inch = 80 ft


Project No: 018-065	Gray A16 Spill Chevron USA, Inc. Rio Blanco County, Colorado NW/4 NW/4 Sec 19 T2S R102W		330 Grand Avenue, Unit C Grand Junction, CO 81501 970-549-1015	Figure
Map By: NDB				1
Date: 3-29-2018				

Table 1
Gray A 16
Soil Data Summary

SAMPLE SUMMARY						
Location Description	Gray A 16					
Sample Type	Soil					

LABORATORY DATA SUMMARY						
Sample ID	GrayA16-SS1	GrayA16-SS2	GrayA16-SS3	GrayA16-BG1	COGCC TABLE 910-1 CONCENTRATION LEVELS	UNITS
Depth	0-6"	0-6"	0-6"	0-6"		
Sample Date	7/18/2017	7/18/2017	7/18/2017	7/18/2017		
Analytical Parameters						
TPH						
TPH Gasoline Range Organics	<3.1	<3.0	<3.3	NT	500	mg/kg
TPH Diesel Range Organics	22	200	21	NT		
BTEX						
Benzene	<0.010	<0.0098	<0.011	NT	0.17	mg/kg
Toluene	<0.015	<0.014	<0.016	NT	85	mg/kg
Ethylbenzene	<0.010	<0.010	<0.011	NT	100	mg/kg
Total Xylene	<0.034	<0.033	<0.036	NT	175	mg/kg
Metals						
Arsenic	7.4	8.5	11	11	0.39	mg/kg
Barium	130	380	240	85	15,000	mg/kg
Cadmium	0.52 J	0.53 J	0.86 J	0.90 J	70	mg/kg
Chromium	13	12	14	12	NA	mg/kg
Copper	16	13	20	16	3,100	mg/kg
Lead	20	16	25	19	400	mg/kg
Mercury	0.037	0.019 J	0.028	0.029	23	mg/kg
Nickel	19	15	22	20	1,600	mg/kg
Selenium	3.2	2.5	3.6	4.2	390	mg/kg
Silver	<0.058	<0.052	<0.064	<0.056	390	mg/kg
Zinc	100	73	110	86	23,000	mg/kg
SAR Metals Analysis						
Calcium	1400	1600	210	660	NA	mg/L
Magnesium	310	190	25	380	NA	mg/L
Sodium	6700	8300	170	3100	NA	mg/L
Sodium Adsorption Ratio	43	52	3.0	24	<12	ratio
Polynuclear Aromatic Hydrocarbons						
Acenaphthene	<0.0036	<0.0036	<0.0038	NT	1,000	mg/kg
Anthracene	<0.0019	<0.0018	<0.0019	NT	1,000	mg/kg
Benzo(a)anthracene	<0.0031	<0.0031	<0.0033	NT	0.22	mg/kg
Benzo(a)pyrene	<0.0013	<0.0013	<0.0013	NT	0.022	mg/kg
Benzo(b)fluoranthene	<0.0020	<0.0019	<0.0020	NT	0.22	mg/kg
Benzo(k)fluoranthene	<0.0026	<0.0026	<0.0028	NT	2.2	mg/kg
Chrysene	<0.0020	<0.0019	<0.0020	NT	22	mg/kg
Dibenzo(a,h)anthracene	<0.0017	<0.0016	<0.0017	NT	0.022	mg/kg
Fluoranthene	<0.0015	<0.0015	<0.0015	NT	1,000	mg/kg
Fluorene	<0.0017	<0.0016	<0.0017	NT	1,000	mg/kg
Indeno(1,2,3-cd)pyrene	<0.0016	<0.0016	<0.0016	NT	0.22	mg/kg
Napthalene	<0.0096	<0.0095	<0.010	NT	23	mg/kg
Pyrene	<0.0019	<0.0018	<0.0019	NT	1,000	mg/kg
General Chemistry						
Chromium, Hexavalent	<0.39	<0.39	<0.39	<0.35	23	mg/kg
Chromium, Trivalent	13	12	14	12	120,000	mg/kg
Specific Conductivity	44	51	2.5	25	<4 or 2 x the background	mmhos/cm
pH	7.51	7.93	8.06	7.81	6-9	su

mg/kg - milligrams per kilogram
mg/L - milligrams per liter
J - indicates an estimated value
mmhos/cm - millimhos per centimeter
mv - millivolts
su - standard units
NA - not applicable
NT - parameter was not tested

Over COGCC Table 910-1 concentration levels but under BACKGROUND level.
Over COGCC Table 910-1 concentration levels and not within BACKGROUND level.
Over COGCC Table 910-1 concentration levels



24-Mar-2021

Tim Dobransky
Olsson Associates
760 Horizon Drive
Suite 102
Grand Junction, CO 81506

Re: **Gray A 16 Spill**

Work Order: **17071195**

Dear Tim,

ALS Environmental received 4 samples on 22-Jul-2017 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 28.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

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Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: Olsson Associates
Project: Gray A 16 Spill
Work Order: 17071195

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
17071195-01	GA16-SS1	Soil		7/18/2017 11:15	7/22/2017 09:15	<input type="checkbox"/>
17071195-02	GA16-BG1	Soil		7/18/2017 11:25	7/22/2017 09:15	<input type="checkbox"/>
17071195-03	GA16-SS2	Soil		7/18/2017 11:40	7/22/2017 09:15	<input type="checkbox"/>
17071195-04	GA16-SS3	Soil		7/18/2017 11:50	7/22/2017 09:15	<input type="checkbox"/>

Client: Olsson Associates**Project:** Gray A 16 Spill**Work Order:** 17071195**Case Narrative**

Batch 104957, Method ICP_6010_S, Sample 17071195-02A MS/MSD: The MS and MSD recoveries were outside of the control limits for Barium and Zinc; however, the results in the parent sample are greater than 4x the spike amount. No qualification is required.

Batch 104957, Method ICP_6010_S, Sample 17071195-02A MS/MSD: The MS and MSD recovery was above the upper control limit for Chromium. The corresponding result in the parent sample may be biased high.

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

ALS Group, USA

Date: 24-Mar-21

Client: Olsson Associates
Project: Gray A 16 Spill
Sample ID: GA16-SS1
Collection Date: 7/18/2017 11:15 AM

Work Order: 17071195
Lab ID: 17071195-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3546 / 7/25/17		Analyst: KB
DRO (C10-C28)	22		3.5	6.1	mg/Kg-dry	1	7/26/2017 02:22
Surr: 4-Terphenyl-d14	58.1			34-130	%REC	1	7/26/2017 02:22
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D				Analyst: KB
GRO (C6-C10)	U		3.1	7.3	mg/Kg-dry	1	7/28/2017 10:45
Surr: Toluene-d8	95.8			71-123	%REC	1	7/28/2017 10:45
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 7/27/17		Analyst: RSH
Mercury	0.037		0.0034	0.021	mg/Kg-dry	1	7/27/2017 19:31
METALS ANALYSIS BY ICP							
			Method: SW6010D		Prep: SW3050B / 7/26/17		Analyst: LR
Arsenic	7.4		0.12	0.47	mg/Kg-dry	1	7/27/2017 07:13
Barium	130		0.19	0.47	mg/Kg-dry	1	7/27/2017 07:13
Cadmium	0.52	J	0.045	0.93	mg/Kg-dry	1	7/27/2017 07:13
Chromium	13		0.026	0.47	mg/Kg-dry	1	7/27/2017 07:13
Copper	16		0.20	0.93	mg/Kg-dry	1	7/27/2017 07:13
Lead	20		0.099	0.47	mg/Kg-dry	1	7/27/2017 07:13
Nickel	19		0.19	0.47	mg/Kg-dry	1	7/27/2017 07:13
Selenium	3.2		0.26	0.93	mg/Kg-dry	1	7/27/2017 07:13
Silver	U		0.058	0.47	mg/Kg-dry	1	7/27/2017 07:13
Zinc	100		0.074	0.93	mg/Kg-dry	1	7/27/2017 07:13
SOLUBLE CATIONS FOR SAR							
			Method: SW6010D		Prep: USDA Method 20B / 7/26/17		Analyst: LR
Calcium	1,400		1.5	50	mg/L	100	7/27/2017 18:59
Magnesium	310		0.13	2.0	mg/L	10	7/27/2017 04:23
Sodium	6,700		1.2	20	mg/L	100	7/27/2017 18:59
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 7/26/17		Analyst: LR
Sodium Adsorption Ratio	43		0.010	0.010	none	1	7/26/2017
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW8270E		Prep: SW3546 / 7/25/17		Analyst: RM
Acenaphthene	U		0.0036	0.051	mg/Kg-dry	1	7/26/2017 18:35
Anthracene	U		0.0019	0.051	mg/Kg-dry	1	7/26/2017 18:35
Benzo(a)anthracene	U		0.0031	0.051	mg/Kg-dry	1	7/26/2017 18:35
Benzo(a)pyrene	U		0.0013	0.051	mg/Kg-dry	1	7/26/2017 18:35
Benzo(b)fluoranthene	U		0.0020	0.051	mg/Kg-dry	1	7/26/2017 18:35
Benzo(k)fluoranthene	U		0.0026	0.051	mg/Kg-dry	1	7/26/2017 18:35
Chrysene	U		0.0020	0.051	mg/Kg-dry	1	7/26/2017 18:35
Dibenzo(a,h)anthracene	U		0.0017	0.051	mg/Kg-dry	1	7/26/2017 18:35
Fluoranthene	U		0.0015	0.051	mg/Kg-dry	1	7/26/2017 18:35

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 24-Mar-21

Client: Olsson Associates
Project: Gray A 16 Spill
Sample ID: GA16-SS1
Collection Date: 7/18/2017 11:15 AM

Work Order: 17071195
Lab ID: 17071195-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0017	0.051	mg/Kg-dry	1	7/26/2017 18:35
Indeno(1,2,3-cd)pyrene	U		0.0016	0.051	mg/Kg-dry	1	7/26/2017 18:35
Naphthalene	U		0.0096	0.051	mg/Kg-dry	1	7/26/2017 18:35
Pyrene	U		0.0019	0.051	mg/Kg-dry	1	7/26/2017 18:35
Surr: 2-Fluorobiphenyl	67.5			20-140	%REC	1	7/26/2017 18:35
Surr: 4-Terphenyl-d14	74.4			22-172	%REC	1	7/26/2017 18:35
Surr: Nitrobenzene-d5	75.0			8-140	%REC	1	7/26/2017 18:35
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 7/25/17		Analyst: WH
Benzene	U		0.010	0.044	mg/Kg-dry	1	7/26/2017 04:58
Ethylbenzene	U		0.010	0.044	mg/Kg-dry	1	7/26/2017 04:58
m,p-Xylene	U		0.020	0.088	mg/Kg-dry	1	7/26/2017 04:58
o-Xylene	U		0.014	0.044	mg/Kg-dry	1	7/26/2017 04:58
Toluene	U		0.015	0.044	mg/Kg-dry	1	7/26/2017 04:58
Xylenes, Total	U		0.034	0.13	mg/Kg-dry	1	7/26/2017 04:58
Surr: 1,2-Dichloroethane-d4	97.6			70-130	%REC	1	7/26/2017 04:58
Surr: 4-Bromofluorobenzene	97.6			70-130	%REC	1	7/26/2017 04:58
Surr: Dibromofluoromethane	90.0			70-130	%REC	1	7/26/2017 04:58
Surr: Toluene-d8	103			70-130	%REC	1	7/26/2017 04:58
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 7/26/17		Analyst: JB
Electrical Conductivity @ Saturation	44		0.028	0.25	mmhos/cm @25°	50	7/27/2017 11:45
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	13		0.38	1.2	mg/Kg-dry	1	7/28/2017 09:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 7/24/17		Analyst: LW
Chromium, Hexavalent	U		0.39	1.3	mg/Kg-dry	1	7/26/2017 13:00
MOISTURE			Method: SW3550C				Analyst: SBR
Moisture	19		0.025	0.050	% of sample	1	7/26/2017 16:43
SOIL PH MEASURED IN WATER AT NOTED TEMP.			Method: SW9045D		Prep: SW9045D / 7/24/17		Analyst: RZM
pH	7.51		0.10	0.10	s.u.	1	7/25/2017 08:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 24-Mar-21

Client: Olsson Associates
Project: Gray A 16 Spill
Sample ID: GA16-BG1
Collection Date: 7/18/2017 11:25 AM

Work Order: 17071195
Lab ID: 17071195-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
Mercury	0.029		0.0030	0.018	mg/Kg-dry	1	7/27/2017 19:34
METALS ANALYSIS BY ICP							
Arsenic	11		0.12	0.45	mg/Kg-dry	1	7/27/2017 07:19
Barium	85		0.18	0.45	mg/Kg-dry	1	7/27/2017 07:19
Cadmium	0.90	J	0.043	0.90	mg/Kg-dry	1	7/27/2017 07:19
Chromium	12		0.025	0.45	mg/Kg-dry	1	7/27/2017 07:19
Copper	16		0.20	0.90	mg/Kg-dry	1	7/27/2017 07:19
Lead	19		0.096	0.45	mg/Kg-dry	1	7/27/2017 07:19
Nickel	20		0.18	0.45	mg/Kg-dry	1	7/27/2017 07:19
Selenium	4.2		0.25	0.90	mg/Kg-dry	1	7/27/2017 07:19
Silver	U		0.056	0.45	mg/Kg-dry	1	7/27/2017 07:19
Zinc	86		0.072	0.90	mg/Kg-dry	1	7/27/2017 07:19
SOLUBLE CATIONS FOR SAR							
Calcium	660		0.15	5.0	mg/L	10	7/28/2017 17:21
Magnesium	380		0.13	2.0	mg/L	10	7/27/2017 04:30
Sodium	3,100		0.12	2.0	mg/L	10	7/27/2017 04:30
SODIUM ADSORPTION RATIO							
Sodium Adsorption Ratio	24		0.010	0.010	none	1	7/26/2017
ELECTRICAL CONDUCTIVITY (SAR)							
Electrical Conductivity @ Saturation	25		0.028	0.25	mmhos/cm @25°	50	7/27/2017 11:45
CHROMIUM, TRIVALENT							
Chromium, Trivalent	12		0.34	1.1	mg/Kg-dry	1	7/28/2017 09:15
CHROMIUM, HEXAVALENT							
Chromium, Hexavalent	U		0.35	1.1	mg/Kg-dry	1	7/26/2017 13:00
MOISTURE							
Moisture	10		0.025	0.050	% of sample	1	7/26/2017 16:43
SOIL PH MEASURED IN WATER AT NOTED TEMP.							
pH	7.81		0.10	0.10	s.u.	1	7/25/2017 08:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 24-Mar-21

Client: Olsson Associates
Project: Gray A 16 Spill
Sample ID: GA16-SS2
Collection Date: 7/18/2017 11:40 AM

Work Order: 17071195
Lab ID: 17071195-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3546 / 7/25/17		Analyst: KB
DRO (C10-C28)	200		3.5	6.1	mg/Kg-dry	1	7/26/2017 02:51
Surr: 4-Terphenyl-d14	86.1			34-130	%REC	1	7/26/2017 02:51
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D				Analyst: KB
GRO (C6-C10)	U		3.0	7.2	mg/Kg-dry	1	7/28/2017 11:15
Surr: Toluene-d8	94.0			71-123	%REC	1	7/28/2017 11:15
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 7/27/17		Analyst: RSH
Mercury	0.019	J	0.0033	0.020	mg/Kg-dry	1	7/27/2017 19:41
METALS ANALYSIS BY ICP							
			Method: SW6010D		Prep: SW3050B / 7/26/17		Analyst: LR
Arsenic	8.5		0.11	0.42	mg/Kg-dry	1	7/27/2017 08:17
Barium	380		0.17	0.42	mg/Kg-dry	1	7/27/2017 08:17
Cadmium	0.53	J	0.040	0.83	mg/Kg-dry	1	7/27/2017 08:17
Chromium	12		0.023	0.42	mg/Kg-dry	1	7/27/2017 08:17
Copper	13		0.18	0.83	mg/Kg-dry	1	7/27/2017 08:17
Lead	16		0.088	0.42	mg/Kg-dry	1	7/27/2017 08:17
Nickel	15		0.17	0.42	mg/Kg-dry	1	7/27/2017 08:17
Selenium	2.5		0.23	0.83	mg/Kg-dry	1	7/27/2017 08:17
Silver	U		0.052	0.42	mg/Kg-dry	1	7/27/2017 08:17
Zinc	73		0.067	0.83	mg/Kg-dry	1	7/27/2017 08:17
SOLUBLE CATIONS FOR SAR							
			Method: SW6010D		Prep: USDA Method 20B / 7/26/17		Analyst: LR
Calcium	1,600		1.5	50	mg/L	100	7/27/2017 19:30
Magnesium	190		0.13	2.0	mg/L	10	7/27/2017 04:37
Sodium	8,300		1.2	20	mg/L	100	7/27/2017 19:30
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 7/26/17		Analyst: LR
Sodium Adsorption Ratio	52		0.010	0.010	none	1	7/26/2017
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW8270E		Prep: SW3546 / 7/25/17		Analyst: RM
Acenaphthene	U		0.0036	0.051	mg/Kg-dry	1	7/26/2017 18:49
Anthracene	U		0.0018	0.051	mg/Kg-dry	1	7/26/2017 18:49
Benzo(a)anthracene	U		0.0031	0.051	mg/Kg-dry	1	7/26/2017 18:49
Benzo(a)pyrene	U		0.0013	0.051	mg/Kg-dry	1	7/26/2017 18:49
Benzo(b)fluoranthene	U		0.0019	0.051	mg/Kg-dry	1	7/26/2017 18:49
Benzo(k)fluoranthene	U		0.0026	0.051	mg/Kg-dry	1	7/26/2017 18:49
Chrysene	U		0.0019	0.051	mg/Kg-dry	1	7/26/2017 18:49
Dibenzo(a,h)anthracene	U		0.0016	0.051	mg/Kg-dry	1	7/26/2017 18:49
Fluoranthene	U		0.0015	0.051	mg/Kg-dry	1	7/26/2017 18:49

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 24-Mar-21

Client: Olsson Associates
Project: Gray A 16 Spill
Sample ID: GA16-SS2
Collection Date: 7/18/2017 11:40 AM

Work Order: 17071195
Lab ID: 17071195-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0016	0.051	mg/Kg-dry	1	7/26/2017 18:49
Indeno(1,2,3-cd)pyrene	U		0.0016	0.051	mg/Kg-dry	1	7/26/2017 18:49
Naphthalene	U		0.0095	0.051	mg/Kg-dry	1	7/26/2017 18:49
Pyrene	U		0.0018	0.051	mg/Kg-dry	1	7/26/2017 18:49
Surr: 2-Fluorobiphenyl	92.7			20-140	%REC	1	7/26/2017 18:49
Surr: 4-Terphenyl-d14	102			22-172	%REC	1	7/26/2017 18:49
Surr: Nitrobenzene-d5	101			8-140	%REC	1	7/26/2017 18:49
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 7/25/17		Analyst: WH
Benzene	U		0.0098	0.043	mg/Kg-dry	1	7/26/2017 05:19
Ethylbenzene	U		0.010	0.043	mg/Kg-dry	1	7/26/2017 05:19
m,p-Xylene	U		0.019	0.086	mg/Kg-dry	1	7/26/2017 05:19
o-Xylene	U		0.014	0.043	mg/Kg-dry	1	7/26/2017 05:19
Toluene	U		0.014	0.043	mg/Kg-dry	1	7/26/2017 05:19
Xylenes, Total	U		0.033	0.13	mg/Kg-dry	1	7/26/2017 05:19
Surr: 1,2-Dichloroethane-d4	97.4			70-130	%REC	1	7/26/2017 05:19
Surr: 4-Bromofluorobenzene	99.6			70-130	%REC	1	7/26/2017 05:19
Surr: Dibromofluoromethane	87.7			70-130	%REC	1	7/26/2017 05:19
Surr: Toluene-d8	103			70-130	%REC	1	7/26/2017 05:19
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 7/26/17		Analyst: JB
Electrical Conductivity @ Saturation	51		0.028	0.25	mmhos/cm @25°	50	7/27/2017 11:45
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	12		0.38	1.2	mg/Kg-dry	1	7/28/2017 09:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 7/24/17		Analyst: LW
Chromium, Hexavalent	U		0.39	1.3	mg/Kg-dry	1	7/26/2017 13:00
MOISTURE			Method: SW3550C				Analyst: SBR
Moisture	18		0.025	0.050	% of sample	1	7/26/2017 16:43
SOIL PH MEASURED IN WATER AT NOTED TEMP.			Method: SW9045D		Prep: SW9045D / 7/24/17		Analyst: RZM
pH	7.93		0.10	0.10	s.u.	1	7/25/2017 08:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 24-Mar-21

Client: Olsson Associates
Project: Gray A 16 Spill
Sample ID: GA16-SS3
Collection Date: 7/18/2017 11:50 AM

Work Order: 17071195
Lab ID: 17071195-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
			Method: SW8015D		Prep: SW3546 / 7/25/17		Analyst: KB
DRO (C10-C28)	21		3.7	6.4	mg/Kg-dry	1	7/26/2017 03:20
Surr: 4-Terphenyl-d14	94.1			34-130	%REC	1	7/26/2017 03:20
GASOLINE RANGE ORGANICS BY GC-FID							
			Method: SW8015D				Analyst: KB
GRO (C6-C10)	U		3.3	7.8	mg/Kg-dry	1	7/28/2017 11:44
Surr: Toluene-d8	94.4			71-123	%REC	1	7/28/2017 11:44
MERCURY BY CVAA							
			Method: SW7471B		Prep: SW7471 / 7/27/17		Analyst: RSB
Mercury	0.028		0.0036	0.022	mg/Kg-dry	1	7/27/2017 19:44
METALS ANALYSIS BY ICP							
			Method: SW6010D		Prep: SW3050B / 7/26/17		Analyst: LR
Arsenic	11		0.14	0.52	mg/Kg-dry	1	7/27/2017 08:25
Barium	240		0.21	0.52	mg/Kg-dry	1	7/27/2017 08:25
Cadmium	0.86	J	0.050	1.0	mg/Kg-dry	1	7/27/2017 08:25
Chromium	14		0.029	0.52	mg/Kg-dry	1	7/27/2017 08:25
Copper	20		0.23	1.0	mg/Kg-dry	1	7/27/2017 08:25
Lead	25		0.11	0.52	mg/Kg-dry	1	7/27/2017 08:25
Nickel	22		0.21	0.52	mg/Kg-dry	1	7/27/2017 08:25
Selenium	3.6		0.29	1.0	mg/Kg-dry	1	7/27/2017 08:25
Silver	U		0.064	0.52	mg/Kg-dry	1	7/27/2017 08:25
Zinc	110		0.083	1.0	mg/Kg-dry	1	7/27/2017 08:25
SOLUBLE CATIONS FOR SAR							
			Method: SW6010D		Prep: USDA Method 20B / 7/26/17		Analyst: LR
Calcium	210		0.15	5.0	mg/L	10	7/28/2017 17:34
Magnesium	25		0.13	2.0	mg/L	10	7/27/2017 04:43
Sodium	170		0.12	2.0	mg/L	10	7/27/2017 04:43
SODIUM ADSORPTION RATIO							
			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 7/26/17		Analyst: LR
Sodium Adsorption Ratio	3.0		0.010	0.010	none	1	7/26/2017
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)							
			Method: SW8270E		Prep: SW3546 / 7/25/17		Analyst: RM
Acenaphthene	U		0.0038	0.053	mg/Kg-dry	1	7/26/2017 19:03
Anthracene	U		0.0019	0.053	mg/Kg-dry	1	7/26/2017 19:03
Benzo(a)anthracene	U		0.0033	0.053	mg/Kg-dry	1	7/26/2017 19:03
Benzo(a)pyrene	U		0.0013	0.053	mg/Kg-dry	1	7/26/2017 19:03
Benzo(b)fluoranthene	U		0.0020	0.053	mg/Kg-dry	1	7/26/2017 19:03
Benzo(k)fluoranthene	U		0.0028	0.053	mg/Kg-dry	1	7/26/2017 19:03
Chrysene	U		0.0020	0.053	mg/Kg-dry	1	7/26/2017 19:03
Dibenzo(a,h)anthracene	U		0.0017	0.053	mg/Kg-dry	1	7/26/2017 19:03
Fluoranthene	U		0.0015	0.053	mg/Kg-dry	1	7/26/2017 19:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 24-Mar-21

Client: Olsson Associates
Project: Gray A 16 Spill
Sample ID: GA16-SS3
Collection Date: 7/18/2017 11:50 AM

Work Order: 17071195
Lab ID: 17071195-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0017	0.053	mg/Kg-dry	1	7/26/2017 19:03
Indeno(1,2,3-cd)pyrene	U		0.0016	0.053	mg/Kg-dry	1	7/26/2017 19:03
Naphthalene	U		0.010	0.053	mg/Kg-dry	1	7/26/2017 19:03
Pyrene	U		0.0019	0.053	mg/Kg-dry	1	7/26/2017 19:03
Surr: 2-Fluorobiphenyl	94.9			20-140	%REC	1	7/26/2017 19:03
Surr: 4-Terphenyl-d14	126			22-172	%REC	1	7/26/2017 19:03
Surr: Nitrobenzene-d5	101			8-140	%REC	1	7/26/2017 19:03
VOLATILE ORGANIC COMPOUNDS			Method: SW8260C		Prep: SW5035 / 7/25/17		Analyst: WH
Benzene	U		0.011	0.047	mg/Kg-dry	1	7/26/2017 05:40
Ethylbenzene	U		0.011	0.047	mg/Kg-dry	1	7/26/2017 05:40
m,p-Xylene	U		0.021	0.094	mg/Kg-dry	1	7/26/2017 05:40
o-Xylene	U		0.015	0.047	mg/Kg-dry	1	7/26/2017 05:40
Toluene	U		0.016	0.047	mg/Kg-dry	1	7/26/2017 05:40
Xylenes, Total	U		0.036	0.14	mg/Kg-dry	1	7/26/2017 05:40
Surr: 1,2-Dichloroethane-d4	98.6			70-130	%REC	1	7/26/2017 05:40
Surr: 4-Bromofluorobenzene	99.4			70-130	%REC	1	7/26/2017 05:40
Surr: Dibromofluoromethane	90.8			70-130	%REC	1	7/26/2017 05:40
Surr: Toluene-d8	102			70-130	%REC	1	7/26/2017 05:40
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 7/26/17		Analyst: JB
Electrical Conductivity @ Saturation	2.5		0.028	0.25	mmhos/cm @25°	50	7/27/2017 11:45
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	14		0.39	1.3	mg/Kg-dry	1	7/28/2017 09:15
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 7/24/17		Analyst: LW
Chromium, Hexavalent	U		0.39	1.3	mg/Kg-dry	1	7/26/2017 13:00
MOISTURE			Method: SW3550C				Analyst: SBR
Moisture	22		0.025	0.050	% of sample	1	7/26/2017 16:43
SOIL PH MEASURED IN WATER AT NOTED TEMP.			Method: SW9045D		Prep: SW9045D / 7/24/17		Analyst: RZM
pH	8.06		0.10	0.10	s.u.	1	7/25/2017 08:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Olsson Associates
Work Order: 17071195
Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104888** Instrument ID **GC8** Method: **SW8015D**

MBLK				Sample ID: DBLKS1-104888-104888		Units: mg/Kg		Analysis Date: 7/25/2017 07:08 PM		
Client ID:		Run ID: GC8_170725B		SeqNo: 4549727		Prep Date: 7/25/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	2.933	0	3.33	0	88.1	34-130	0			

LCS				Sample ID: DLCSS1-104888-104888		Units: mg/Kg		Analysis Date: 7/25/2017 07:37 PM		
Client ID:		Run ID: GC8_170725B		SeqNo: 4549728		Prep Date: 7/25/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	314.9	5.0	333	0	94.6	65-122	0			
Surr: 4-Terphenyl-d14	3.067	0	3.33	0	92.1	34-130	0			

MS				Sample ID: 17071193-01A MS		Units: mg/Kg		Analysis Date: 7/25/2017 08:05 PM		
Client ID:		Run ID: GC8_170725B		SeqNo: 4549729		Prep Date: 7/25/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	340	5.0	329.9	1.078	103	65-122	0			
Surr: 4-Terphenyl-d14	3.087	0	3.299	0	93.6	34-130	0			

MSD				Sample ID: 17071193-01A MSD		Units: mg/Kg		Analysis Date: 7/25/2017 08:35 PM		
Client ID:		Run ID: GC8_170725B		SeqNo: 4549730		Prep Date: 7/25/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	326.9	4.9	327.7	1.078	99.4	65-122	340	3.92	30	
Surr: 4-Terphenyl-d14	3.084	0	3.277	0	94.1	34-130	3.087	0.125	30	

The following samples were analyzed in this batch:

17071195-01A	17071195-03A	17071195-04A
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Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104907a** Instrument ID **GC9** Method: **SW8015D**

MBLK		Sample ID: MBLK-104907-104907a				Units: µg/Kg-dry		Analysis Date: 7/27/2017 08:35 PM		
Client ID:		Run ID: GC9_170727C				SeqNo: 4554067		Prep Date: 7/25/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	U	5,000								
Surr: Toluene-d8	4886	0	5000	0	97.7	71-123	0			

LCS		Sample ID: LCS-104907-104907a				Units: µg/Kg-dry		Analysis Date: 7/27/2017 07:05 PM		
Client ID:		Run ID: GC9_170727C				SeqNo: 4554066		Prep Date: 7/25/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	577800	5,000	500000	0	116	71-123	0			
Surr: Toluene-d8	5265	0	5000	0	105	71-123	0			

MS		Sample ID: 17071194-01A MS				Units: µg/Kg-dry		Analysis Date: 7/27/2017 09:05 PM		
Client ID:		Run ID: GC9_170727C				SeqNo: 4554068		Prep Date: 7/25/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	798000	6,500	649400	0	123	71-123	0			
Surr: Toluene-d8	6925	0	6494	0	107	71-123	0			

MSD		Sample ID: 17071194-01A MSD				Units: µg/Kg-dry		Analysis Date: 7/27/2017 09:34 PM		
Client ID:		Run ID: GC9_170727C				SeqNo: 4554069		Prep Date: 7/25/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	786900	6,500	649400	0	121	71-123	798000	1.41	30	
Surr: Toluene-d8	6918	0	6494	0	107	71-123	6925	0.0938	30	

The following samples were analyzed in this batch:

17071195-01A	17071195-03A	17071195-04A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **105058** Instrument ID **HG1** Method: **SW7471B**

MBLK		Sample ID: MBLK-105058-105058				Units: mg/Kg		Analysis Date: 7/27/2017 07:11 PM		
Client ID:		Run ID: HG1_170727C				SeqNo: 4553613		Prep Date: 7/27/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.020

LCS		Sample ID: LCS-105058-105058				Units: mg/Kg		Analysis Date: 7/27/2017 07:21 PM		
Client ID:		Run ID: HG1_170727C				SeqNo: 4553617		Prep Date: 7/27/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1817 0.020 0.1665 0 109 80-120 0

MS		Sample ID: 17071195-02AMS				Units: mg/Kg		Analysis Date: 7/27/2017 07:36 PM		
Client ID: GA16-BG1		Run ID: HG1_170727C				SeqNo: 4553623		Prep Date: 7/27/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1696 0.016 0.1339 0.02608 107 75-125 0

MSD		Sample ID: 17071195-02AMSD				Units: mg/Kg		Analysis Date: 7/27/2017 07:39 PM		
Client ID: GA16-BG1		Run ID: HG1_170727C				SeqNo: 4553624		Prep Date: 7/27/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1732 0.016 0.1346 0.02608 109 75-125 0.1696 2.11 35

The following samples were analyzed in this batch:

17071195-01A	17071195-02A	17071195-03A
17071195-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104957** Instrument ID **ICP2** Method: **SW6010D**

Sample ID: MBLK-104957-104957				Units: mg/Kg		Analysis Date: 7/27/2017 04:50 AM				
Client ID:		Run ID: ICP2_170726A			SeqNo: 4551791		Prep Date: 7/26/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Barium	U	0.25								
Cadmium	0.02621	0.50								J
Chromium	U	0.25								
Copper	U	0.50								
Lead	U	0.25								
Nickel	U	0.25								
Selenium	U	0.50								
Silver	U	0.25								
Zinc	0.07356	0.50								J

LCS					Sample ID: LCS-104957-104957			Units: mg/Kg		Analysis Date: 7/27/2017 05:15 AM		
Client ID:			Run ID: ICP2_170726A			SeqNo: 4551795		Prep Date: 7/26/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Arsenic	5.08	0.25	5	0	102	80-120	0					
Barium	5.21	0.25	5	0	104	80-120	0					
Cadmium	5.143	0.50	5	0	103	80-120	0					
Chromium	5.546	0.25	5	0	111	80-120	0					
Copper	4.986	0.50	5	0	99.7	80-120	0					
Lead	5.319	0.25	5	0	106	80-120	0					
Nickel	5.239	0.25	5	0	105	80-120	0					
Selenium	4.514	0.50	5	0	90.3	80-120	0					
Silver	5.176	0.25	5	0	104	80-120	0					
Zinc	5.355	0.50	5	0	107	80-120	0					

MS				Sample ID: 17071195-02AMS			Units: mg/Kg		Analysis Date: 7/27/2017 07:39 AM		
Client ID: GA16-BG1			Run ID: ICP2_170726A			SeqNo: 4551817		Prep Date: 7/26/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	19.57	0.41	8.13	9.714	121	75-125	0				
Barium	91.5	0.41	8.13	75.91	192	75-125	0			SO	
Cadmium	10.2	0.81	8.13	0.8061	116	75-125	0				
Chromium	23.36	0.41	8.13	10.92	153	75-125	0			S	
Copper	23.41	0.81	8.13	14.43	110	75-125	0				
Lead	25.54	0.41	8.13	16.8	107	75-125	0				
Nickel	26.85	0.41	8.13	17.77	112	75-125	0				
Selenium	12.11	0.81	8.13	3.733	103	75-125	0				
Silver	8.812	0.41	8.13	-0.1822	111	75-125	0				
Zinc	89.67	0.81	8.13	76.93	157	75-125	0			SO	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
Work Order: 17071195
Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104957** Instrument ID **ICP2** Method: **SW6010D**

MSD		Sample ID: 17071195-02AMSD				Units: mg/Kg		Analysis Date: 7/27/2017 08:11 AM		
Client ID: GA16-BG1		Run ID: ICP2_170726A				SeqNo: 4551822		Prep Date: 7/26/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.66	0.41	8.104	9.714	123	75-125	19.57	0.413	20	
Barium	89.33	0.41	8.104	75.91	166	75-125	91.5	2.39	20	SO
Cadmium	10.3	0.81	8.104	0.8061	117	75-125	10.2	0.949	20	
Chromium	24.48	0.41	8.104	10.92	167	75-125	23.36	4.68	20	S
Copper	23.05	0.81	8.104	14.43	106	75-125	23.41	1.52	20	
Lead	25.26	0.41	8.104	16.8	105	75-125	25.54	1.07	20	
Nickel	26.27	0.41	8.104	17.77	105	75-125	26.85	2.2	20	
Selenium	12.53	0.81	8.104	3.733	109	75-125	12.11	3.43	20	
Silver	9.08	0.41	8.104	-0.1822	114	75-125	8.812	3	20	
Zinc	88.68	0.81	8.104	76.93	145	75-125	89.67	1.11	20	SO

The following samples were analyzed in this batch:

17071195-01A	17071195-02A	17071195-03A
17071195-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
Work Order: 17071195
Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104972** Instrument ID **SAR** Method: **USDA H60 Method**

DUP		Sample ID: 17071193-03BDUP				Units: none		Analysis Date: 7/26/2017		
Client ID:		Run ID: SAR_170726A				SeqNo: 4561372		Prep Date: 7/26/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	4.98	0.010	0	0	0		5.498	9.9	50	

The following samples were analyzed in this batch:

17071195-01B	17071195-02B	17071195-03B
17071195-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104887** Instrument ID **SVMS6** Method: **SW8270E**

MBLK				Sample ID: SBLKS1-104887-104887		Units: µg/Kg		Analysis Date: 7/26/2017 11:31 AM		
Client ID:				Run ID: SVMS6_170726A		SeqNo: 4550256		Prep Date: 7/25/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	U	42								
Anthracene	U	42								
Benzo(a)anthracene	U	42								
Benzo(a)pyrene	U	42								
Benzo(b)fluoranthene	U	42								
Benzo(k)fluoranthene	U	42								
Chrysene	U	42								
Dibenzo(a,h)anthracene	U	42								
Fluoranthene	U	42								
Fluorene	U	42								
Indeno(1,2,3-cd)pyrene	U	42								
Naphthalene	U	42								
Pyrene	U	42								
Surr: 2-Fluorobiphenyl	3297	0	3333	0	98.9	20-140	0			
Surr: 4-Terphenyl-d14	3723	0	3333	0	112	22-172	0			
Surr: Nitrobenzene-d5	3802	0	3333	0	114	8-140	0			

LCS				Sample ID: SLCSS1-104887-104887		Units: µg/Kg		Analysis Date: 7/26/2017 11:45 AM		
Client ID:				Run ID: SVMS6_170726A		SeqNo: 4550257		Prep Date: 7/25/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1120	42	1333	0	84	40-140	0			
Anthracene	1397	42	1333	0	105	40-140	0			
Benzo(a)anthracene	1454	42	1333	0	109	40-140	0			
Benzo(a)pyrene	1523	42	1333	0	114	40-140	0			
Benzo(b)fluoranthene	1491	42	1333	0	112	40-140	0			
Benzo(k)fluoranthene	1297	42	1333	0	97.3	40-140	0			
Chrysene	1239	42	1333	0	93	40-140	0			
Dibenzo(a,h)anthracene	1607	42	1333	0	121	40-140	0			
Fluoranthene	1251	42	1333	0	93.8	40-140	0			
Fluorene	1366	42	1333	0	103	40-140	0			
Indeno(1,2,3-cd)pyrene	1499	42	1333	0	112	40-140	0			
Naphthalene	1202	42	1333	0	90.2	40-140	0			
Pyrene	1193	42	1333	0	89.5	40-140	0			
Surr: 2-Fluorobiphenyl	3389	0	3333	0	102	20-140	0			
Surr: 4-Terphenyl-d14	3438	0	3333	0	103	22-172	0			
Surr: Nitrobenzene-d5	3478	0	3333	0	104	8-140	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104887** Instrument ID **SVMS6** Method: **SW8270E**

MS				Sample ID: 17071111-21B MS			Units: µg/Kg		Analysis Date: 7/26/2017 12:39 PM	
Client ID:				Run ID: SVMS6_170726A			SeqNo: 4550258		Prep Date: 7/25/2017	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1134	41	1295	0	87.6	40-140	0			
Anthracene	1403	41	1295	0	108	40-140	0			
Benzo(a)anthracene	1450	41	1295	0	112	40-140	0			
Benzo(a)pyrene	1506	41	1295	0	116	40-140	0			
Benzo(b)fluoranthene	1514	41	1295	0	117	40-140	0			
Benzo(k)fluoranthene	1299	41	1295	0	100	40-140	0			
Chrysene	1235	41	1295	0	95.4	40-140	0			
Dibenzo(a,h)anthracene	1646	41	1295	0	127	40-140	0			
Fluoranthene	1260	41	1295	0	97.3	40-140	0			
Fluorene	1344	41	1295	0	104	40-140	0			
Indeno(1,2,3-cd)pyrene	1499	41	1295	0	116	40-140	0			
Naphthalene	1194	41	1295	0	92.2	40-140	0			
Pyrene	1215	41	1295	0	93.8	40-140	0			
Surr: 2-Fluorobiphenyl	3347	0	3237	0	103	20-140	0			
Surr: 4-Terphenyl-d14	3559	0	3237	0	110	22-172	0			
Surr: Nitrobenzene-d5	3737	0	3237	0	115	8-140	0			

MSD				Sample ID: 17071111-21B MSD			Units: µg/Kg		Analysis Date: 7/26/2017 12:53 PM	
Client ID:				Run ID: SVMS6_170726A			SeqNo: 4550259		Prep Date: 7/25/2017	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1082	41	1298	0	83.4	40-140	1134	4.7	30	
Anthracene	1354	41	1298	0	104	40-140	1403	3.56	30	
Benzo(a)anthracene	1373	41	1298	0	106	40-140	1450	5.51	30	
Benzo(a)pyrene	1452	41	1298	0	112	40-140	1506	3.66	30	
Benzo(b)fluoranthene	1439	41	1298	0	111	40-140	1514	5.09	30	
Benzo(k)fluoranthene	1239	41	1298	0	95.4	40-140	1299	4.78	30	
Chrysene	1172	41	1298	0	90.3	40-140	1235	5.28	30	
Dibenzo(a,h)anthracene	1588	41	1298	0	122	40-140	1646	3.57	30	
Fluoranthene	1223	41	1298	0	94.2	40-140	1260	3.01	30	
Fluorene	1278	41	1298	0	98.5	40-140	1344	5.02	30	
Indeno(1,2,3-cd)pyrene	1487	41	1298	0	115	40-140	1499	0.855	30	
Naphthalene	1149	41	1298	0	88.5	40-140	1194	3.88	30	
Pyrene	1133	41	1298	0	87.3	40-140	1215	6.97	30	
Surr: 2-Fluorobiphenyl	3162	0	3245	0	97.5	20-140	3347	5.7	0	
Surr: 4-Terphenyl-d14	3312	0	3245	0	102	22-172	3559	7.19	0	
Surr: Nitrobenzene-d5	3546	0	3245	0	109	8-140	3737	5.23	0	

The following samples were analyzed in this batch:

17071195-01A 17071195-03A 17071195-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104905** Instrument ID **VMS7** Method: **SW8260C**

MBLK Sample ID: MBLK-104905-104905				Units: µg/Kg-dry		Analysis Date: 7/25/2017 11:40 PM				
Client ID:		Run ID: VMS7_170725B		SeqNo: 4549674		Prep Date: 7/25/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	30								
Ethylbenzene	U	30								
m,p-Xylene	U	60								
o-Xylene	U	30								
Toluene	U	30								
Xylenes, Total	U	90								
<i>Surr: 1,2-Dichloroethane-d4</i>	992	0	1000	0	99.2	70-130	0			
<i>Surr: 4-Bromofluorobenzene</i>	995	0	1000	0	99.5	70-130	0			
<i>Surr: Dibromofluoromethane</i>	921	0	1000	0	92.1	70-130	0			
<i>Surr: Toluene-d8</i>	999	0	1000	0	99.9	70-130	0			

MBLK Sample ID: MBLK-104905-104905				Units: µg/Kg-dry		Analysis Date: 7/25/2017 11:40 PM				
Client ID:		Run ID: VMS7_170725B		SeqNo: 4552595		Prep Date: 7/25/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	30	0	0	0	0-0	0			
Ethylbenzene	U	30	0	0	0	0-0	0			
m,p-Xylene	U	60	0	0	0	0-0	0			
o-Xylene	U	30	0	0	0	0-0	0			
Toluene	U	30	0	0	0	0-0	0			
Xylenes, Total	U	90	0	0	0	0-0	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	992	0	1000	0	99.2	70-130	0			
<i>Surr: 4-Bromofluorobenzene</i>	995	0	1000	0	99.5	70-130	0			
<i>Surr: Dibromofluoromethane</i>	921	0	1000	0	92.1	70-130	0			
<i>Surr: Toluene-d8</i>	999	0	1000	0	99.9	70-130	0			

LCS Sample ID: LCS-104905-104905				Units: µg/Kg-dry		Analysis Date: 7/25/2017 10:37 PM				
Client ID:		Run ID: VMS7_170725B		SeqNo: 4549672		Prep Date: 7/25/2017		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1073	30	1000	0	107	75-125	0			
Ethylbenzene	1070	30	1000	0	107	75-125	0			
m,p-Xylene	2174	60	2000	0	109	80-125	0			
o-Xylene	1092	30	1000	0	109	75-125	0			
Toluene	1080	30	1000	0	108	70-125	0			
Xylenes, Total	3266	90	3000	0	109	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	974	0	1000	0	97.4	70-130	0			
<i>Surr: 4-Bromofluorobenzene</i>	1037	0	1000	0	104	70-130	0			
<i>Surr: Dibromofluoromethane</i>	1003	0	1000	0	100	70-130	0			
<i>Surr: Toluene-d8</i>	1003	0	1000	0	100	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104905** Instrument ID **VMS7** Method: **SW8260C**

LCS				Sample ID: LCS-104905-104905			Units: µg/Kg-dry		Analysis Date: 7/25/2017 10:37 PM	
Client ID:		Run ID: VMS7_170725B			SeqNo: 4552594		Prep Date: 7/25/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1073	30	1000	0	107	75-125	0			
Ethylbenzene	1070	30	1000	0	107	75-125	0			
m,p-Xylene	2174	60	2000	0	109	80-125	0			
o-Xylene	1092	30	1000	0	109	75-125	0			
Toluene	1080	30	1000	0	108	70-125	0			
Xylenes, Total	3266	90	3000	0	109	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>974</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97.4</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>1037</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>104</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>1003</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>100</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>1003</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>100</i>	<i>70-130</i>	<i>0</i>			

MS				Sample ID: 17071194-01A MS			Units: µg/Kg-dry		Analysis Date: 7/27/2017 08:30 PM	
Client ID:		Run ID: VMS7_170727A			SeqNo: 4554015		Prep Date: 7/25/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2178	39	1299	668.3	116	75-125	0			
Ethylbenzene	1657	39	1299	192.2	113	75-125	0			
m,p-Xylene	4495	78	2598	1300	123	80-125	0			
o-Xylene	1690	39	1299	192.2	115	75-125	0			
Toluene	3787	39	1299	1848	149	70-125	0			S
Xylenes, Total	6186	120	3897	1492	120	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1218</i>	<i>0</i>	<i>1299</i>	<i>0</i>	<i>93.8</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>1318</i>	<i>0</i>	<i>1299</i>	<i>0</i>	<i>102</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>1228</i>	<i>0</i>	<i>1299</i>	<i>0</i>	<i>94.6</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>1302</i>	<i>0</i>	<i>1299</i>	<i>0</i>	<i>100</i>	<i>70-130</i>	<i>0</i>			

MS				Sample ID: 17071194-01A MS			Units: µg/Kg-dry		Analysis Date: 7/27/2017 08:30 PM	
Client ID:		Run ID: VMS7_170727A			SeqNo: 4554975		Prep Date: 7/25/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2178	39	1299	668.3	116	75-125	0			
Ethylbenzene	1657	39	1299	192.2	113	75-125	0			
m,p-Xylene	4495	78	2598	1300	123	80-125	0			
o-Xylene	1690	39	1299	192.2	115	75-125	0			
Toluene	3787	39	1299	1848	149	70-125	0			S
Xylenes, Total	6186	120	3897	1492	120	75-125	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1218</i>	<i>0</i>	<i>1299</i>	<i>0</i>	<i>93.8</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>1318</i>	<i>0</i>	<i>1299</i>	<i>0</i>	<i>102</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>1228</i>	<i>0</i>	<i>1299</i>	<i>0</i>	<i>94.6</i>	<i>70-130</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>1302</i>	<i>0</i>	<i>1299</i>	<i>0</i>	<i>100</i>	<i>70-130</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104905** Instrument ID **VMS7** Method: **SW8260C**

MSD				Sample ID: 17071194-01A MSD			Units: µg/Kg-dry		Analysis Date: 7/27/2017 08:51 PM	
Client ID:		Run ID: VMS7_170727A			SeqNo: 4554016		Prep Date: 7/25/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2909	39	1299	668.3	172	75-125	2178	28.7	30	S
Ethylbenzene	1687	39	1299	192.2	115	75-125	1657	1.83	30	
m,p-Xylene	4906	78	2598	1300	139	80-125	4495	8.73	30	S
o-Xylene	1733	39	1299	192.2	119	75-125	1690	2.5	30	
Toluene	4632	39	1299	1848	214	70-125	3787	20.1	30	S
Xylenes, Total	6639	120	3897	1492	132	75-125	6186	7.07	30	S
<i>Surr: 1,2-Dichloroethane-d4</i>	1224	0	1299	0	94.2	70-130	1218	0.426	30	
<i>Surr: 4-Bromofluorobenzene</i>	1313	0	1299	0	101	70-130	1318	0.395	30	
<i>Surr: Dibromofluoromethane</i>	1227	0	1299	0	94.5	70-130	1228	0.0529	30	
<i>Surr: Toluene-d8</i>	1307	0	1299	0	101	70-130	1302	0.398	30	

MSD				Sample ID: 17071194-01A MSD			Units: µg/Kg-dry		Analysis Date: 7/27/2017 08:51 PM	
Client ID:		Run ID: VMS7_170727A			SeqNo: 4554976		Prep Date: 7/25/2017		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2909	39	1299	668.3	172	75-125	2178	28.7	30	S
Ethylbenzene	1687	39	1299	192.2	115	75-125	1657	1.83	30	
m,p-Xylene	4906	78	2598	1300	139	80-125	4495	8.73	30	S
o-Xylene	1733	39	1299	192.2	119	75-125	1690	2.5	30	
Toluene	4632	39	1299	1848	214	70-125	3787	20.1	30	S
Xylenes, Total	6639	120	3897	1492	132	75-125	6186	7.07	30	S
<i>Surr: 1,2-Dichloroethane-d4</i>	1224	0	1299	0	94.2	70-130	1218	0.426	30	
<i>Surr: 4-Bromofluorobenzene</i>	1313	0	1299	0	101	70-130	1318	0.395	30	
<i>Surr: Dibromofluoromethane</i>	1227	0	1299	0	94.5	70-130	1228	0.0529	30	
<i>Surr: Toluene-d8</i>	1307	0	1299	0	101	70-130	1302	0.398	30	

The following samples were analyzed in this batch:

17071195-01A	17071195-03A	17071195-04A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104834** Instrument ID **WETCHEM** Method: **SW9045D**

LCS				Sample ID: LCS-104834-104834				Units: s.u.		Analysis Date: 7/25/2017 08:50 AM													
Client ID:				Run ID: WETCHEM_170725C				SeqNo: 4546723		Prep Date: 7/24/2017		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

pH 3.95 0.10 4 0 98.8 90-110 0

DUP				Sample ID: 17071176-01A DUP				Units: s.u.		Analysis Date: 7/25/2017 08:50 AM			
Client ID:				Run ID: WETCHEM_170725C				SeqNo: 4546733		Prep Date: 7/24/2017		DF: 1	
Analyte				Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH 5.58 0.10 0 0 0 0-0 5.57 0.179 20 H

DUP				Sample ID: 17071193-02A DUP				Units: s.u.		Analysis Date: 7/25/2017 08:50 AM													
Client ID:				Run ID: WETCHEM_170725C				SeqNo: 4546737		Prep Date: 7/24/2017		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

pH 8.57 0.10 0 0 0 0-0 9.07 5.67 20

The following samples were analyzed in this batch:

17071195-01A	17071195-02A	17071195-03A
17071195-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
Work Order: 17071195
Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104972** Instrument ID **WETCHEM** Method: **USDA H60 Method**

DUP		Sample ID: 17071193-03B DUP				Units: mmhos/cm @25°		Analysis Date: 7/27/2017 11:45 AM		
Client ID:		Run ID: WETCHEM_170727D				SeqNo: 4552143		Prep Date: 7/26/2017		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	5.325	0.25	0	0	0		6.97	26.8	50	

The following samples were analyzed in this batch:

17071195-01B	17071195-02B	17071195-03B
17071195-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **104977** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK		Sample ID: MBLK-104977-104977				Units: mg/Kg		Analysis Date: 7/26/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170726C				SeqNo: 4549467		Prep Date: 7/24/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent U 1.0

LCS		Sample ID: LCS-104977-104977				Units: mg/Kg		Analysis Date: 7/26/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170726C				SeqNo: 4549468		Prep Date: 7/24/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.32 1.0 5 0 86.4 80-120 0

MS		Sample ID: 1707923-01A MS				Units: mg/Kg		Analysis Date: 7/26/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170726C				SeqNo: 4549478		Prep Date: 7/24/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.83 1.0 5 -0.09091 78.4 75-125 0

MS		Sample ID: 1707923-01A MSI				Units: mg/Kg		Analysis Date: 7/26/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170726C				SeqNo: 4549480		Prep Date: 7/24/2017		DF: 100
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2716 99 2788 -0.09091 97.4 75-125 0

MSD		Sample ID: 1707923-01A MSD				Units: mg/Kg		Analysis Date: 7/26/2017 01:00 PM		
Client ID:		Run ID: WETCHEM_170726C				SeqNo: 4549479		Prep Date: 7/24/2017		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.83 1.0 5 -0.09091 78.4 75-125 3.83 0 20

The following samples were analyzed in this batch:

17071195-01A	17071195-02A	17071195-03A
17071195-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Olsson Associates
 Work Order: 17071195
 Project: Gray A 16 Spill

QC BATCH REPORT

Batch ID: **R216652** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R216652				Units: % of sample		Analysis Date: 7/26/2017 04:43 PM		
Client ID:		Run ID: MOIST_170726C				SeqNo: 4551907		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.050								

LCS		Sample ID: LCS-R216652				Units: % of sample		Analysis Date: 7/26/2017 04:43 PM		
Client ID:		Run ID: MOIST_170726C				SeqNo: 4551906		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.050	100	0	100	99.5-100.5	0			

DUP		Sample ID: 17071194-01B DUP				Units: % of sample		Analysis Date: 7/26/2017 04:43 PM		
Client ID:		Run ID: MOIST_170726C				SeqNo: 4551894		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	12.55	0.050	0	0	0	0-0	12.8	1.97	5	

DUP		Sample ID: 17071195-02A DUP				Units: % of sample		Analysis Date: 7/26/2017 04:43 PM		
Client ID: GA16-BG1		Run ID: MOIST_170726C				SeqNo: 4551898		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.99	0.050	0	0	0	0-0	10.29	2.96	5	

The following samples were analyzed in this batch:

17071195-01A	17071195-02A	17071195-03A
17071195-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Environmental

Chain of Custody Form

Page 1 of 1

COC ID: 123456

☐ Cincinnati, OH
+1 513 733 5336

☐ Everett, WA
+1 425 356 2600

☐ Fort Collins, CO
+1 970 490 1311

☐ Holland, MI
+1 616 399 6070

☐ Houston, TX
+1 281 530 5656

☐ Middletown, PA
+1 717 944 5541

☐ Salt Lake City, UT
+1 801 266 7700

☐ Spring City, PA
+1 610 948 4903

☐ York, PA
+1 717 505 5280

Customer Information		Project Information		Parameter/Method Request for Analysis															
Purchase Order		Project Name	Gray A 16 Spill	A TPH (GRO & DRO)															
Work Order		Project Number	013.3287.400.400004	B BTEX															
Company Name	Olsson Associates	Bill To Company	Olsson Associates	C PAH (See Attached List) CO Table 910															
Send Report To	Tim Dobransky	Invoice Attn.	Tim Dobransky	D Electrical Conductivity															
Address	780 Horizon Drive, Ste. 102	Address	780 Horizon Drive, Ste. 102	E Sodium Adsorption Ratio															
City/State/Zip	Grand Junction, CO 81508	City/State/Zip	Grand Junction, CO 81508	F pH															
Phone	970.263.7800	Phone	970.263.7800	G Metals (See Attached List) CO Table 910															
Fax	970.263.7456	Fax	970.263.7456	H Arsenic Only															
e-Mail Address	tdobransky@olssonconsulting.com	e-Mail Address		I															
				J															
No.	Sample Description	Date	Time	Matrix	Pres.	# Batches	A	B	C	D	E	F	G	H	I	J	Hold		
1	GA16- SS1	07/18/17	1115	Soil	8	2	X	X	X	X	X	X	X						
2	GA16- BG1	07/18/17	1125	Soil	8	2				X	X	X	X						
3	GA16- SS2	07/18/17	1140	Soil	8	2	X	X	X	X	X	X	X						
4	GA16- SS3	07/18/17	1150	Soil	8	2	X	X	X	X	X	X	X						
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			

Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:	
Jason McLarty		FedEx		<input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour			
Relinquished by:	Date:	Time:	Received by:	Notes:			
<i>[Signature]</i>	7/19/17	1200	<i>[Signature]</i>	Chevron Pricing Applies - Per Bruce Schlatter			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler Temp.	QC Package: (Check Box Below)		
<i>[Signature]</i>	7-20-17	1820	<i>[Signature]</i>	4.8°C	<input checked="" type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Std QC + Raw Data <input type="checkbox"/> Level IV: SW846 CLP-Like Other:		
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):				
<i>[Signature]</i>	7/22/17	1030	<i>[Signature]</i>				
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035							

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

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Sample Receipt Checklist

Client Name: OLSSON

Date/Time Received: 22-Jul-17 09:15

Work Order: 17071195

Received by: KRW

Checklist completed by Keith Wierenga

22-Jul-17

Reviewed by: Chad Whelton

24-Jul-17

eSignature

Date

eSignature

Date

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Sample(s) received on ice? Yes ☒ No ☐

Temperature(s)/Thermometer(s): 4.8/4.8 C SR2

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage: 7/22/2017 11:06:57 AM

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: