State of New Mexico
Oil Conservation Division

Incident ID	NCH1815942247
District RP	1RP-5084
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Mr. Lupe Carrillo Title: COO/Co-Founder

Signature: Lupe Carrillo Date: 2/26/2019

email: Lupe@percussionpetroleum.com Telephone: 713-589-9509

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: __/Bradford Billings/sig Date: 03/12/2019

Printed Name: Bradford Billings Title: Envi.Spec.A

February 26, 2018

Mr. Bradford Billings
New Mexico Oil Conservation Division – Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, NM 87505

RE: Release Closure Request
Percussion Petroleum
HT-18 Federal #1 Tank Battery
Lea County, New Mexico
NMOCD Case Number – 1RP-5084

Mr. Billings:

WSP USA, Inc. (WSP) was engaged by Percussion Petroleum, LLC (Percussion) to perform soil assessment and remediation services at the HT-18 Federal #1 facility well pad in Lea County, New Mexico (Figure 1). WSP submitted a work plan for the excavation and disposal of the impacted soils on July 31, 2018 which was approved by Ms. Hernandez on August 28, 2018. After remediation efforts analytical results from all confirmation sample locations are below the remediation guidelines for the 1993 Guidelines for Remediation of Leaks, Spills and Releases. Based on the remediation and confirmation analytical data, WSP is requesting closure on Percussion's behalf for this release. WSP's preliminary soil assessment results, remediation activities, and post remediation assessment results are as follows:

INCIDENT DESCRIPTION

On May 22, 2018 approximately 100 barrels of oil and produced water was released from the HT 18 battery and approximately 40 barrels was recovered. The two produced water tanks were struck by lightning and the facility burned to the ground. The incident was reported to the Ms. Olivia Yu at 9:15 AM Mountain Standard Time on May 22, 2018.

BACKGROUND INFORMATION

The HT 18 facility is located 3.5 miles southwest of Maljamar, New Mexico. The legal location for the site is Section 18, Township 17S, Range 32E in Lea County, New Mexico. The attached Figure 1 depicts the facility's location.

WSP USA
2777 N. Stemmons Freeway
Suite 1600
Dallas, TX 75207

T +1-214-583-3400

wsp.com

According to the United States Department of Agricultural, Natural Resource Conservation Service, Web Soil Survey, the soil in the vicinity of the facility is Kermit-Palomas fine sands, 0 to 12 percent slopes. Kermit-Palomas soils are described as fine sands to a depth of greater than 60 inches. In the Work Plan approval by Ms. Hernandez, she identified the nearest water well, according to the New Mexico State Engineer's office, to be located in Section 24, Township 17S, Range 32E, 2.5 miles to the southeast of the HT 18 facility. The depth to groundwater was identified at 81 feet below ground surface (bgs) in 2013. Ms. Hernandez based the approved remediation guidelines on this well and groundwater depth.

WSP utilized the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Spills, Leaks and Releases (1993) in preparing this work plan. Based on the site inspection the impacts would be classified as Unsaturated Contaminated Soils. Following the ranking criteria in the Guide, WSP identified the facility with a depth to ground water of 100 feet, well head protection area greater than 1,000 feet from a water source and greater than 200 feet from a private domestic water source, and greater than 1,000 feet to a surface body of water. The total score for the facility is 0. In the Work Plan approval by Ms. Hernandez, she stated the depth to groundwater was 81 feet, giving the facility a total score of 10. The Work Plan approval stated the required action levels to be 10 parts per million (ppm) for benzene, 50 ppm for benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 ppm for total petroleum hydrocarbons (TPH) combined ranges (gasoline range organics (GRO), diesel range organics (DRO), and oil range organics (ORO). A chloride level of 600 ppm was used as an action level. The facility is not located in an area of mapped karst topography based on the USGS Karst Topography map, included as Figure 3.

ACTION TAKEN

Percussion's initial response included utilizing a vacuum truck to remove free fluids. On May 24, 2018 WSP staff collected soil samples from the impacted area to preliminarily delineate the vertical and horizontal extent of the spill. Soil samples were collected utilizing a decontaminated hand auger and gloved hands. Soil was placed in clean jars supplied by the laboratory, placed in a cooler on ice and shipped to ALS Laboratory in Houston, Texas for analysis for TPH GRO, TPH DRO, TPH ORO, BTEX and chlorides. Based on the site ranking criteria and corresponding action levels, WSP identified elevated levels of TPH and/or chlorides at three locations. The analytical results have been summarized in the attached Table 1 and the attached Figure 2 identifies the sample locations. The impacted areas were excavated to a depth of 3-4 feet below ground surface and resampled. Any areas exhibiting elevated levels were excavated further and resampled.

POST REMEDIATION SAMPLING RESULTS

The results for the sampling event have been summarized in Table 1 and the post remediation sampling locations have been identified on Figure 4.

SUMMARY and CONCLUSIONS

The post remediation analytical results identified all soil samples were found to be below the 1993 action levels of 10 ppm for benzene, 50 ppm for BTEX, 1,000 ppm for TPH (GRO/DRO/ORO) and 600 for chlorides. Based on the analytical results, WSP is requesting closure on Percussion's behalf for this release, 1RP-5084.

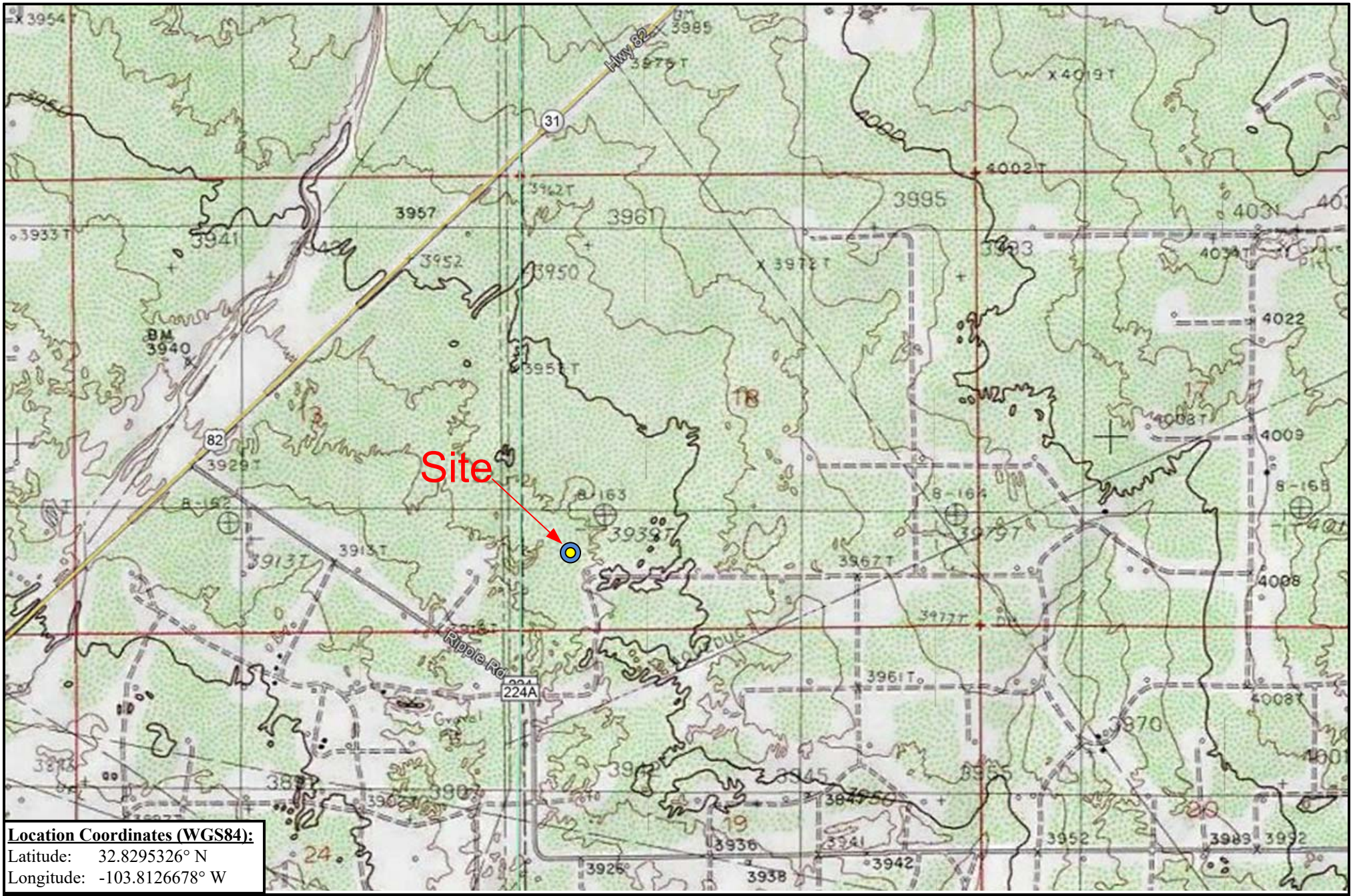
If you have any questions or require additional information, please contact Matthew Boyle at (214) 561-7424 or (817) 713-0262.

Sincerely,

Matthew Boyle
Sr. Environmental Scientist

Charles D. Harlan, P.G.
Sr. Consultant – Environmental Services

Figures



Location Coordinates (WGS84):
Latitude: 32.8295326° N
Longitude: -103.8126678° W

Percussion Petroleum
HT 18 Federal #1
Lea County, New Mexico

Legend:

- Site Location

(Source): Google Earth

N

(Not to Scale)

WSP

Site Location Map

WSP Project#: 31401117.005	7/25/2018	Figure 1

Location Coordinates (WGS84):
Latitude: 32.8295326° N
Longitude: -103.8126678° W

Percussion Petroleum
HT 18 Federal #1
Lea County, New Mexico

Legend:

Impacted Area
Sample Location

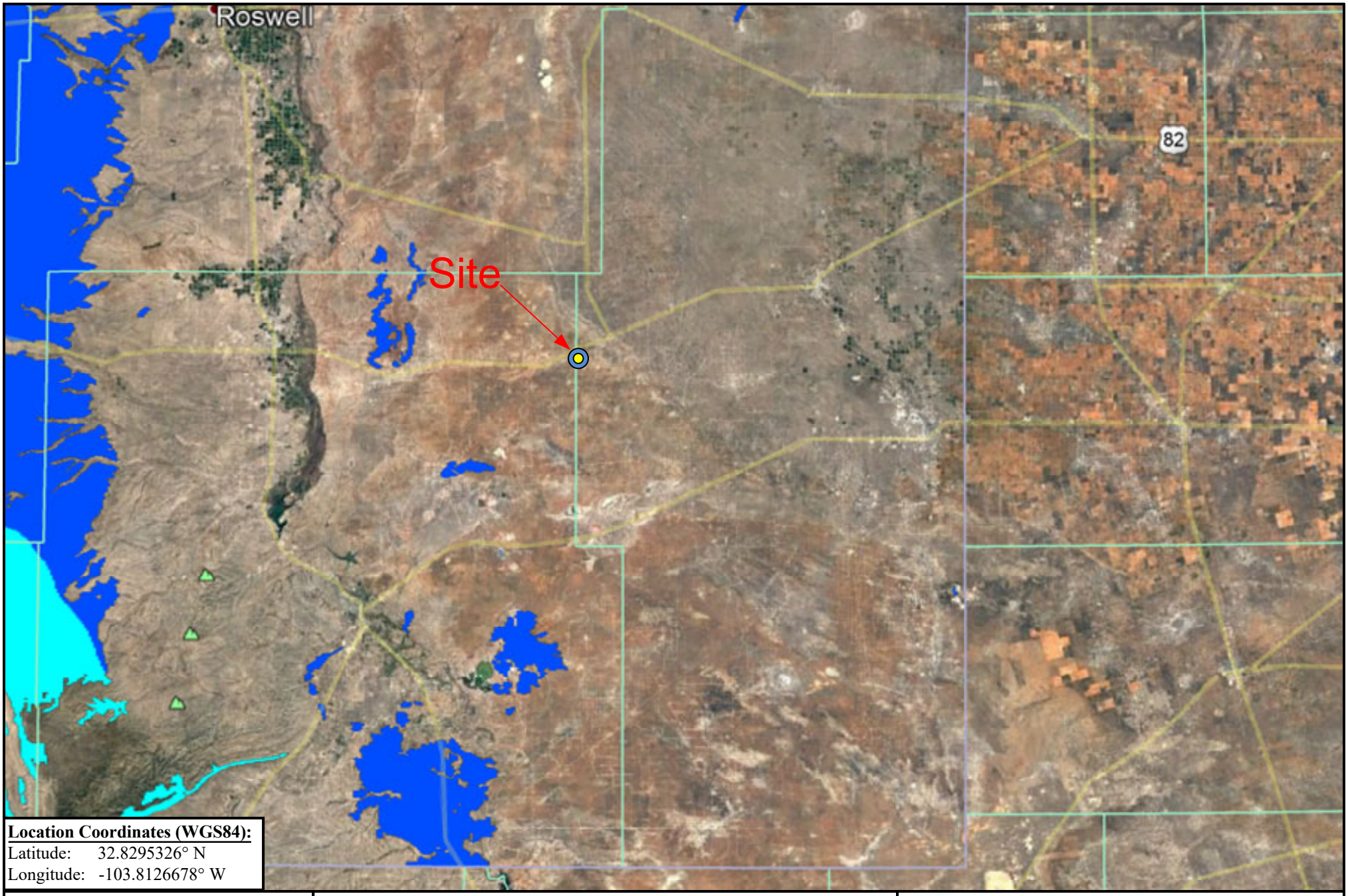
N

1"=60'

wsp

Post Spill Sample Location Map

WSP Project#: 31401117.005	7/25/2018	Figure 2



Location Coordinates (WGS84):
Latitude: 32.8295326° N
Longitude: -103.8126678° W

Percussion Petroleum
HT-18 Federal #1
Lea County, New Mexico

Legend:

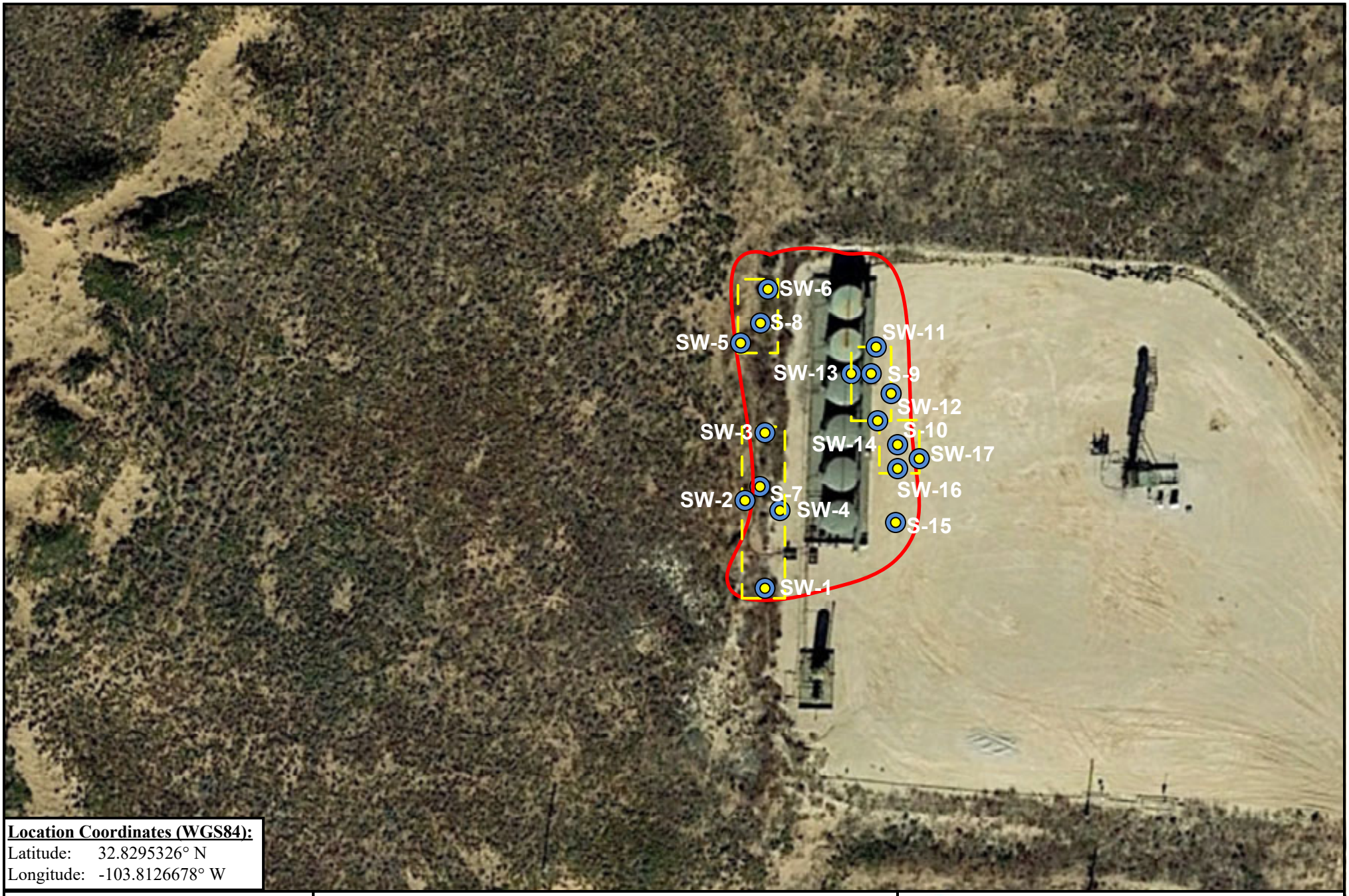
Site Location

N

(Not to Scale)

UKarst Topograpy Map

WSP Project#: 31401117.005	12/8/2018	Figure 3



Location Coordinates (WGS84):
Latitude: 32.8295326° N
Longitude: -103.8126678° W

Percussion Petroleum
HT 18 Federal #1
Eddy County, New Mexico

Legend:

- Impacted Area
- Sample Location
- Excavation Area

N

1"=60'

wsp

Post Remediation Sample Location Map

WSP Project#: 31401117.005	7/25/2018	Figure 3

Data Tables

Table 1

Summary of Soil Sample Analytical Results

Sample ID	Sample Depth	Sample Date	Parameter								
			Chloride mg/kg	TPH-GRO	TPH-DRO	TPH-ORO	Total TPH mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Total Xylene mg/kg
CAS Number			16887-00-6	PHC612	PHCG1028	PHCG2835	PHC635	71-43-2	108-88-3	100-41-4	1330-20-7
NMOCD Action Levels			600				1,000	10			
								50			
S-1	1'	5/24/2018	51.1	0.44	120	390	510	0.081	0.098	0.031	0.027
S-1	2'	5/24/2018	**1,210**	0.41	13	46	59	U	U	0.046	0.033
S-1	3'	5/24/2018	597	0.08	150	290	440	0.014	0.029	0.0093	0.014
S-2	1'	5/24/2018	28.7	0.14	u	12	12	0.010	0.039	0.020	0.030
S-2	2'	5/24/2018	88.4	u	u	8	8	U	U	0.0062	U
S-2	3'	5/24/2018	109	0.24	u	10	10	0.088	0.180	0.038	0.071
S-3	1'	5/24/2018	**1740**	u	20	40	60	U	0.0094	U	U
S-3	2'	5/24/2018	152	0.27	u	u	0	0.100	0.190	0.037	0.076
S-3	3'	5/24/2018	30	u	4100	4400	**8500**	U	U	U	U
S-4	1'	5/24/2018	**2030**	0.30	6	18	25	U	U	0.023	U
S-4	2'	5/24/2018	**1490**	0.06	190	450	640	U	U	0.024	0.031
S-4	3'	5/24/2018	48.2	0.25	u	6.80	7	0.093	0.006	U	0.051
Post Remediation Sampling Results											
SW-1	-	1/10/2019	41	U	2700	510	**3210**	U	U	U	U
SW-2	-	1/10/2019	21.2	U	250	530	780	U	U	U	U
SW-3	-	1/10/2019	15	U	160	350	510	U	U	U	U
SW-4	-	1/10/2019	563	U	370	170	540	U	U	U	U
SW-5	-	1/10/2019	85.1	U	82	410	492	U	U	U	U
SW-6	-	1/10/2019	24.8	U	21	33	54	U	U	U	U
S-7 @ 4'	4'	1/10/2019	197	U	48	65	113	U	U	U	U
S-8 @ 4'	4'	1/10/2019	114	U	U	U	U	U	U	U	U
S-9 @ 4'	4'	1/10/2019	U	U	U	U	U	U	U	U	U
S-10 @ 4'	4'	1/10/2019	239	U	U	U	U	U	U	U	U
SW-11	-	1/10/2019	U	U	U	4.2	4.2	U	U	U	U
SW-12	-	1/10/2019	18.2	U	26	57	83	U	U	U	U

Table 1

Summary of Soil Sample Analytical Results

Sample ID	Sample Depth	Sample Date	Parameter								
			Chloride mg/kg	TPH-GRO	TPH-DRO	TPH-ORO	Total TPH mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Total Xylene mg/kg
CAS Number			16887-00-6	PHC612	PHCG1028	PHCG2835	PHC635	71-43-2	108-88-3	100-41-4	1330-20-7
NMOCD Action Levels			600				1,000	10			
								50			
SW-13	-	1/10/2019	104	U	6.5	20.00	26.5	U	U	U	U
SW-14	-	1/10/2019	969	U	360	530	890	U	U	U	U
S-15 @ 4'	4'	1/10/2019	5.8	U	5.90	59	64.9	U	U	U	U
Post Remediation Re-Sampling Results											
SW-1	-	2/11/2019	U	U	U	9.9	9.9	U	U	U	U
SW-14	-	2/11/2019	U	U	U	U	U	U	U	U	U
SW-16	-	2/11/2019	U	U	U	12.0	12.0	U	U	U	U
SW-17	-	2/11/2019	8.35	U	U	8.7	8.7	U	U	U	U

U - Not Detected - less than Standard Detection Limit

SW - Sidewall Samples

Bold numbers exhibit concentrations above the action levels.

Site Photographs

PHOTOGRAPHIC LOG		
Percussion Petroleum	**HT 18 Federal #1** **Lea County, New Mexico**	**WSP Project #:** **31401117.005**

Photo No.	**Date**
1	January 10, 2019

Excavation of impacted soil

Photo No.	**Date**
2	January 10, 2019

Excavation of impacted soil

PHOTOGRAPHIC LOG		
Percussion Petroleum	**HT 18 Federal #1** **Lea County, New Mexico**	**WSP Project #:** **31401117.005**

Photo No.	**Date**
3	January 10, 2019

Excavation of impacted soil

Photo No.	**Date**
4	January 10, 2019

Excavation of impacted soil

PHOTOGRAPHIC LOG		
Percussion Petroleum	**HT 18 Federal #1 Lea County, New Mexico**	**WSP Project #: 31401117.005**

Photo No.	**Date**
5	February 10, 2019

Excavation of impacted soil

Photo No.	**Date**
6	February 10, 2019

Excavation of impacted soil

PHOTOGRAPHIC LOG		
Percussion Petroleum	**HT 18 Federal #1** **Lea County, New Mexico**	**WSP Project #:** **31401117.005**

Photo No.	**Date**
7	February 16, 2019

Backfill of clean soil

Photo No.	**Date**
8	February 16, 2019

Backfill of clean soil

Approved Work Plan Correspondence

Boyle, Matthew

From: Hernandez, Christina, EMNRD <Christina.Hernandez@state.nm.us>
Sent: Tuesday, August 28, 2018 1:21 PM
To: Boyle, Matthew; Yu, Olivia, EMNRD; 'Shelly Tucker'
Cc: 'Lupe Carrillo'; Harlan, Charles
Subject: RE: HT 18 Federal #1 Work Plan
Attachments: ApprovedRemediationWorkPlan1RP-5084.pdf

Dear Mr. Boyle:

Notes:

- The depth to groundwater data provided was from an NMOSE well that is too far from release location (~4 mi). Closest NMOSE well SE of release site , RA 12020 POD 1 (2.5 mi), shows gw depth at 81 ft (2013). RRAL's are adjust accordingly to 10 point criteria.
- All submitted figures and maps must be scaled.
- The vertical delineation completed for 1RP-5084 is incomplete at SP-3.

Please note that delineation for **1RP-5084** is still incomplete. NMOCD approves the proposed remediation for **1RP-5084**, however, please be advised that completion of delineation, while remediating, is considered conducted at-risk. Approval is also conditional based on the following:

1) Please be advised to excavate S3 to 4' bgs.
2) Bottom and sidewall confirmation samples from all sample locations at no greater than 50 ft. intervals.
3) At least one confirmation sidewall/edge sample location must be at the border between each different depth of excavation, for example between S-4 (2' excavation) and SP3 (4' excavation).
4) BTEX, TPH extended, and chlorides laboratory analyses for all confirmation samples.
5) Marked confirmation sample locations in relation to delineation sample locations on a scaled map.
6) Dated photo documentation of the remediation process.

Like approval from BLM required. BLM may have additional concerns or stipulations.

Thanks,

Christina Hernandez
EMNRD-OCD
Environmental Specialist
1625 N. French Drive
Hobbs, NM 88240
575-393-6161 x111
Christina.Hernandez@state.nm.us

From: Boyle, Matthew <Matthew.Boyle@wsp.com>
Sent: Thursday, August 2, 2018 12:54 PM
To: Hernandez, Christina, EMNRD <Christina.Hernandez@state.nm.us>; Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; 'Shelly Tucker' <stucker@blm.gov>
Cc: 'Lupe Carrillo' <Lupe@percussionpetroleum.com>; Harlan, Charles <Charles.Harlan@wsp.com>
Subject: HT 18 Federal #1 Work Plan

Attached is the remediation work plan for the HT 18 Federal #1 facility in Lea County. Following your approval Percussion will begin the on-site remediation. Please let me know if you have any questions or need additional information.

Thank you,

Matthew Boyle
Sr. Environmental Scientist

Phone: +1 214 561-7424
Mobile: +1 817 713 0262
Email: matthew.boyle@wsp.com
Please note I have a new email address.

WSP USA
2777 N. Stemmons Freeway, Suite 1600
Dallas, Texas 75207

wsp.com

Leggette, Brashears & Graham is now WSP.

ALS Environmental Analytical Report - Post Spill

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

June 06, 2018

Matthew Boyle
WSP Parsons Brinckerhoff
15305 N. Dallas Parkway
Suite 300
Addison, TX 75001

Work Order: **HS18051337**

Laboratory Results for: **HT 18 Fed #1**

Dear Matthew,

ALS Environmental received 12 sample(s) on May 26, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Bernadette Fini

Generated By: JUMOKE.LAWAL
Bernadette A. Fini
Project Manager

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Work Order: HS18051337

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18051337-01	S-1 1'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-02	S-1 2'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-03	S-1 3'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-04	S-2 1'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-05	S-2 2'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-06	S-2 3'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-07	S-3 1'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-08	S-3 2'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-09	S-3 3'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-10	S-4 1'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-11	S-4 2'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐
HS18051337-12	S-4 3'	Soil		24-May-2018 00:00	26-May-2018 09:30	☐

Client: WSP Parsons Brinckerhoff **CASE NARRATIVE**
Project: HT 18 Fed #1
Work Order: HS18051337

GC Semivolatiles by Method SW8015M

Batch ID: 129017

Sample ID: S-1 2' (HS18051337-02MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: S-1 2' (HS18051337-02MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

GC Volatiles by Method SW8015

Batch ID: R317297

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R317277

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R317222

Sample ID: HS18051333-03MS

- MS and MSD are for an unrelated sample

Batch ID: R317115

Sample ID: HS18051333-05MS

- MS and MSD are for an unrelated sample

WetChemistry by Method E300

Batch ID: 129028

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-1 1'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-01
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**0.081**		**0.0048**	**mg/Kg**	1	31-May-2018 04:30
Ethylbenzene	**0.031**		**0.0048**	**mg/Kg**	1	31-May-2018 04:30
m,p-Xylene	**0.018**		**0.0097**	**mg/Kg**	1	31-May-2018 04:30
o-Xylene	**0.0088**		**0.0048**	**mg/Kg**	1	31-May-2018 04:30
Toluene	**0.098**		**0.0048**	**mg/Kg**	1	31-May-2018 04:30
Xylenes, Total	**0.027**		**0.0048**	**mg/Kg**	1	31-May-2018 04:30
Surr: 1,2-Dichloroethane-d4	*99.6*		*70-126*	*%REC*	*1*	*31-May-2018 04:30*
Surr: 4-Bromofluorobenzene	*88.7*		*70-130*	*%REC*	*1*	*31-May-2018 04:30*
Surr: Dibromofluoromethane	*98.7*		*70-130*	*%REC*	*1*	*31-May-2018 04:30*
Surr: Toluene-d8	*110*		*70-130*	*%REC*	*1*	*31-May-2018 04:30*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.44**		**0.050**	**mg/Kg**	1	01-Jun-2018 15:53
Surr: 4-Bromofluorobenzene	*98.2*		*70-123*	*%REC*	*1*	*01-Jun-2018 15:53*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	**120**		**17**	**mg/Kg**	10	05-Jun-2018 05:58
TPH (Motor Oil Range)	**390**	n	**34**	**mg/Kg**	10	05-Jun-2018 05:58
Surr: 2-Fluorobiphenyl	*88.0*		*60-129*	*%REC*	*10*	*05-Jun-2018 05:58*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**51.1**		**4.99**	**mg/Kg**	1	02-Jun-2018 02:56

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-1 2'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-02
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0048	mg/Kg	1	31-May-2018 04:58
Ethylbenzene	**0.046**		**0.0048**	**mg/Kg**	1	31-May-2018 04:58
m,p-Xylene	**0.029**		**0.0097**	**mg/Kg**	1	31-May-2018 04:58
o-Xylene	ND		0.0048	mg/Kg	1	31-May-2018 04:58
Toluene	ND		0.0048	mg/Kg	1	31-May-2018 04:58
Xylenes, Total	**0.033**		**0.0048**	**mg/Kg**	1	31-May-2018 04:58
Surr: 1,2-Dichloroethane-d4	*102*		*70-126*	*%REC*	*1*	*31-May-2018 04:58*
Surr: 4-Bromofluorobenzene	*96.5*		*70-130*	*%REC*	*1*	*31-May-2018 04:58*
Surr: Dibromofluoromethane	*104*		*70-130*	*%REC*	*1*	*31-May-2018 04:58*
Surr: Toluene-d8	*99.4*		*70-130*	*%REC*	*1*	*31-May-2018 04:58*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.41**		**0.050**	**mg/Kg**	1	01-Jun-2018 16:10
Surr: 4-Bromofluorobenzene	*103*		*70-123*	*%REC*	*1*	*01-Jun-2018 16:10*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	**13**		**1.7**	**mg/Kg**	1	03-Jun-2018 08:00
TPH (Motor Oil Range)	**46**	n	**3.4**	**mg/Kg**	1	03-Jun-2018 08:00
Surr: 2-Fluorobiphenyl	*69.4*		*60-129*	*%REC*	*1*	*03-Jun-2018 08:00*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**1,210**		**24.5**	**mg/Kg**	5	02-Jun-2018 04:01

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-1 3'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-03
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**0.014**		**0.0048**	**mg/Kg**	1	31-May-2018 05:26
Ethylbenzene	**0.0093**		**0.0048**	**mg/Kg**	1	31-May-2018 05:26
m,p-Xylene	**0.0098**		**0.0096**	**mg/Kg**	1	31-May-2018 05:26
o-Xylene	ND		0.0048	mg/Kg	1	31-May-2018 05:26
Toluene	**0.029**		**0.0048**	**mg/Kg**	1	31-May-2018 05:26
Xylenes, Total	**0.014**		**0.0048**	**mg/Kg**	1	31-May-2018 05:26
Surr: 1,2-Dichloroethane-d4	*93.7*		*70-126*	*%REC*	*1*	*31-May-2018 05:26*
Surr: 4-Bromofluorobenzene	*95.3*		*70-130*	*%REC*	*1*	*31-May-2018 05:26*
Surr: Dibromofluoromethane	*98.6*		*70-130*	*%REC*	*1*	*31-May-2018 05:26*
Surr: Toluene-d8	*108*		*70-130*	*%REC*	*1*	*31-May-2018 05:26*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.084**		**0.050**	**mg/Kg**	1	01-Jun-2018 16:26
Surr: 4-Bromofluorobenzene	*107*		*70-123*	*%REC*	*1*	*01-Jun-2018 16:26*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	**150**		**8.5**	**mg/Kg**	5	05-Jun-2018 06:46
TPH (Motor Oil Range)	**290**	n	**17**	**mg/Kg**	5	05-Jun-2018 06:46
Surr: 2-Fluorobiphenyl	*112*		*60-129*	*%REC*	*5*	*05-Jun-2018 06:46*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**597**		**4.96**	**mg/Kg**	1	02-Jun-2018 04:23

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-2 1'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-04
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**0.0100**		**0.0050**	**mg/Kg**	1	31-May-2018 05:54
Ethylbenzene	**0.020**		**0.0050**	**mg/Kg**	1	31-May-2018 05:54
m,p-Xylene	**0.021**		**0.010**	**mg/Kg**	1	31-May-2018 05:54
o-Xylene	**0.0096**		**0.0050**	**mg/Kg**	1	31-May-2018 05:54
Toluene	**0.039**		**0.0050**	**mg/Kg**	1	31-May-2018 05:54
Xylenes, Total	**0.030**		**0.0050**	**mg/Kg**	1	31-May-2018 05:54
Surr: 1,2-Dichloroethane-d4	*88.7*		*70-126*	*%REC*	*1*	*31-May-2018 05:54*
Surr: 4-Bromofluorobenzene	*93.1*		*70-130*	*%REC*	*1*	*31-May-2018 05:54*
Surr: Dibromofluoromethane	*99.9*		*70-130*	*%REC*	*1*	*31-May-2018 05:54*
Surr: Toluene-d8	*110*		*70-130*	*%REC*	*1*	*31-May-2018 05:54*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.14**		**0.050**	**mg/Kg**	1	01-Jun-2018 16:43
Surr: 4-Bromofluorobenzene	*101*		*70-123*	*%REC*	*1*	*01-Jun-2018 16:43*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Jun-2018 09:35
TPH (Motor Oil Range)	**12**	n	**3.4**	**mg/Kg**	1	03-Jun-2018 09:35
Surr: 2-Fluorobiphenyl	*68.2*		*60-129*	*%REC*	*1*	*03-Jun-2018 09:35*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**28.7**		**4.99**	**mg/Kg**	1	02-Jun-2018 05:28

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-2 2'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-05
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0047	mg/Kg	1	31-May-2018 06:24
Ethylbenzene	**0.0062**		**0.0047**	**mg/Kg**	1	31-May-2018 06:24
m,p-Xylene	ND		0.0094	mg/Kg	1	31-May-2018 06:24
o-Xylene	ND		0.0047	mg/Kg	1	31-May-2018 06:24
Toluene	ND		0.0047	mg/Kg	1	31-May-2018 06:24
Xylenes, Total	ND		0.0047	mg/Kg	1	31-May-2018 06:24
Surr: 1,2-Dichloroethane-d4	*114*		*70-126*	*%REC*	*1*	*31-May-2018 06:24*
Surr: 4-Bromofluorobenzene	*92.8*		*70-130*	*%REC*	*1*	*31-May-2018 06:24*
Surr: Dibromofluoromethane	*112*		*70-130*	*%REC*	*1*	*31-May-2018 06:24*
Surr: Toluene-d8	*107*		*70-130*	*%REC*	*1*	*31-May-2018 06:24*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	ND		0.050	mg/Kg	1	01-Jun-2018 16:59
Surr: 4-Bromofluorobenzene	*102*		*70-123*	*%REC*	*1*	*01-Jun-2018 16:59*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	03-Jun-2018 09:59
TPH (Motor Oil Range)	**7.9**	n	**3.4**	**mg/Kg**	1	03-Jun-2018 09:59
Surr: 2-Fluorobiphenyl	*78.4*		*60-129*	*%REC*	*1*	*03-Jun-2018 09:59*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**88.4**		**4.93**	**mg/Kg**	1	02-Jun-2018 05:50

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-2 3'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-06
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**0.088**		**0.0048**	**mg/Kg**	1	31-May-2018 06:51
Ethylbenzene	**0.038**		**0.0048**	**mg/Kg**	1	31-May-2018 06:51
m,p-Xylene	**0.049**		**0.0096**	**mg/Kg**	1	31-May-2018 06:51
o-Xylene	**0.022**		**0.0048**	**mg/Kg**	1	31-May-2018 06:51
Toluene	**0.18**		**0.0048**	**mg/Kg**	1	31-May-2018 06:51
Xylenes, Total	**0.071**		**0.0048**	**mg/Kg**	1	31-May-2018 06:51
Surr: 1,2-Dichloroethane-d4	*94.5*		*70-126*	*%REC*	*1*	*31-May-2018 06:51*
Surr: 4-Bromofluorobenzene	*92.9*		*70-130*	*%REC*	*1*	*31-May-2018 06:51*
Surr: Dibromofluoromethane	*98.3*		*70-130*	*%REC*	*1*	*31-May-2018 06:51*
Surr: Toluene-d8	*110*		*70-130*	*%REC*	*1*	*31-May-2018 06:51*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.24**		**0.050**	**mg/Kg**	1	01-Jun-2018 17:15
Surr: 4-Bromofluorobenzene	*103*		*70-123*	*%REC*	*1*	*01-Jun-2018 17:15*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	05-Jun-2018 07:33
TPH (Motor Oil Range)	**9.5**	n	**3.4**	**mg/Kg**	1	05-Jun-2018 07:33
Surr: 2-Fluorobiphenyl	*77.2*		*60-129*	*%REC*	*1*	*05-Jun-2018 07:33*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**109**		**4.99**	**mg/Kg**	1	02-Jun-2018 06:11

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-3 1'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-07
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0050	mg/Kg	1	31-May-2018 07:30
Ethylbenzene	ND		0.0050	mg/Kg	1	31-May-2018 07:30
m,p-Xylene	ND		0.0099	mg/Kg	1	31-May-2018 07:30
o-Xylene	ND		0.0050	mg/Kg	1	31-May-2018 07:30
Toluene	**0.0094**		**0.0050**	**mg/Kg**	1	31-May-2018 07:30
Xylenes, Total	ND		0.0050	mg/Kg	1	31-May-2018 07:30
Surr: 1,2-Dichloroethane-d4	*81.8*		*70-126*	*%REC*	*1*	*31-May-2018 07:30*
Surr: 4-Bromofluorobenzene	*87.1*		*70-130*	*%REC*	*1*	*31-May-2018 07:30*
Surr: Dibromofluoromethane	*95.8*		*70-130*	*%REC*	*1*	*31-May-2018 07:30*
Surr: Toluene-d8	*109*		*70-130*	*%REC*	*1*	*31-May-2018 07:30*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	ND		0.050	mg/Kg	1	01-Jun-2018 17:32
Surr: 4-Bromofluorobenzene	*104*		*70-123*	*%REC*	*1*	*01-Jun-2018 17:32*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	**20**		**1.7**	**mg/Kg**	1	05-Jun-2018 07:57
TPH (Motor Oil Range)	**40**	n	**3.4**	**mg/Kg**	1	05-Jun-2018 07:57
Surr: 2-Fluorobiphenyl	*96.3*		*60-129*	*%REC*	*1*	*05-Jun-2018 07:57*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**1,740**		**49.8**	**mg/Kg**	10	02-Jun-2018 06:33

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-3 2'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-08
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**0.10**		**0.0048**	**mg/Kg**	1	31-May-2018 07:59
Ethylbenzene	**0.037**		**0.0048**	**mg/Kg**	1	31-May-2018 07:59
m,p-Xylene	**0.053**		**0.0096**	**mg/Kg**	1	31-May-2018 07:59
o-Xylene	**0.023**		**0.0048**	**mg/Kg**	1	31-May-2018 07:59
Toluene	**0.19**		**0.0048**	**mg/Kg**	1	31-May-2018 07:59
Xylenes, Total	**0.076**		**0.0048**	**mg/Kg**	1	31-May-2018 07:59
Surr: 1,2-Dichloroethane-d4	*104*		*70-126*	*%REC*	*1*	*31-May-2018 07:59*
Surr: 4-Bromofluorobenzene	*92.4*		*70-130*	*%REC*	*1*	*31-May-2018 07:59*
Surr: Dibromofluoromethane	*103*		*70-130*	*%REC*	*1*	*31-May-2018 07:59*
Surr: Toluene-d8	*106*		*70-130*	*%REC*	*1*	*31-May-2018 07:59*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.27**		**0.050**	**mg/Kg**	1	01-Jun-2018 18:21
Surr: 4-Bromofluorobenzene	*103*		*70-123*	*%REC*	*1*	*01-Jun-2018 18:21*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	05-Jun-2018 08:21
TPH (Motor Oil Range)	ND	n	3.4	mg/Kg	1	05-Jun-2018 08:21
Surr: 2-Fluorobiphenyl	*83.5*		*60-129*	*%REC*	*1*	*05-Jun-2018 08:21*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**152**		**4.92**	**mg/Kg**	1	02-Jun-2018 06:55

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-3 3'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-09
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0048	mg/Kg	1	02-Jun-2018 13:29
Ethylbenzene	ND		0.0048	mg/Kg	1	02-Jun-2018 13:29
m,p-Xylene	ND		0.0097	mg/Kg	1	02-Jun-2018 13:29
o-Xylene	ND		0.0048	mg/Kg	1	02-Jun-2018 13:29
Toluene	ND		0.0048	mg/Kg	1	02-Jun-2018 13:29
Xylenes, Total	ND		0.0048	mg/Kg	1	02-Jun-2018 13:29
Surr: 1,2-Dichloroethane-d4	*93.5*		*70-126*	*%REC*	*1*	*02-Jun-2018 13:29*
Surr: 4-Bromofluorobenzene	*95.7*		*70-130*	*%REC*	*1*	*02-Jun-2018 13:29*
Surr: Dibromofluoromethane	*99.0*		*70-130*	*%REC*	*1*	*02-Jun-2018 13:29*
Surr: Toluene-d8	*109*		*70-130*	*%REC*	*1*	*02-Jun-2018 13:29*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	ND		0.050	mg/Kg	1	01-Jun-2018 12:21
Surr: 4-Bromofluorobenzene	*101*		*70-123*	*%REC*	*1*	*01-Jun-2018 12:21*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	**4,100**		**850**	**mg/Kg**	500	05-Jun-2018 08:45
TPH (Motor Oil Range)	**4,400**	n	**1700**	**mg/Kg**	500	05-Jun-2018 08:45
Surr: 2-Fluorobiphenyl	*1540*	*S*	*60-129*	*%REC*	*500*	*05-Jun-2018 08:45*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**30.1**		**4.88**	**mg/Kg**	1	02-Jun-2018 07:17

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-4 1'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-10
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0048	mg/Kg	1	01-Jun-2018 06:36
Ethylbenzene	**0.023**		**0.0048**	**mg/Kg**	1	01-Jun-2018 06:36
m,p-Xylene	ND		0.0097	mg/Kg	1	01-Jun-2018 06:36
o-Xylene	ND		0.0048	mg/Kg	1	01-Jun-2018 06:36
Toluene	ND		0.0048	mg/Kg	1	01-Jun-2018 06:36
Xylenes, Total	ND		0.0048	mg/Kg	1	01-Jun-2018 06:36
Surr: 1,2-Dichloroethane-d4	*88.6*		*70-126*	*%REC*	*1*	*01-Jun-2018 06:36*
Surr: 4-Bromofluorobenzene	*90.6*		*70-130*	*%REC*	*1*	*01-Jun-2018 06:36*
Surr: Dibromofluoromethane	*93.0*		*70-130*	*%REC*	*1*	*01-Jun-2018 06:36*
Surr: Toluene-d8	*110*		*70-130*	*%REC*	*1*	*01-Jun-2018 06:36*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.30**		**0.050**	**mg/Kg**	1	01-Jun-2018 18:37
Surr: 4-Bromofluorobenzene	*104*		*70-123*	*%REC*	*1*	*01-Jun-2018 18:37*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	**6.2**		**1.7**	**mg/Kg**	1	05-Jun-2018 09:32
TPH (Motor Oil Range)	**18**	n	**3.4**	**mg/Kg**	1	05-Jun-2018 09:32
Surr: 2-Fluorobiphenyl	*75.3*		*60-129*	*%REC*	*1*	*05-Jun-2018 09:32*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**2,030**		**49.5**	**mg/Kg**	10	02-Jun-2018 07:38

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-4 2'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-11
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	01-Jun-2018 07:03
Ethylbenzene	**0.024**		**0.0049**	**mg/Kg**	1	01-Jun-2018 07:03
m,p-Xylene	**0.022**		**0.0098**	**mg/Kg**	1	01-Jun-2018 07:03
o-Xylene	**0.0083**		**0.0049**	**mg/Kg**	1	01-Jun-2018 07:03
Toluene	ND		0.0049	mg/Kg	1	01-Jun-2018 07:03
Xylenes, Total	**0.031**		**0.0049**	**mg/Kg**	1	01-Jun-2018 07:03
Surr: 1,2-Dichloroethane-d4	*90.9*		*70-126*	*%REC*	*1*	*01-Jun-2018 07:03*
Surr: 4-Bromofluorobenzene	*89.0*		*70-130*	*%REC*	*1*	*01-Jun-2018 07:03*
Surr: Dibromofluoromethane	*95.9*		*70-130*	*%REC*	*1*	*01-Jun-2018 07:03*
Surr: Toluene-d8	*107*		*70-130*	*%REC*	*1*	*01-Jun-2018 07:03*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.062**		**0.050**	**mg/Kg**	1	01-Jun-2018 18:54
Surr: 4-Bromofluorobenzene	*102*		*70-123*	*%REC*	*1*	*01-Jun-2018 18:54*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	**190**		**42**	**mg/Kg**	25	05-Jun-2018 11:07
TPH (Motor Oil Range)	**450**	n	**85**	**mg/Kg**	25	05-Jun-2018 11:07
Surr: 2-Fluorobiphenyl	*97.9*		*60-129*	*%REC*	*25*	*05-Jun-2018 11:07*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**1,490**		**49.9**	**mg/Kg**	10	02-Jun-2018 08:00

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
Sample ID: S-4 3'
Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT
WorkOrder:HS18051337
Lab ID:HS18051337-12
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**0.093**		**0.0048**	**mg/Kg**	1	02-Jun-2018 14:24
Ethylbenzene	ND		0.0048	mg/Kg	1	02-Jun-2018 14:24
m,p-Xylene	**0.028**		**0.0096**	**mg/Kg**	1	02-Jun-2018 14:24
o-Xylene	**0.023**		**0.0048**	**mg/Kg**	1	02-Jun-2018 14:24
Toluene	**0.0060**		**0.0048**	**mg/Kg**	1	02-Jun-2018 14:24
Xylenes, Total	**0.051**		**0.0048**	**mg/Kg**	1	02-Jun-2018 14:24
Surr: 1,2-Dichloroethane-d4	*91.7*		*70-126*	*%REC*	*1*	*02-Jun-2018 14:24*
Surr: 4-Bromofluorobenzene	*93.1*		*70-130*	*%REC*	*1*	*02-Jun-2018 14:24*
Surr: Dibromofluoromethane	*101*		*70-130*	*%REC*	*1*	*02-Jun-2018 14:24*
Surr: Toluene-d8	*110*		*70-130*	*%REC*	*1*	*02-Jun-2018 14:24*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.25**		**0.050**	**mg/Kg**	1	01-Jun-2018 19:10
Surr: 4-Bromofluorobenzene	*107*		*70-123*	*%REC*	*1*	*01-Jun-2018 19:10*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 01-Jun-2018		Analyst: AAP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	05-Jun-2018 11:31
TPH (Motor Oil Range)	**6.8**	n	**3.4**	**mg/Kg**	1	05-Jun-2018 11:31
Surr: 2-Fluorobiphenyl	*75.1*		*60-129*	*%REC*	*1*	*05-Jun-2018 11:31*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 01-Jun-2018		Analyst: KMU
Chloride	**48.2**		**5.00**	**mg/Kg**	1	02-Jun-2018 09:48

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

WEIGHT LOG

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

Batch ID: 2436 **Method:** VOLATILES BY SW8260C

SampID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS18051337-01	1	5.163 (g)	5 (mL)	0.97	Bulk (5030B)
HS18051337-02	1	5.152 (g)	5 (mL)	0.97	Bulk (5030B)
HS18051337-03	1	5.2 (g)	5 (mL)	0.96	Bulk (5030B)
HS18051337-04	1	4.994 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-05	1	5.304 (g)	5 (mL)	0.94	Bulk (5030B)
HS18051337-06	1	5.208 (g)	5 (mL)	0.96	Bulk (5030B)
HS18051337-07	1	5.031 (g)	5 (mL)	0.99	Bulk (5030B)
HS18051337-08	1	5.234 (g)	5 (mL)	0.96	Bulk (5030B)
HS18051337-09	1	5.135 (g)	5 (mL)	0.97	Bulk (5030B)
HS18051337-10	1	5.163 (g)	5 (mL)	0.97	Bulk (5030B)
HS18051337-11	1	5.096 (g)	5 (mL)	0.98	Bulk (5030B)
HS18051337-12	1	5.207 (g)	5 (mL)	0.96	Bulk (5030B)

Batch ID: 2442 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS18051337-01	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-02	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-03	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-04	1	4.96 (g)	5 (mL)	1.01	Bulk (5030B)
HS18051337-05	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS18051337-06	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-07	1	4.99 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-08	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS18051337-09	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-10	1	4.99 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-11	1	4.99 (g)	5 (mL)	1	Bulk (5030B)
HS18051337-12	1	5.02 (g)	5 (mL)	1	Bulk (5030B)

Batch ID: 129017 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18051337-01	1	30.06	1 (mL)	0.03327
HS18051337-02	1	30.04	1 (mL)	0.03329
HS18051337-03	1	30.08	1 (mL)	0.03324
HS18051337-04	1	30.02	1 (mL)	0.03331
HS18051337-05	1	30.06	1 (mL)	0.03327
HS18051337-06	1	30.07	1 (mL)	0.03326
HS18051337-07	1	30.05	1 (mL)	0.03328
HS18051337-08	1	30.09	1 (mL)	0.03323
HS18051337-09	1	30.04	1 (mL)	0.03329
HS18051337-10	1	30.07	1 (mL)	0.03326
HS18051337-11	1	30.09	1 (mL)	0.03323
HS18051337-12	1	30.02	1 (mL)	0.03331

WEIGHT LOG

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

Batch ID: 129028 **Method:** ANIONS BY E300.0 **Prep:** 300_S_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18051337-01	1	5.009	50 (mL)	9.982
HS18051337-02	1	5.0918	50 (mL)	9.82
HS18051337-03	1	5.0424	50 (mL)	9.916
HS18051337-04	1	5.0115	50 (mL)	9.977
HS18051337-05	1	5.0708	50 (mL)	9.86
HS18051337-06	1	5.0061	50 (mL)	9.988
HS18051337-07	1	5.0226	50 (mL)	9.955
HS18051337-08	1	5.0862	50 (mL)	9.831
HS18051337-09	1	5.1215	50 (mL)	9.763
HS18051337-10	1	5.0512	50 (mL)	9.899
HS18051337-11	1	5.0105	50 (mL)	9.979
HS18051337-12	1	5.0018	50 (mL)	9.996

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 129017	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS18051337-01	S-1 1'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 05:58	10
HS18051337-02	S-1 2'	24 May 2018 00:00		01 Jun 2018 11:00	03 Jun 2018 08:00	1
HS18051337-03	S-1 3'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 06:46	5
HS18051337-04	S-2 1'	24 May 2018 00:00		01 Jun 2018 11:00	03 Jun 2018 09:35	1
HS18051337-05	S-2 2'	24 May 2018 00:00		01 Jun 2018 11:00	03 Jun 2018 09:59	1
HS18051337-06	S-2 3'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 07:33	1
HS18051337-07	S-3 1'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 07:57	1
HS18051337-08	S-3 2'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 08:21	1
HS18051337-09	S-3 3'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 08:45	500
HS18051337-10	S-4 1'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 09:32	1
HS18051337-11	S-4 2'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 11:07	25
HS18051337-12	S-4 3'	24 May 2018 00:00		01 Jun 2018 11:00	05 Jun 2018 11:31	1
Batch ID 129028	**Test Name :** ANIONS BY E300.0			**Matrix:** Soil		
HS18051337-01	S-1 1'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 02:56	1
HS18051337-02	S-1 2'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 04:01	5
HS18051337-03	S-1 3'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 04:23	1
HS18051337-04	S-2 1'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 05:28	1
HS18051337-05	S-2 2'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 05:50	1
HS18051337-06	S-2 3'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 06:11	1
HS18051337-07	S-3 1'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 06:33	10
HS18051337-08	S-3 2'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 06:55	1
HS18051337-09	S-3 3'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 07:17	1
HS18051337-10	S-4 1'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 07:38	10
HS18051337-11	S-4 2'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 08:00	10
HS18051337-12	S-4 3'	24 May 2018 00:00		01 Jun 2018 11:00	02 Jun 2018 09:48	1
Batch ID R317115	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18051337-01	S-1 1'	24 May 2018 00:00			31 May 2018 04:30	1
HS18051337-02	S-1 2'	24 May 2018 00:00			31 May 2018 04:58	1
HS18051337-03	S-1 3'	24 May 2018 00:00			31 May 2018 05:26	1
HS18051337-04	S-2 1'	24 May 2018 00:00			31 May 2018 05:54	1
HS18051337-05	S-2 2'	24 May 2018 00:00			31 May 2018 06:24	1
HS18051337-06	S-2 3'	24 May 2018 00:00			31 May 2018 06:51	1
HS18051337-07	S-3 1'	24 May 2018 00:00			31 May 2018 07:30	1
HS18051337-08	S-3 2'	24 May 2018 00:00			31 May 2018 07:59	1
Batch ID R317222	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18051337-10	S-4 1'	24 May 2018 00:00			01 Jun 2018 06:36	1
HS18051337-11	S-4 2'	24 May 2018 00:00			01 Jun 2018 07:03	1

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R317277	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18051337-09	S-3 3'	24 May 2018 00:00			02 Jun 2018 13:29	1
HS18051337-12	S-4 3'	24 May 2018 00:00			02 Jun 2018 14:24	1
Batch ID R317297	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS18051337-01	S-1 1'	24 May 2018 00:00			01 Jun 2018 15:53	1
HS18051337-02	S-1 2'	24 May 2018 00:00			01 Jun 2018 16:10	1
HS18051337-03	S-1 3'	24 May 2018 00:00			01 Jun 2018 16:26	1
HS18051337-04	S-2 1'	24 May 2018 00:00			01 Jun 2018 16:43	1
HS18051337-05	S-2 2'	24 May 2018 00:00			01 Jun 2018 16:59	1
HS18051337-06	S-2 3'	24 May 2018 00:00			01 Jun 2018 17:15	1
HS18051337-07	S-3 1'	24 May 2018 00:00			01 Jun 2018 17:32	1
HS18051337-08	S-3 2'	24 May 2018 00:00			01 Jun 2018 18:21	1
HS18051337-09	S-3 3'	24 May 2018 00:00			01 Jun 2018 12:21	1
HS18051337-10	S-4 1'	24 May 2018 00:00			01 Jun 2018 18:37	1
HS18051337-11	S-4 2'	24 May 2018 00:00			01 Jun 2018 18:54	1
HS18051337-12	S-4 3'	24 May 2018 00:00			01 Jun 2018 19:10	1

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: 129017 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-129017** Units: **mg/Kg** Analysis Date: **03-Jun-2018 06:49**
Client ID: Run ID: **FID-7_317513** SeqNo: **4589879** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	ND	1.7								
TPH (Motor Oil Range)	ND	3.4								
Surr: 2-Fluorobiphenyl	*2.465*	*0.10*	*3.33*	*0*	*74.0*	*70 - 130*				

LCS Sample ID: **LCS-129017** Units: **mg/Kg** Analysis Date: **03-Jun-2018 07:13**
Client ID: Run ID: **FID-7_317513** SeqNo: **4589880** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	30.22	1.7	33.33	0	90.7	70 - 130				
TPH (Motor Oil Range)	37.48	3.4	33.33	0	112	70 - 130				
Surr: 2-Fluorobiphenyl	*2.944*	*0.10*	*3.33*	*0*	*88.4*	*70 - 130*				

MS Sample ID: **HS18051337-02MS** Units: **mg/Kg** Analysis Date: **03-Jun-2018 08:24**
Client ID: **S-1 2'** Run ID: **FID-7_317513** SeqNo: **4589882** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	42.11	1.7	33.23	12.6	88.8	70 - 130				
TPH (Motor Oil Range)	66.35	3.4	33.23	45.52	62.7	70 - 130				S
Surr: 2-Fluorobiphenyl	*2.798*	*0.10*	*3.32*	*0*	*84.3*	*60 - 129*				

MSD Sample ID: **HS18051337-02MSD** Units: **mg/Kg** Analysis Date: **03-Jun-2018 08:48**
Client ID: **S-1 2'** Run ID: **FID-7_317513** SeqNo: **4589883** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	40.55	1.7	33.3	12.6	84.0	70 - 130	42.11	3.77	30	
TPH (Motor Oil Range)	66.74	3.4	33.3	45.52	63.7	70 - 130	66.35	0.59	30	SE
Surr: 2-Fluorobiphenyl	*2.996*	*0.10*	*3.327*	*0*	*90.1*	*60 - 129*	*2.798*	*6.84*	*30*	

The following samples were analyzed in this batch:

HS18051337-01	HS18051337-02	HS18051337-03	HS18051337-04
HS18051337-05	HS18051337-06	HS18051337-07	HS18051337-08
HS18051337-09	HS18051337-10	HS18051337-11	HS18051337-12

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: R317297 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **GMBLK-180601** Units: **mg/Kg** Analysis Date: **01-Jun-2018 12:05**
Client ID: Run ID: **FID-14_317297** SeqNo: **4584881** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.09287*	*0.0050*	*0.1*	*0*	*92.9*	*75 - 121*				

LCS Sample ID: **GLCS-180601** Units: **mg/Kg** Analysis Date: **01-Jun-2018 11:32**
Client ID: Run ID: **FID-14_317297** SeqNo: **4584880** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.093	0.050	1	0	109	72 - 121				
Surr: 4-Bromofluorobenzene	*0.08601*	*0.0050*	*0.1*	*0*	*86.0*	*75 - 121*				

MS Sample ID: **HS18051337-09MS** Units: **mg/Kg** Analysis Date: **01-Jun-2018 12:37**
Client ID: **S-3 3'** Run ID: **FID-14_317297** SeqNo: **4584883** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.7579	0.050	1	0	75.8	70 - 130				
Surr: 4-Bromofluorobenzene	*0.07328*	*0.0050*	*0.1*	*0*	*73.3*	*70 - 123*				

MS Sample ID: **HS18051337-09MS** Units: **mg/Kg** Analysis Date: **01-Jun-2018 12:54**
Client ID: **S-3 3'** Run ID: **FID-14_317297** SeqNo: **4584884** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8114	0.050	1	0	81.1	70 - 130				
Surr: 4-Bromofluorobenzene	*0.07527*	*0.0050*	*0.1*	*0*	*75.3*	*70 - 123*				

The following samples were analyzed in this batch:

HS18051337-01	HS18051337-02	HS18051337-03	HS18051337-04
HS18051337-05	HS18051337-06	HS18051337-07	HS18051337-08
HS18051337-09	HS18051337-10	HS18051337-11	HS18051337-12

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: R317115 **Instrument: VOA8** **Method: SW8260**

MBLK Sample ID: **VBLKS2-053018** Units: **ug/Kg** Analysis Date: **31-May-2018 00:25**
Client ID: Run ID: **VOA8_317115** SeqNo: **4580653** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*50.41*	*0*	*50*	*0*	*101*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*54.34*	*0*	*50*	*0*	*109*	*83 - 120*				
Surr: Dibromofluoromethane	*49.9*	*0*	*50*	*0*	*99.8*	*80 - 119*				
Surr: Toluene-d8	*54.04*	*0*	*50*	*0*	*108*	*81 - 118*				

LCS Sample ID: **VLCSS2-053018** Units: **ug/Kg** Analysis Date: **30-May-2018 23:31**
Client ID: Run ID: **VOA8_317115** SeqNo: **4580652** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.41	5.0	50	0	96.8	75 - 124				
Ethylbenzene	50.25	5.0	50	0	100	70 - 123				
m,p-Xylene	99.18	10	100	0	99.2	77 - 125				
o-Xylene	49.64	5.0	50	0	99.3	78 - 122				
Toluene	49.05	5.0	50	0	98.1	76 - 122				
Xylenes, Total	148.8	5.0	150	0	99.2	77 - 128				
Surr: 1,2-Dichloroethane-d4	*53.85*	*0*	*50*	*0*	*108*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.68*	*0*	*50*	*0*	*101*	*83 - 120*				
Surr: Dibromofluoromethane	*52.1*	*0*	*50*	*0*	*104*	*80 - 119*				
Surr: Toluene-d8	*49.86*	*0*	*50*	*0*	*99.7*	*81 - 118*				

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: R317115 **Instrument: VOA8** **Method: SW8260**

MS Sample ID: **HS18051333-05MS** Units: **ug/Kg** Analysis Date: **31-May-2018 03:36**
Client ID: Run ID: **VOA8_317115** SeqNo: **4580660** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	37.64	4.9	49	2.628	71.4	70 - 130				
Ethylbenzene	32.63	4.9	49	1.444	63.6	70 - 130				S
m,p-Xylene	111.7	9.8	98	53.5	59.4	70 - 130				S
o-Xylene	60.24	4.9	49	34.19	53.2	70 - 130				S
Toluene	39.62	4.9	49	6.207	68.2	70 - 130				S
Xylenes, Total	172	4.9	147	87.69	57.3	70 - 130				S
Surr: 1,2-Dichloroethane-d4	*51.52*	*0*	*49*	*0*	*105*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*48.3*	*0*	*49*	*0*	*98.6*	*70 - 130*				
Surr: Dibromofluoromethane	*51.8*	*0*	*49*	*0*	*106*	*70 - 130*				
Surr: Toluene-d8	*50.79*	*0*	*49*	*0*	*104*	*70 - 130*				

MSD Sample ID: **HS18051333-05MSD** Units: **ug/Kg** Analysis Date: **31-May-2018 04:04**
Client ID: Run ID: **VOA8_317115** SeqNo: **4580661** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	37.89	4.9	49	2.628	72.0	70 - 130	37.64	0.657	30	
Ethylbenzene	36.32	4.9	49	1.444	71.2	70 - 130	32.63	10.7	30	
m,p-Xylene	103.6	9.8	98	53.5	51.1	70 - 130	111.7	7.56	30	S
o-Xylene	54.44	4.9	49	34.19	41.3	70 - 130	60.24	10.1	30	S
Toluene	41.93	4.9	49	6.207	72.9	70 - 130	39.62	5.65	30	
Xylenes, Total	158	4.9	147	87.69	47.8	70 - 130	172	8.45	30	S
Surr: 1,2-Dichloroethane-d4	*50.07*	*0*	*49*	*0*	*102*	*70 - 126*	*51.52*	*2.84*	*30*	
Surr: 4-Bromofluorobenzene	*49.3*	*0*	*49*	*0*	*101*	*70 - 130*	*48.3*	*2.06*	*30*	
Surr: Dibromofluoromethane	*50.98*	*0*	*49*	*0*	*104*	*70 - 130*	*51.8*	*1.6*	*30*	
Surr: Toluene-d8	*52.3*	*0*	*49*	*0*	*107*	*70 - 130*	*50.79*	*2.92*	*30*	

The following samples were analyzed in this batch:

HS18051337-01	HS18051337-02	HS18051337-03	HS18051337-04
HS18051337-05	HS18051337-06	HS18051337-07	HS18051337-08

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: R317222 **Instrument: VOA8** **Method: SW8260**

MBLK Sample ID: **VBLKS2-053118** Units: **ug/Kg** Analysis Date: **01-Jun-2018 02:55**
Client ID: Run ID: **VOA8_317222** SeqNo: **4582987** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*46.35*	*0*	*50*	*0*	*92.7*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.65*	*0*	*50*	*0*	*101*	*83 - 120*				
Surr: Dibromofluoromethane	*50.25*	*0*	*50*	*0*	*101*	*80 - 119*				
Surr: Toluene-d8	*55.33*	*0*	*50*	*0*	*111*	*81 - 118*				

LCS Sample ID: **VLCSS2-053118** Units: **ug/Kg** Analysis Date: **01-Jun-2018 01:06**
Client ID: Run ID: **VOA8_317222** SeqNo: **4582985** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.19	5.0	50	0	92.4	75 - 124				
Ethylbenzene	49.65	5.0	50	0	99.3	70 - 123				
m,p-Xylene	100.3	10	100	0	100	77 - 125				
o-Xylene	48.88	5.0	50	0	97.8	78 - 122				
Toluene	49.16	5.0	50	0	98.3	76 - 122				
Xylenes, Total	149.2	5.0	150	0	99.4	77 - 128				
Surr: 1,2-Dichloroethane-d4	*52.47*	*0*	*50*	*0*	*105*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.58*	*0*	*50*	*0*	*99.2*	*83 - 120*				
Surr: Dibromofluoromethane	*52.78*	*0*	*50*	*0*	*106*	*80 - 119*				
Surr: Toluene-d8	*51.53*	*0*	*50*	*0*	*103*	*81 - 118*				

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: R317222 **Instrument: VOA8** **Method: SW8260**

LCSD Sample ID: **VLCSDS2-053118** Units: **ug/Kg** Analysis Date: **01-Jun-2018 02:01**
Client ID: Run ID: **VOA8_317222** SeqNo: **4582986** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	49.87	5.0	50	0	99.7	75 - 124	46.19	7.65	20	
Ethylbenzene	54.26	5.0	50	0	109	70 - 123	49.65	8.87	20	
m,p-Xylene	109.1	10	100	0	109	77 - 125	100.3	8.43	20	
o-Xylene	53.04	5.0	50	0	106	78 - 122	48.88	8.17	20	
Toluene	53.91	5.0	50	0	108	76 - 122	49.16	9.22	20	
Xylenes, Total	162.1	5.0	150	0	108	77 - 128	149.2	8.34	20	
Surr: 1,2-Dichloroethane-d4	*52.38*	*0*	*50*	*0*	*105*	*76 - 125*	*52.47*	*0.178*	*20*	
Surr: 4-Bromofluorobenzene	*48.85*	*0*	*50*	*0*	*97.7*	*83 - 120*	*49.58*	*1.48*	*20*	
Surr: Dibromofluoromethane	*52.45*	*0*	*50*	*0*	*105*	*80 - 119*	*52.78*	*0.633*	*20*	
Surr: Toluene-d8	*52.11*	*0*	*50*	*0*	*104*	*81 - 118*	*51.53*	*1.12*	*20*	

MS Sample ID: **HS18051333-03MS** Units: **ug/Kg** Analysis Date: **01-Jun-2018 05:15**
Client ID: Run ID: **VOA8_317222** SeqNo: **4582991** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	149.9	5.0	50	250.8	-202	70 - 130				SO
Ethylbenzene	1316	5.0	50	1289	53.5	70 - 130				SEO
m,p-Xylene	1696	10	100	1634	62.8	70 - 130				SEO
o-Xylene	521.6	5.0	50	495.8	51.6	70 - 130				SEO
Toluene	1332	5.0	50	150.7	2360	70 - 130				SE
Xylenes, Total	2218	5.0	150	2129	59.0	70 - 130				SEO
Surr: 1,2-Dichloroethane-d4	*49.82*	*0*	*50*	*0*	*99.6*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*52.63*	*0*	*50*	*0*	*105*	*70 - 130*				
Surr: Dibromofluoromethane	*51.74*	*0*	*50*	*0*	*103*	*70 - 130*				
Surr: Toluene-d8	*53.36*	*0*	*50*	*0*	*107*	*70 - 130*				

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: R317222 **Instrument: VOA8** **Method: SW8260**

MSD Sample ID: **HS18051333-03MSD** Units: **ug/Kg** Analysis Date: **01-Jun-2018 05:43**
Client ID: Run ID: **VOA8_317222** SeqNo: **4582992** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	103	4.9	49	250.8	-302	70 - 130	149.9	37.1	30	SRO
Ethylbenzene	899.2	4.9	49	1289	-796	70 - 130	1316	37.6	30	SREO
m,p-Xylene	1188	9.8	98	1634	-455	70 - 130	1696	35.3	30	SREO
o-Xylene	368.3	4.9	49	495.8	-260	70 - 130	521.6	34.4	30	SREO
Toluene	1114	4.9	49	150.7	1970	70 - 130	1332	17.9	30	SE
Xylenes, Total	1556	4.9	147	2129	-390	70 - 130	2218	35.1	30	SREO
Surr: 1,2-Dichloroethane-d4	*52.73*	*0*	*49*	*0*	*108*	*70 - 126*	*49.82*	*5.66*	*30*	
Surr: 4-Bromofluorobenzene	*50.14*	*0*	*49*	*0*	*102*	*70 - 130*	*52.63*	*4.84*	*30*	
Surr: Dibromofluoromethane	*51.07*	*0*	*49*	*0*	*104*	*70 - 130*	*51.74*	*1.3*	*30*	
Surr: Toluene-d8	*52.59*	*0*	*49*	*0*	*107*	*70 - 130*	*53.36*	*1.45*	*30*	

The following samples were analyzed in this batch: HS18051337-10 HS18051337-11

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: R317277 **Instrument: VOA8** **Method: SW8260**

MBLK Sample ID: **VBLKS1-060218** Units: **ug/Kg** Analysis Date: **02-Jun-2018 11:10**
Client ID: Run ID: **VOA8_317277** SeqNo: **4584440** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*45.55*	*0*	*50*	*0*	*91.1*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.03*	*0*	*50*	*0*	*100*	*83 - 120*				
Surr: Dibromofluoromethane	*49.14*	*0*	*50*	*0*	*98.3*	*80 - 119*				
Surr: Toluene-d8	*55*	*0*	*50*	*0*	*110*	*81 - 118*				

LCS Sample ID: **VLCSS1-060218** Units: **ug/Kg** Analysis Date: **02-Jun-2018 10:13**
Client ID: Run ID: **VOA8_317277** SeqNo: **4584439** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.47	5.0	50	0	96.9	75 - 124				
Ethylbenzene	53.8	5.0	50	0	108	70 - 123				
m,p-Xylene	107.1	10	100	0	107	77 - 125				
o-Xylene	52.11	5.0	50	0	104	78 - 122				
Toluene	53.21	5.0	50	0	106	76 - 122				
Xylenes, Total	159.2	5.0	150	0	106	77 - 128				
Surr: 1,2-Dichloroethane-d4	*51.46*	*0*	*50*	*0*	*103*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.06*	*0*	*50*	*0*	*98.1*	*83 - 120*				
Surr: Dibromofluoromethane	*51.88*	*0*	*50*	*0*	*104*	*80 - 119*				
Surr: Toluene-d8	*52.07*	*0*	*50*	*0*	*104*	*81 - 118*				

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: R317277 **Instrument: VOA8** **Method: SW8260**

MS Sample ID: **HS18051337-09MS** Units: **ug/Kg** Analysis Date: **02-Jun-2018 14:52**
Client ID: **S-3 3'** Run ID: **VOA8_317277** SeqNo: **4584448** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	48.55	5.0	49.5	0	98.1	70 - 130				
Ethylbenzene	55.14	5.0	49.5	1.333	109	70 - 130				
m,p-Xylene	107.8	9.9	99	2.092	107	70 - 130				
o-Xylene	53.36	5.0	49.5	1.007	106	70 - 130				
Toluene	55.6	5.0	49.5	2.625	107	70 - 130				
Xylenes, Total	161.1	5.0	148.5	3.098	106	70 - 130				
Surr: 1,2-Dichloroethane-d4	*50.26*	*0*	*49.5*	*0*	*102*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.55*	*0*	*49.5*	*0*	*100*	*70 - 130*				
Surr: Dibromofluoromethane	*50.56*	*0*	*49.5*	*0*	*102*	*70 - 130*				
Surr: Toluene-d8	*51.97*	*0*	*49.5*	*0*	*105*	*70 - 130*				

MSD Sample ID: **HS18051337-09MSD** Units: **ug/Kg** Analysis Date: **02-Jun-2018 15:20**
Client ID: **S-3 3'** Run ID: **VOA8_317277** SeqNo: **4584449** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	51.58	5.0	49.5	0	104	70 - 130	48.55	6.05	30	
Ethylbenzene	53.92	5.0	49.5	1.333	106	70 - 130	55.14	2.23	30	
m,p-Xylene	106.2	9.9	99	2.092	105	70 - 130	107.8	1.42	30	
o-Xylene	52.38	5.0	49.5	1.007	104	70 - 130	53.36	1.84	30	
Toluene	54.7	5.0	49.5	2.625	105	70 - 130	55.6	1.63	30	
Xylenes, Total	158.6	5.0	148.5	3.098	105	70 - 130	161.1	1.56	30	
Surr: 1,2-Dichloroethane-d4	*51.55*	*0*	*49.5*	*0*	*104*	*70 - 126*	*50.26*	*2.53*	*30*	
Surr: 4-Bromofluorobenzene	*49.11*	*0*	*49.5*	*0*	*99.2*	*70 - 130*	*49.55*	*0.881*	*30*	
Surr: Dibromofluoromethane	*51.56*	*0*	*49.5*	*0*	*104*	*70 - 130*	*50.56*	*1.96*	*30*	
Surr: Toluene-d8	*51.09*	*0*	*49.5*	*0*	*103*	*70 - 130*	*51.97*	*1.7*	*30*	

The following samples were analyzed in this batch: HS18051337-09 HS18051337-12

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: 129028 **Instrument: ICS3K2** **Method: E300**

MBLK Sample ID: **MBLK-129028** Units: **mg/Kg** Analysis Date: **02-Jun-2018 01:29**
Client ID: Run ID: **ICS3K2_317410** SeqNo: **4587484** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	5.00								

LCS Sample ID: **LCS-129028** Units: **mg/Kg** Analysis Date: **02-Jun-2018 02:13**
Client ID: Run ID: **ICS3K2_317410** SeqNo: **4587485** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	203.7	5.00	200	0	102	90 - 110				

LCSD Sample ID: **LCSD-129028** Units: **mg/Kg** Analysis Date: **02-Jun-2018 02:34**
Client ID: Run ID: **ICS3K2_317410** SeqNo: **4587486** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	204	5.00	200	0	102	90 - 110	203.7	0.152	20	

MS Sample ID: **HS18051337-11MS** Units: **mg/Kg** Analysis Date: **02-Jun-2018 08:22**
Client ID: **S-4 2'** Run ID: **ICS3K2_317410** SeqNo: **4587502** PrepDate: **01-Jun-2018** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2418	49.7	994.2	1488	93.6	75 - 125				

MS Sample ID: **HS18051337-01MS** Units: **mg/Kg** Analysis Date: **02-Jun-2018 03:18**
Client ID: **S-1 1'** Run ID: **ICS3K2_317410** SeqNo: **4587488** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	154.8	4.98	99.66	51.12	104	75 - 125				

MSD Sample ID: **HS18051337-11MSD** Units: **mg/Kg** Analysis Date: **02-Jun-2018 08:43**
Client ID: **S-4 2'** Run ID: **ICS3K2_317410** SeqNo: **4587503** PrepDate: **01-Jun-2018** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2289	49.9	998.8	1488	80.2	75 - 125	2418	5.51	20	

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: HS18051337

QC BATCH REPORT

Batch ID: 129028 **Instrument: ICS3K2** **Method: E300**

MSD Sample ID: **HS18051337-01MSD** Units: **mg/Kg** Analysis Date: **02-Jun-2018 03:40**
Client ID: **S-1 1'** Run ID: **ICS3K2_317410** SeqNo: **4587489** PrepDate: **01-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	154.2	4.99	99.88	51.12	103	75 - 125	154.8	0.381	20	

The following samples were analyzed in this batch:

HS18051337-01	HS18051337-02	HS18051337-03	HS18051337-04
HS18051337-05	HS18051337-06	HS18051337-07	HS18051337-08
HS18051337-09	HS18051337-10	HS18051337-11	HS18051337-12

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

Client: WSP Parsons Brinckerhoff
Project: HT 18 Fed #1
WorkOrder: **HS18051337**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
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/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/Kg	Milligrams per Kilogram

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919 2016-2018	31-Jul-2018
Oklahoma	2017-088	31-Aug-2018
North Carolina	624-2018	31-Dec-2018
Louisiana	03087 2017-2018	30-Jun-2018
Arkansas	88-0356	27-Mar-2019
Kansas	E-10352 2017-218	31-Jul-2018
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193	30-Apr-2019

Sample Receipt Checklist

Client Name: LBG Addison Texas
Work Order: HS18051337
Date/Time Received: **26-May-2018 09:30**
Received by: **JRM**

Checklist completed by: *Paresh M. Giga* eSignature 29-May-2018 Date
Reviewed by: *Bernadette A. Fini* eSignature 29-May-2018 Date

Matrices: **Soil**
Carrier name: **Greyhound**

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 ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☑	N/A ☐
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☑	
Temperature(s)/Thermometer(s):	2.1c/1.6c U/C	IR11	
Cooler(s)/Kit(s):	Brown		
Date/Time sample(s) sent to storage:	5/26/18 13:00		
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: No sampling times on COC & jar labels

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ALS Environmental
Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 2

COC ID: 21755

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HT 18 Fed #1	A	TPH 8015 DRO GRO MRO
Work Order		Project Number		B	BTEX 8260 or 8021
Company Name	WSP USA Inc	Bill To Company		C	Chloride 300
Send Report To	Matthew Boyle	Invoice Attn	Same	D	
Address	2777 N Stemmons Suite 1600	Address		E	
				F	
City/State/Zip	Dallas TX 75207	City/State/Zip		G	
Phone	817 213 0262	Phone		H	
Fax		Fax		I	
e-Mail Address	Matthew.Boyle@wsp.com	e-Mail Address		J	

HS18051337
WSP Parsons Brinckerhoff
HT 18 Fed #1

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-1 1'	5-24-18		Soil	Ice	2	✓	✓	✓								
2	S-1 2'																
3	S-1 3'																
4	S-2 1'																
5	S-2 2'																
6	S-2 3'																
7	S-3 1'																
8	S-3 2'																
9	S-3 3'																
10	S-4 1'																

Sampler(s) Please Print & Sign: Matt Boyle Matthew Boyle
Shipment Method: FedEx
Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other
Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Matthew Boyle	5-25-18	7:30	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	5/26/18	09:30	S. Makowski
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp
	uC
Blank	2.1
	uC
	OF-0.5

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental

+1 513 733 5336 Everett, WA +1 425 356 2600
+1 970 490 1511 Holland, MI +1 616 399 6070
+1 281 530 5656 Houston, TX
+1 610 948 4903 Spring City, PA
+1 304 356 3168 South Charleston
+1 717 944 5541 Middletown, PA
+1 801 266 7700 Salt Lake City, UT
+1 717 505 5280 York, PA

Chain of Custody Form

COC ID: 21757

ALS Project Manager:		ALS Work Order #:	

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	HT 18 Fed #1	A	TPH 8015 DRO GRO MRO
Work Order		Project Number	Same	B	BTEX 8021 or 8260
Company Name	Lost USA Inc.	Bill To Company		C	Chlorides 300
Send Report To	Matthew Beyle	Invoice Attn		D	
Address	2777 N Stemmons Suite 1600	Address		E	
				F	
City/State/Zip	Dallas TX 75207	City/State/Zip		G	
Phone	817 7150262	Phone		H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

HS18051337

WSP Parsons Brinckerhoff

HT 18 Fed #1

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-4 2'	5-24-18		Soil	ICE	2											
2	S-4 3'	5-24-18		Soil	ICE	2											
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Matthew Beyle

Shipment Method: Fed Ex

Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Matthew Beyle	5-25-18	7:30	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	5/26/18	09:30	J. Maiorano
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

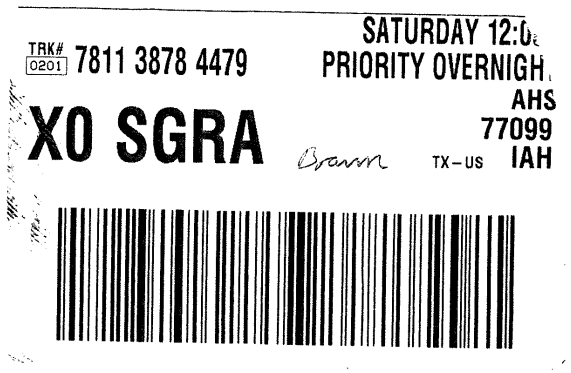
Cooler ID	Cooler Temp
	UC
Brown	2-1
	ICE
	CF-0.5

QC Package: (Check One Box Below)

☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.



ALS Environmental Analytical Report - First Remediation

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

January 17, 2019

Matthew Boyle
WSP Environment & Energy
2777 N. Stemmons Fwy. Suite 1600
Dallas, TX 75207

Work Order: **HS19010608**

Laboratory Results for: **HT-18**

Dear Matthew,

ALS Environmental received 15 sample(s) on Jan 15, 2019 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Bernadette A. Fini
Project Manager

Client: WSP Environment & Energy
Project: HT-18
Work Order: HS19010608

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19010608-01	SW-1	Soil		10-Jan-2019 14:00	15-Jan-2019 08:50	☐
HS19010608-02	SW-2	Soil		10-Jan-2019 14:05	15-Jan-2019 08:50	☐
HS19010608-03	SW-3	Soil		10-Jan-2019 14:10	15-Jan-2019 08:50	☐
HS19010608-04	SW-4	Soil		10-Jan-2019 14:15	15-Jan-2019 08:50	☐
HS19010608-05	SW-5	Soil		10-Jan-2019 14:20	15-Jan-2019 08:50	☐
HS19010608-06	SW-6	Soil		10-Jan-2019 14:25	15-Jan-2019 08:50	☐
HS19010608-07	S-7 @ 4'	Soil		10-Jan-2019 14:30	15-Jan-2019 08:50	☐
HS19010608-08	S-8 @ 4'	Soil		10-Jan-2019 14:35	15-Jan-2019 08:50	☐
HS19010608-09	S-9 @ 4'	Soil		10-Jan-2019 14:45	15-Jan-2019 08:50	☐
HS19010608-10	S-10 @ 4'	Soil		10-Jan-2019 14:50	15-Jan-2019 08:50	☐
HS19010608-11	SW-11	Soil		10-Jan-2019 14:55	15-Jan-2019 08:50	☐
HS19010608-12	SW-12	Soil		10-Jan-2019 15:00	15-Jan-2019 08:50	☐
HS19010608-13	SW-13	Soil		10-Jan-2019 15:05	15-Jan-2019 08:50	☐
HS19010608-14	SW-14	Soil		10-Jan-2019 15:10	15-Jan-2019 08:50	☐
HS19010608-15	S-15 @ 4'	Soil		10-Jan-2019 15:15	15-Jan-2019 08:50	☐

Client: WSP Environment & Energy **CASE NARRATIVE**
Project: HT-18
Work Order: HS19010608

GC Semivolatiles by Method SW8015M

Batch ID: 136635

Sample ID: SW-1 (HS19010608-01)

- The surrogate recovered above the control limit due to sample dilution

Batch ID: 136680

Sample ID: S-15 @ 4' (HS19010608-15MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: S-15 @ 4' (HS19010608-15MSD)

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Sample ID: SW-14 (HS19010608-14)

- The surrogate recovered above the control limit due to sample dilution

GC Volatiles by Method SW8015

Batch ID: R331094

Sample ID: S-15 @ 4' (HS19010608-15)

- One or more surrogate recoveries were above the upper control limits. No target analytes were detected in the sample. The high surrogate recoveries did not impact the non-detect results for target analytes.

Sample ID: S-15 @ 4' (HS19010608-15MS)

- Surrogate recoveries were outside of the control limits due to matrix interference.

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: S-15 @ 4' (HS19010608-15MSD)

- Surrogate recoveries were outside of the control limits due to matrix interference.

- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

Sample ID: SW-13 (HS19010608-13)

- One or more surrogate recoveries were above the upper control limits. No target analytes were detected in the sample. The high surrogate recoveries did not impact the non-detect results for target analytes.

Sample ID: SW-14 (HS19010608-14)

- One or more surrogate recoveries were above the upper control limits. No target analytes were detected in the sample. The high surrogate recoveries did not impact the non-detect results for target analytes.

Sample ID: SW-3 (HS19010608-03)

- One or more surrogate recoveries were above the upper control limits. No target analytes were detected in the sample. The high surrogate recoveries did not impact the non-detect results for target analytes.

Sample ID: SW-4 (HS19010608-04)

Client: WSP Environment & Energy **CASE NARRATIVE**
Project: HT-18
Work Order: HS19010608

GC Volatiles by Method SW8015

Batch ID: R331094

- One or more surrogate recoveries were above the upper control limits. No target analytes were detected in the sample. The high surrogate recoveries did not impact the non-detect results for target analytes.

GCMS Volatiles by Method SW8260

Batch ID: R331087,R331163

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R331152

Sample ID: HS19010154-11MS

- MS is for an unrelated sample

WetChemistry by Method E300

Batch ID: 136620,136621

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-1
Collection Date: 10-Jan-2019 14:00

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-01
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0050	mg/Kg	1	16-Jan-2019 07:22
Ethylbenzene	ND		0.0050	mg/Kg	1	16-Jan-2019 07:22
m,p-Xylene	ND		0.0099	mg/Kg	1	16-Jan-2019 07:22
o-Xylene	ND		0.0050	mg/Kg	1	16-Jan-2019 07:22
Toluene	ND		0.0050	mg/Kg	1	16-Jan-2019 07:22
Xylenes, Total	ND		0.0050	mg/Kg	1	16-Jan-2019 07:22
Surr: 1,2-Dichloroethane-d4	*86.4*		*70-126*	*%REC*	*1*	*16-Jan-2019 07:22*
Surr: 4-Bromofluorobenzene	*91.2*		*70-130*	*%REC*	*1*	*16-Jan-2019 07:22*
Surr: Dibromofluoromethane	*88.9*		*70-130*	*%REC*	*1*	*16-Jan-2019 07:22*
Surr: Toluene-d8	*90.8*		*70-130*	*%REC*	*1*	*16-Jan-2019 07:22*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.049	mg/Kg	1	16-Jan-2019 03:27
Surr: 4-Bromofluorobenzene	*119*		*70-123*	*%REC*	*1*	*16-Jan-2019 03:27*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**2,700**		**85**	**mg/Kg**	50	16-Jan-2019 13:27
TPH (Motor Oil Range)	**510**	n	**170**	**mg/Kg**	50	16-Jan-2019 13:27
Surr: 2-Fluorobiphenyl	*311*	*S*	*60-129*	*%REC*	*50*	*16-Jan-2019 13:27*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**41.0**		**4.93**	**mg/Kg**	1	17-Jan-2019 00:14

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-2
Collection Date: 10-Jan-2019 14:05

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-02
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	16-Jan-2019 08:35
Ethylbenzene	ND		0.0049	mg/Kg	1	16-Jan-2019 08:35
m,p-Xylene	ND		0.0098	mg/Kg	1	16-Jan-2019 08:35
o-Xylene	ND		0.0049	mg/Kg	1	16-Jan-2019 08:35
Toluene	ND		0.0049	mg/Kg	1	16-Jan-2019 08:35
Xylenes, Total	ND		0.0049	mg/Kg	1	16-Jan-2019 08:35
Surr: 1,2-Dichloroethane-d4	*84.7*		*70-126*	*%REC*	*1*	*16-Jan-2019 08:35*
Surr: 4-Bromofluorobenzene	*91.8*		*70-130*	*%REC*	*1*	*16-Jan-2019 08:35*
Surr: Dibromofluoromethane	*87.2*		*70-130*	*%REC*	*1*	*16-Jan-2019 08:35*
Surr: Toluene-d8	*92.5*		*70-130*	*%REC*	*1*	*16-Jan-2019 08:35*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jan-2019 03:44
Surr: 4-Bromofluorobenzene	*119*		*70-123*	*%REC*	*1*	*16-Jan-2019 03:44*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**250**		**17**	**mg/Kg**	10	16-Jan-2019 09:03
TPH (Motor Oil Range)	**530**	n	**34**	**mg/Kg**	10	16-Jan-2019 09:03
Surr: 2-Fluorobiphenyl	*75.0*		*60-129*	*%REC*	*10*	*16-Jan-2019 09:03*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**21.2**		**5.00**	**mg/Kg**	1	17-Jan-2019 00:29

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-3
Collection Date: 10-Jan-2019 14:10

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-03
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0048	mg/Kg	1	16-Jan-2019 09:00
Ethylbenzene	ND		0.0048	mg/Kg	1	16-Jan-2019 09:00
m,p-Xylene	ND		0.0097	mg/Kg	1	16-Jan-2019 09:00
o-Xylene	ND		0.0048	mg/Kg	1	16-Jan-2019 09:00
Toluene	ND		0.0048	mg/Kg	1	16-Jan-2019 09:00
Xylenes, Total	ND		0.0048	mg/Kg	1	16-Jan-2019 09:00
Surr: 1,2-Dichloroethane-d4	*85.9*		*70-126*	*%REC*	*1*	*16-Jan-2019 09:00*
Surr: 4-Bromofluorobenzene	*91.6*		*70-130*	*%REC*	*1*	*16-Jan-2019 09:00*
Surr: Dibromofluoromethane	*86.4*		*70-130*	*%REC*	*1*	*16-Jan-2019 09:00*
Surr: Toluene-d8	*91.2*		*70-130*	*%REC*	*1*	*16-Jan-2019 09:00*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jan-2019 04:00
Surr: 4-Bromofluorobenzene	*132*	*S*	*70-123*	*%REC*	*1*	*16-Jan-2019 04:00*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**160**		**17**	**mg/Kg**	10	16-Jan-2019 13:51
TPH (Motor Oil Range)	**350**	n	**34**	**mg/Kg**	10	16-Jan-2019 13:51
Surr: 2-Fluorobiphenyl	*113*		*60-129*	*%REC*	*10*	*16-Jan-2019 13:51*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**15.0**		**4.94**	**mg/Kg**	1	17-Jan-2019 00:43

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-4
Collection Date: 10-Jan-2019 14:15

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-04
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	16-Jan-2019 09:24
Ethylbenzene	ND		0.0049	mg/Kg	1	16-Jan-2019 09:24
m,p-Xylene	ND		0.0098	mg/Kg	1	16-Jan-2019 09:24
o-Xylene	ND		0.0049	mg/Kg	1	16-Jan-2019 09:24
Toluene	ND		0.0049	mg/Kg	1	16-Jan-2019 09:24
Xylenes, Total	ND		0.0049	mg/Kg	1	16-Jan-2019 09:24
Surr: 1,2-Dichloroethane-d4	*88.7*		*70-126*	*%REC*	*1*	*16-Jan-2019 09:24*
Surr: 4-Bromofluorobenzene	*92.0*		*70-130*	*%REC*	*1*	*16-Jan-2019 09:24*
Surr: Dibromofluoromethane	*88.6*		*70-130*	*%REC*	*1*	*16-Jan-2019 09:24*
Surr: Toluene-d8	*90.0*		*70-130*	*%REC*	*1*	*16-Jan-2019 09:24*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jan-2019 04:17
Surr: 4-Bromofluorobenzene	*131*	*S*	*70-123*	*%REC*	*1*	*16-Jan-2019 04:17*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**370**		**17**	**mg/Kg**	10	16-Jan-2019 14:25
TPH (Motor Oil Range)	**170**	n	**34**	**mg/Kg**	10	16-Jan-2019 14:25
Surr: 2-Fluorobiphenyl	*81.8*		*60-129*	*%REC*	*10*	*16-Jan-2019 14:25*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**563**		**4.97**	**mg/Kg**	1	17-Jan-2019 00:58

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-5
Collection Date: 10-Jan-2019 14:20

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-05
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0050	mg/Kg	1	17-Jan-2019 01:33
Ethylbenzene	ND		0.0050	mg/Kg	1	17-Jan-2019 01:33
m,p-Xylene	ND		0.0099	mg/Kg	1	17-Jan-2019 01:33
o-Xylene	ND		0.0050	mg/Kg	1	17-Jan-2019 01:33
Toluene	ND		0.0050	mg/Kg	1	17-Jan-2019 01:33
Xylenes, Total	ND		0.0050	mg/Kg	1	17-Jan-2019 01:33
Surr: 1,2-Dichloroethane-d4	*95.3*		*70-126*	*%REC*	*1*	*17-Jan-2019 01:33*
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	*1*	*17-Jan-2019 01:33*
Surr: Dibromofluoromethane	*96.7*		*70-130*	*%REC*	*1*	*17-Jan-2019 01:33*
Surr: Toluene-d8	*99.8*		*70-130*	*%REC*	*1*	*17-Jan-2019 01:33*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jan-2019 04:33
Surr: 4-Bromofluorobenzene	*121*		*70-123*	*%REC*	*1*	*16-Jan-2019 04:33*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 15-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**82**		**17**	**mg/Kg**	10	16-Jan-2019 14:50
TPH (Motor Oil Range)	**410**	n	**34**	**mg/Kg**	10	16-Jan-2019 14:50
Surr: 2-Fluorobiphenyl	*79.2*		*60-129*	*%REC*	*10*	*16-Jan-2019 14:50*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**85.1**		**4.93**	**mg/Kg**	1	17-Jan-2019 13:14

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-6
Collection Date: 10-Jan-2019 14:25

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-06
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	17-Jan-2019 01:57
Ethylbenzene	ND		0.0049	mg/Kg	1	17-Jan-2019 01:57
m,p-Xylene	ND		0.0098	mg/Kg	1	17-Jan-2019 01:57
o-Xylene	ND		0.0049	mg/Kg	1	17-Jan-2019 01:57
Toluene	ND		0.0049	mg/Kg	1	17-Jan-2019 01:57
Xylenes, Total	ND		0.0049	mg/Kg	1	17-Jan-2019 01:57
Surr: 1,2-Dichloroethane-d4	*97.8*		*70-126*	*%REC*	*1*	*17-Jan-2019 01:57*
Surr: 4-Bromofluorobenzene	*99.0*		*70-130*	*%REC*	*1*	*17-Jan-2019 01:57*
Surr: Dibromofluoromethane	*99.1*		*70-130*	*%REC*	*1*	*17-Jan-2019 01:57*
Surr: Toluene-d8	*102*		*70-130*	*%REC*	*1*	*17-Jan-2019 01:57*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jan-2019 04:49
Surr: 4-Bromofluorobenzene	*122*		*70-123*	*%REC*	*1*	*16-Jan-2019 04:49*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**21**		**1.7**	**mg/Kg**	1	16-Jan-2019 16:50
TPH (Motor Oil Range)	**33**	n	**3.4**	**mg/Kg**	1	16-Jan-2019 16:50
Surr: 2-Fluorobiphenyl	*62.2*		*60-129*	*%REC*	*1*	*16-Jan-2019 16:50*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**24.8**		**4.97**	**mg/Kg**	1	17-Jan-2019 01:16

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: S-7 @ 4'
Collection Date: 10-Jan-2019 14:30

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-07
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0048	mg/Kg	1	17-Jan-2019 02:22
Ethylbenzene	ND		0.0048	mg/Kg	1	17-Jan-2019 02:22
m,p-Xylene	ND		0.0096	mg/Kg	1	17-Jan-2019 02:22
o-Xylene	ND		0.0048	mg/Kg	1	17-Jan-2019 02:22
Toluene	ND		0.0048	mg/Kg	1	17-Jan-2019 02:22
Xylenes, Total	ND		0.0048	mg/Kg	1	17-Jan-2019 02:22
Surr: 1,2-Dichloroethane-d4	*97.7*		*70-126*	*%REC*	*1*	*17-Jan-2019 02:22*
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*17-Jan-2019 02:22*
Surr: Dibromofluoromethane	*97.5*		*70-130*	*%REC*	*1*	*17-Jan-2019 02:22*
Surr: Toluene-d8	*101*		*70-130*	*%REC*	*1*	*17-Jan-2019 02:22*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.048	mg/Kg	1	16-Jan-2019 05:06
Surr: 4-Bromofluorobenzene	*120*		*70-123*	*%REC*	*1*	*16-Jan-2019 05:06*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**48**		**1.7**	**mg/Kg**	1	16-Jan-2019 17:14
TPH (Motor Oil Range)	**65**	n	**3.4**	**mg/Kg**	1	16-Jan-2019 17:14
Surr: 2-Fluorobiphenyl	*67.7*		*60-129*	*%REC*	*1*	*16-Jan-2019 17:14*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**197**		**4.97**	**mg/Kg**	1	17-Jan-2019 01:38

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: S-8 @ 4'
Collection Date: 10-Jan-2019 14:35

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-08
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0048	mg/Kg	1	17-Jan-2019 02:47
Ethylbenzene	ND		0.0048	mg/Kg	1	17-Jan-2019 02:47
m,p-Xylene	ND		0.0097	mg/Kg	1	17-Jan-2019 02:47
o-Xylene	ND		0.0048	mg/Kg	1	17-Jan-2019 02:47
Toluene	ND		0.0048	mg/Kg	1	17-Jan-2019 02:47
Xylenes, Total	ND		0.0048	mg/Kg	1	17-Jan-2019 02:47
Surr: 1,2-Dichloroethane-d4	*97.8*		*70-126*	*%REC*	*1*	*17-Jan-2019 02:47*
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	*1*	*17-Jan-2019 02:47*
Surr: Dibromofluoromethane	*98.2*		*70-130*	*%REC*	*1*	*17-Jan-2019 02:47*
Surr: Toluene-d8	*101*		*70-130*	*%REC*	*1*	*17-Jan-2019 02:47*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jan-2019 05:56
Surr: 4-Bromofluorobenzene	*120*		*70-123*	*%REC*	*1*	*16-Jan-2019 05:56*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Jan-2019 17:38
TPH (Motor Oil Range)	ND	n	3.4	mg/Kg	1	16-Jan-2019 17:38
Surr: 2-Fluorobiphenyl	*74.4*		*60-129*	*%REC*	*1*	*16-Jan-2019 17:38*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**114**		**4.98**	**mg/Kg**	1	17-Jan-2019 01:59

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: S-9 @ 4'
Collection Date: 10-Jan-2019 14:45

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-09
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	17-Jan-2019 06:30
Ethylbenzene	ND		0.0049	mg/Kg	1	17-Jan-2019 06:30
m,p-Xylene	ND		0.0098	mg/Kg	1	17-Jan-2019 06:30
o-Xylene	ND		0.0049	mg/Kg	1	17-Jan-2019 06:30
Toluene	ND		0.0049	mg/Kg	1	17-Jan-2019 06:30
Xylenes, Total	ND		0.0049	mg/Kg	1	17-Jan-2019 06:30
Surr: 1,2-Dichloroethane-d4	*97.7*		*70-126*	*%REC*	*1*	*17-Jan-2019 06:30*
Surr: 4-Bromofluorobenzene	*99.3*		*70-130*	*%REC*	*1*	*17-Jan-2019 06:30*
Surr: Dibromofluoromethane	*97.1*		*70-130*	*%REC*	*1*	*17-Jan-2019 06:30*
Surr: Toluene-d8	*99.6*		*70-130*	*%REC*	*1*	*17-Jan-2019 06:30*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.049	mg/Kg	1	16-Jan-2019 06:12
Surr: 4-Bromofluorobenzene	*121*		*70-123*	*%REC*	*1*	*16-Jan-2019 06:12*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Jan-2019 18:02
TPH (Motor Oil Range)	ND	n	3.4	mg/Kg	1	16-Jan-2019 18:02
Surr: 2-Fluorobiphenyl	*66.5*		*60-129*	*%REC*	*1*	*16-Jan-2019 18:02*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	ND		4.97	mg/Kg	1	17-Jan-2019 02:21

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: S-10 @ 4'
Collection Date: 10-Jan-2019 14:50

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-10
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0050	mg/Kg	1	17-Jan-2019 06:55
Ethylbenzene	ND		0.0050	mg/Kg	1	17-Jan-2019 06:55
m,p-Xylene	ND		0.010	mg/Kg	1	17-Jan-2019 06:55
o-Xylene	ND		0.0050	mg/Kg	1	17-Jan-2019 06:55
Toluene	ND		0.0050	mg/Kg	1	17-Jan-2019 06:55
Xylenes, Total	ND		0.0050	mg/Kg	1	17-Jan-2019 06:55
Surr: 1,2-Dichloroethane-d4	*94.6*		*70-126*	*%REC*	*1*	*17-Jan-2019 06:55*
Surr: 4-Bromofluorobenzene	*99.6*		*70-130*	*%REC*	*1*	*17-Jan-2019 06:55*
Surr: Dibromofluoromethane	*97.7*		*70-130*	*%REC*	*1*	*17-Jan-2019 06:55*
Surr: Toluene-d8	*102*		*70-130*	*%REC*	*1*	*17-Jan-2019 06:55*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.048	mg/Kg	1	16-Jan-2019 06:29
Surr: 4-Bromofluorobenzene	*120*		*70-123*	*%REC*	*1*	*16-Jan-2019 06:29*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Jan-2019 18:26
TPH (Motor Oil Range)	ND	n	3.4	mg/Kg	1	16-Jan-2019 18:26
Surr: 2-Fluorobiphenyl	*61.7*		*60-129*	*%REC*	*1*	*16-Jan-2019 18:26*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**239**		**4.96**	**mg/Kg**	1	17-Jan-2019 02:42

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-11
Collection Date: 10-Jan-2019 14:55

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-11
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0050	mg/Kg	1	17-Jan-2019 07:19
Ethylbenzene	ND		0.0050	mg/Kg	1	17-Jan-2019 07:19
m,p-Xylene	ND		0.0099	mg/Kg	1	17-Jan-2019 07:19
o-Xylene	ND		0.0050	mg/Kg	1	17-Jan-2019 07:19
Toluene	ND		0.0050	mg/Kg	1	17-Jan-2019 07:19
Xylenes, Total	ND		0.0050	mg/Kg	1	17-Jan-2019 07:19
Surr: 1,2-Dichloroethane-d4	*93.2*		*70-126*	*%REC*	*1*	*17-Jan-2019 07:19*
Surr: 4-Bromofluorobenzene	*98.5*		*70-130*	*%REC*	*1*	*17-Jan-2019 07:19*
Surr: Dibromofluoromethane	*96.6*		*70-130*	*%REC*	*1*	*17-Jan-2019 07:19*
Surr: Toluene-d8	*101*		*70-130*	*%REC*	*1*	*17-Jan-2019 07:19*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.049	mg/Kg	1	16-Jan-2019 06:45
Surr: 4-Bromofluorobenzene	*120*		*70-123*	*%REC*	*1*	*16-Jan-2019 06:45*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	16-Jan-2019 16:02
TPH (Motor Oil Range)	**4.2**	n	**3.4**	**mg/Kg**	1	16-Jan-2019 16:02
Surr: 2-Fluorobiphenyl	*60.5*		*60-129*	*%REC*	*1*	*16-Jan-2019 16:02*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	ND		4.90	mg/Kg	1	17-Jan-2019 03:04

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-12
Collection Date: 10-Jan-2019 15:00

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-12
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	17-Jan-2019 08:43
Ethylbenzene	ND		0.0049	mg/Kg	1	17-Jan-2019 08:43
m,p-Xylene	ND		0.0098	mg/Kg	1	17-Jan-2019 08:43
o-Xylene	ND		0.0049	mg/Kg	1	17-Jan-2019 08:43
Toluene	ND		0.0049	mg/Kg	1	17-Jan-2019 08:43
Xylenes, Total	ND		0.0049	mg/Kg	1	17-Jan-2019 08:43
Surr: 1,2-Dichloroethane-d4	*92.2*		*70-126*	*%REC*	*1*	*17-Jan-2019 08:43*
Surr: 4-Bromofluorobenzene	*98.5*		*70-130*	*%REC*	*1*	*17-Jan-2019 08:43*
Surr: Dibromofluoromethane	*97.9*		*70-130*	*%REC*	*1*	*17-Jan-2019 08:43*
Surr: Toluene-d8	*102*		*70-130*	*%REC*	*1*	*17-Jan-2019 08:43*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.049	mg/Kg	1	16-Jan-2019 07:02
Surr: 4-Bromofluorobenzene	*120*		*70-123*	*%REC*	*1*	*16-Jan-2019 07:02*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**26**		**1.7**	**mg/Kg**	1	16-Jan-2019 16:26
TPH (Motor Oil Range)	**57**	n	**3.4**	**mg/Kg**	1	16-Jan-2019 16:26
Surr: 2-Fluorobiphenyl	*62.9*		*60-129*	*%REC*	*1*	*16-Jan-2019 16:26*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**18.2**		**5.00**	**mg/Kg**	1	17-Jan-2019 03:25

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-13
Collection Date: 10-Jan-2019 15:05

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-13
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:07
Ethylbenzene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:07
m,p-Xylene	ND		0.0098	mg/Kg	1	17-Jan-2019 09:07
o-Xylene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:07
Toluene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:07
Xylenes, Total	ND		0.0049	mg/Kg	1	17-Jan-2019 09:07
Surr: 1,2-Dichloroethane-d4	*90.3*		*70-126*	*%REC*	*1*	*17-Jan-2019 09:07*
Surr: 4-Bromofluorobenzene	*97.9*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:07*
Surr: Dibromofluoromethane	*95.8*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:07*
Surr: Toluene-d8	*101*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:07*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jan-2019 07:18
Surr: 4-Bromofluorobenzene	*139*	*S*	*70-123*	*%REC*	*1*	*16-Jan-2019 07:18*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**6.5**		**1.7**	**mg/Kg**	1	16-Jan-2019 16:50
TPH (Motor Oil Range)	**20**	n	**3.4**	**mg/Kg**	1	16-Jan-2019 16:50
Surr: 2-Fluorobiphenyl	*63.2*		*60-129*	*%REC*	*1*	*16-Jan-2019 16:50*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**104**		**4.99**	**mg/Kg**	1	17-Jan-2019 03:47

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-14
Collection Date: 10-Jan-2019 15:10

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-14
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:32
Ethylbenzene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:32
m,p-Xylene	ND		0.0098	mg/Kg	1	17-Jan-2019 09:32
o-Xylene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:32
Toluene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:32
Xylenes, Total	ND		0.0049	mg/Kg	1	17-Jan-2019 09:32
Surr: 1,2-Dichloroethane-d4	*101*		*70-126*	*%REC*	*1*	*17-Jan-2019 09:32*
Surr: 4-Bromofluorobenzene	*99.7*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:32*
Surr: Dibromofluoromethane	*99.4*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:32*
Surr: Toluene-d8	*99.7*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:32*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	16-Jan-2019 07:35
Surr: 4-Bromofluorobenzene	*139*	*S*	*70-123*	*%REC*	*1*	*16-Jan-2019 07:35*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**360**		**17**	**mg/Kg**	10	16-Jan-2019 18:50
TPH (Motor Oil Range)	**530**	n	**34**	**mg/Kg**	10	16-Jan-2019 18:50
Surr: 2-Fluorobiphenyl	*133*	*S*	*60-129*	*%REC*	*10*	*16-Jan-2019 18:50*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**969**		**24.6**	**mg/Kg**	5	17-Jan-2019 05:35

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: S-15 @ 4'
Collection Date: 10-Jan-2019 15:15

ANALYTICAL REPORT
WorkOrder:HS19010608
Lab ID:HS19010608-15
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:57
Ethylbenzene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:57
m,p-Xylene	ND		0.0098	mg/Kg	1	17-Jan-2019 09:57
o-Xylene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:57
Toluene	ND		0.0049	mg/Kg	1	17-Jan-2019 09:57
Xylenes, Total	ND		0.0049	mg/Kg	1	17-Jan-2019 09:57
Surr: 1,2-Dichloroethane-d4	*99.0*		*70-126*	*%REC*	*1*	*17-Jan-2019 09:57*
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:57*
Surr: Dibromofluoromethane	*98.9*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:57*
Surr: Toluene-d8	*99.6*		*70-130*	*%REC*	*1*	*17-Jan-2019 09:57*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.048	mg/Kg	1	16-Jan-2019 07:51
Surr: 4-Bromofluorobenzene	*140*	*S*	*70-123*	*%REC*	*1*	*16-Jan-2019 07:51*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 16-Jan-2019		Analyst: PVL
TPH (Diesel Range)	**5.9**		**1.7**	**mg/Kg**	1	16-Jan-2019 17:38
TPH (Motor Oil Range)	**59**	n	**3.4**	**mg/Kg**	1	16-Jan-2019 17:38
Surr: 2-Fluorobiphenyl	*61.4*		*60-129*	*%REC*	*1*	*16-Jan-2019 17:38*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Jan-2019		Analyst: KMU
Chloride	**5.87**		**4.92**	**mg/Kg**	1	17-Jan-2019 05:56

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

WEIGHT LOG

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

Batch ID: 2870 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS19010608-01	1	5.08 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-02	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS19010608-03	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS19010608-04	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS19010608-05	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS19010608-06	1	5.06 (g)	5 (mL)	0.99	Bulk (5030B)
HS19010608-07	1	5.13 (g)	5 (mL)	0.97	Bulk (5030B)
HS19010608-08	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS19010608-09	1	5.08 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-10	1	5.15 (g)	5 (mL)	0.97	Bulk (5030B)
HS19010608-11	1	5.09 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-12	1	5.12 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-13	1	5.06 (g)	5 (mL)	0.99	Bulk (5030B)
HS19010608-14	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS19010608-15	1	5.13 (g)	5 (mL)	0.97	Bulk (5030B)

Batch ID: 2871 **Method:** VOLATILES BY SW8260C

SampID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS19010608-01	1	5.033 (g)	5 (mL)	0.99	Bulk (5030B)
HS19010608-02	1	5.119 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-03	1	5.181 (g)	5 (mL)	0.97	Bulk (5030B)
HS19010608-04	1	5.128 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-05	1	5.065 (g)	5 (mL)	0.99	Bulk (5030B)
HS19010608-06	1	5.094 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-07	1	5.194 (g)	5 (mL)	0.96	Bulk (5030B)
HS19010608-08	1	5.137 (g)	5 (mL)	0.97	Bulk (5030B)
HS19010608-09	1	5.085 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-10	1	4.987 (g)	5 (mL)	1	Bulk (5030B)
HS19010608-11	1	5.076 (g)	5 (mL)	0.99	Bulk (5030B)
HS19010608-12	1	5.115 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-13	1	5.094 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-14	1	5.089 (g)	5 (mL)	0.98	Bulk (5030B)
HS19010608-15	1	5.116 (g)	5 (mL)	0.98	Bulk (5030B)

Batch ID: 136620 **Method:** ANIONS BY E300.0 **Prep:** 300_S_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19010608-01	1	5.0674	50 (mL)	9.867
HS19010608-02	1	5.0047	50 (mL)	9.991
HS19010608-03	1	5.0592	50 (mL)	9.883
HS19010608-04	1	5.0332	50 (mL)	9.934
HS19010608-05	1	5.0739	50 (mL)	9.854

WEIGHT LOG

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

Batch ID: 136621 **Method:** ANIONS BY E300.0 **Prep:** 300_S_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19010608-06	1	5.0268	50 (mL)	9.947
HS19010608-07	1	5.0295	50 (mL)	9.941
HS19010608-08	1	5.0198	50 (mL)	9.961
HS19010608-09	1	5.0331	50 (mL)	9.934
HS19010608-10	1	5.0447	50 (mL)	9.911
HS19010608-11	1	5.0979	50 (mL)	9.808
HS19010608-12	1	5.0042	50 (mL)	9.992
HS19010608-13	1	5.0061	50 (mL)	9.988
HS19010608-14	1	5.0823	50 (mL)	9.838
HS19010608-15	1	5.0794	50 (mL)	9.844

Batch ID: 136635 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19010608-01	1	30.02	1 (mL)	0.03331
HS19010608-02	1	30.04	1 (mL)	0.03329
HS19010608-03	1	30	1 (mL)	0.03333
HS19010608-04	1	30.12	1 (mL)	0.0332
HS19010608-05	1	30.07	1 (mL)	0.03326

Batch ID: 136680 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19010608-06	1	30.14	1 (mL)	0.03318
HS19010608-07	1	30.06	1 (mL)	0.03327
HS19010608-08	1	30.01	1 (mL)	0.03332
HS19010608-09	1	30.07	1 (mL)	0.03326
HS19010608-10	1	30.18	1 (mL)	0.03313
HS19010608-11	1	30.02	1 (mL)	0.03331
HS19010608-12	1	30.19	1 (mL)	0.03312
HS19010608-13	1	30.25	1 (mL)	0.03306
HS19010608-14	1	30.03	1 (mL)	0.0333
HS19010608-15	1	30.1	1 (mL)	0.03322

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 136620	**Test Name :** ANIONS BY E300.0			**Matrix:** Soil		
HS19010608-01	SW-1	10 Jan 2019 14:00		15 Jan 2019 11:57	17 Jan 2019 00:14	1
HS19010608-02	SW-2	10 Jan 2019 14:05		15 Jan 2019 11:57	17 Jan 2019 00:29	1
HS19010608-03	SW-3	10 Jan 2019 14:10		15 Jan 2019 11:57	17 Jan 2019 00:43	1
HS19010608-04	SW-4	10 Jan 2019 14:15		15 Jan 2019 11:57	17 Jan 2019 00:58	1
HS19010608-05	SW-5	10 Jan 2019 14:20		15 Jan 2019 11:57	17 Jan 2019 13:14	1
Batch ID 136621	**Test Name :** ANIONS BY E300.0			**Matrix:** Soil		
HS19010608-06	SW-6	10 Jan 2019 14:25		15 Jan 2019 11:58	17 Jan 2019 01:16	1
HS19010608-07	S-7 @ 4'	10 Jan 2019 14:30		15 Jan 2019 11:58	17 Jan 2019 01:38	1
HS19010608-08	S-8 @ 4'	10 Jan 2019 14:35		15 Jan 2019 11:58	17 Jan 2019 01:59	1
HS19010608-09	S-9 @ 4'	10 Jan 2019 14:45		15 Jan 2019 11:58	17 Jan 2019 02:21	1
HS19010608-10	S-10 @ 4'	10 Jan 2019 14:50		15 Jan 2019 11:58	17 Jan 2019 02:42	1
HS19010608-11	SW-11	10 Jan 2019 14:55		15 Jan 2019 11:58	17 Jan 2019 03:04	1
HS19010608-12	SW-12	10 Jan 2019 15:00		15 Jan 2019 11:58	17 Jan 2019 03:25	1
HS19010608-13	SW-13	10 Jan 2019 15:05		15 Jan 2019 11:58	17 Jan 2019 03:47	1
HS19010608-14	SW-14	10 Jan 2019 15:10		15 Jan 2019 11:58	17 Jan 2019 05:35	5
HS19010608-15	S-15 @ 4'	10 Jan 2019 15:15		15 Jan 2019 11:58	17 Jan 2019 05:56	1
Batch ID 136635	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS19010608-01	SW-1	10 Jan 2019 14:00		15 Jan 2019 14:23	16 Jan 2019 13:27	50
HS19010608-02	SW-2	10 Jan 2019 14:05		15 Jan 2019 14:23	16 Jan 2019 09:03	10
HS19010608-03	SW-3	10 Jan 2019 14:10		15 Jan 2019 14:23	16 Jan 2019 13:51	10
HS19010608-04	SW-4	10 Jan 2019 14:15		15 Jan 2019 14:23	16 Jan 2019 14:25	10
HS19010608-05	SW-5	10 Jan 2019 14:20		15 Jan 2019 14:23	16 Jan 2019 14:50	10
Batch ID 136680	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS19010608-06	SW-6	10 Jan 2019 14:25		16 Jan 2019 14:10	16 Jan 2019 16:50	1
HS19010608-07	S-7 @ 4'	10 Jan 2019 14:30		16 Jan 2019 14:10	16 Jan 2019 17:14	1
HS19010608-08	S-8 @ 4'	10 Jan 2019 14:35		16 Jan 2019 14:10	16 Jan 2019 17:38	1
HS19010608-09	S-9 @ 4'	10 Jan 2019 14:45		16 Jan 2019 14:10	16 Jan 2019 18:02	1
HS19010608-10	S-10 @ 4'	10 Jan 2019 14:50		16 Jan 2019 14:10	16 Jan 2019 18:26	1
HS19010608-11	SW-11	10 Jan 2019 14:55		16 Jan 2019 14:10	16 Jan 2019 16:02	1
HS19010608-12	SW-12	10 Jan 2019 15:00		16 Jan 2019 14:10	16 Jan 2019 16:26	1
HS19010608-13	SW-13	10 Jan 2019 15:05		16 Jan 2019 14:10	16 Jan 2019 16:50	1
HS19010608-14	SW-14	10 Jan 2019 15:10		16 Jan 2019 14:10	16 Jan 2019 18:50	10
HS19010608-15	S-15 @ 4'	10 Jan 2019 15:15		16 Jan 2019 14:10	16 Jan 2019 17:38	1

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R331087	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS19010608-01	SW-1	10 Jan 2019 14:00			16 Jan 2019 07:22	1
HS19010608-02	SW-2	10 Jan 2019 14:05			16 Jan 2019 08:35	1
HS19010608-03	SW-3	10 Jan 2019 14:10			16 Jan 2019 09:00	1
HS19010608-04	SW-4	10 Jan 2019 14:15			16 Jan 2019 09:24	1
Batch ID R331094	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS19010608-01	SW-1	10 Jan 2019 14:00			16 Jan 2019 03:27	1
HS19010608-02	SW-2	10 Jan 2019 14:05			16 Jan 2019 03:44	1
HS19010608-03	SW-3	10 Jan 2019 14:10			16 Jan 2019 04:00	1
HS19010608-04	SW-4	10 Jan 2019 14:15			16 Jan 2019 04:17	1
HS19010608-05	SW-5	10 Jan 2019 14:20			16 Jan 2019 04:33	1
HS19010608-06	SW-6	10 Jan 2019 14:25			16 Jan 2019 04:49	1
HS19010608-07	S-7 @ 4'	10 Jan 2019 14:30			16 Jan 2019 05:06	1
HS19010608-08	S-8 @ 4'	10 Jan 2019 14:35			16 Jan 2019 05:56	1
HS19010608-09	S-9 @ 4'	10 Jan 2019 14:45			16 Jan 2019 06:12	1
HS19010608-10	S-10 @ 4'	10 Jan 2019 14:50			16 Jan 2019 06:29	1
HS19010608-11	SW-11	10 Jan 2019 14:55			16 Jan 2019 06:45	1
HS19010608-12	SW-12	10 Jan 2019 15:00			16 Jan 2019 07:02	1
HS19010608-13	SW-13	10 Jan 2019 15:05			16 Jan 2019 07:18	1
HS19010608-14	SW-14	10 Jan 2019 15:10			16 Jan 2019 07:35	1
HS19010608-15	S-15 @ 4'	10 Jan 2019 15:15			16 Jan 2019 07:51	1
Batch ID R331152	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS19010608-05	SW-5	10 Jan 2019 14:20			17 Jan 2019 01:33	1
HS19010608-06	SW-6	10 Jan 2019 14:25			17 Jan 2019 01:57	1
HS19010608-07	S-7 @ 4'	10 Jan 2019 14:30			17 Jan 2019 02:22	1
HS19010608-08	S-8 @ 4'	10 Jan 2019 14:35			17 Jan 2019 02:47	1
Batch ID R331163	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS19010608-09	S-9 @ 4'	10 Jan 2019 14:45			17 Jan 2019 06:30	1
HS19010608-10	S-10 @ 4'	10 Jan 2019 14:50			17 Jan 2019 06:55	1
HS19010608-11	SW-11	10 Jan 2019 14:55			17 Jan 2019 07:19	1
HS19010608-12	SW-12	10 Jan 2019 15:00			17 Jan 2019 08:43	1
HS19010608-13	SW-13	10 Jan 2019 15:05			17 Jan 2019 09:07	1
HS19010608-14	SW-14	10 Jan 2019 15:10			17 Jan 2019 09:32	1
HS19010608-15	S-15 @ 4'	10 Jan 2019 15:15			17 Jan 2019 09:57	1

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: 136635 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-136635** Units: **mg/Kg** Analysis Date: **15-Jan-2019 22:15**
Client ID: Run ID: **FID-7_331130** SeqNo: **4910582** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	ND	1.7								
TPH (Motor Oil Range)	ND	3.4								
Surr: 2-Fluorobiphenyl	*2.347*	*0.10*	*3.33*	*0*	*70.5*	*70 - 130*				

LCS Sample ID: **LCS-136635** Units: **mg/Kg** Analysis Date: **15-Jan-2019 22:39**
Client ID: Run ID: **FID-7_331130** SeqNo: **4910583** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	35.78	1.7	33.33	0	107	70 - 130				
TPH (Motor Oil Range)	27.4	3.4	33.33	0	82.2	70 - 130				
Surr: 2-Fluorobiphenyl	*2.726*	*0.10*	*3.33*	*0*	*81.9*	*70 - 130*				

MS Sample ID: **HS19010606-01MS** Units: **mg/Kg** Analysis Date: **15-Jan-2019 23:27**
Client ID: Run ID: **FID-7_331130** SeqNo: **4910591** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	37.39	1.7	33.31	1.202	109	70 - 130				
TPH (Motor Oil Range)	27.03	3.4	33.31	2.776	72.8	70 - 130				
Surr: 2-Fluorobiphenyl	*2.777*	*0.10*	*3.328*	*0*	*83.4*	*60 - 129*				

MSD Sample ID: **HS19010606-01MSD** Units: **mg/Kg** Analysis Date: **15-Jan-2019 23:51**
Client ID: Run ID: **FID-7_331130** SeqNo: **4910586** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	34.81	1.7	33.22	1.202	101	70 - 130	37.39	7.14	30	
TPH (Motor Oil Range)	27.6	3.4	33.22	2.776	74.7	70 - 130	27.03	2.07	30	
Surr: 2-Fluorobiphenyl	*2.618*	*0.10*	*3.319*	*0*	*78.9*	*60 - 129*	*2.777*	*5.9*	*30*	

The following samples were analyzed in this batch: HS19010608-01 HS19010608-02 HS19010608-03 HS19010608-04 HS19010608-05

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: 136680 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-136680** Units: **mg/Kg** Analysis Date: **16-Jan-2019 16:02**
Client ID: Run ID: **FID-7_331200** SeqNo: **4912144** PrepDate: **16-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	ND	1.7								
TPH (Motor Oil Range)	ND	3.4								
Surr: 2-Fluorobiphenyl	*2.335*	*0.10*	*3.33*	*0*	*70.1*	*70 - 130*				

LCS Sample ID: **LCS-136680** Units: **mg/Kg** Analysis Date: **16-Jan-2019 16:26**
Client ID: Run ID: **FID-7_331200** SeqNo: **4912145** PrepDate: **16-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	30.18	1.7	33.33	0	90.5	70 - 130				
TPH (Motor Oil Range)	28.35	3.4	33.33	0	85.1	70 - 130				
Surr: 2-Fluorobiphenyl	*2.687*	*0.10*	*3.33*	*0*	*80.7*	*70 - 130*				

MS Sample ID: **HS19010608-15MS** Units: **mg/Kg** Analysis Date: **16-Jan-2019 18:02**
Client ID: **S-15 @ 4'** Run ID: **FID-7_331200** SeqNo: **4912317** PrepDate: **16-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	42.38	1.7	33.13	5.85	110	70 - 130				
TPH (Motor Oil Range)	55.02	3.4	33.13	59.15	-12.5	70 - 130				S
Surr: 2-Fluorobiphenyl	*2.848*	*0.099*	*3.31*	*0*	*86.0*	*60 - 129*				

MSD Sample ID: **HS19010608-15MSD** Units: **mg/Kg** Analysis Date: **16-Jan-2019 18:26**
Client ID: **S-15 @ 4'** Run ID: **FID-7_331200** SeqNo: **4912318** PrepDate: **16-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	37.7	1.7	33.19	5.85	96.0	70 - 130	42.38	11.7	30	
TPH (Motor Oil Range)	58.43	3.4	33.19	59.15	-2.17	70 - 130	55.02	6	30	S
Surr: 2-Fluorobiphenyl	*2.246*	*0.10*	*3.316*	*0*	*67.7*	*60 - 129*	*2.848*	*23.7*	*30*	

The following samples were analyzed in this batch:

HS19010608-06	HS19010608-07	HS19010608-08	HS19010608-09
HS19010608-10	HS19010608-11	HS19010608-12	HS19010608-13
HS19010608-14	HS19010608-15		

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: R331094 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **MBLK-190115** Units: **mg/Kg** Analysis Date: **16-Jan-2019 03:11**
Client ID: Run ID: **FID-14_331094** SeqNo: **4909834** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.1186*	*0.0050*	*0.1*	*0*	*119*	*75 - 121*				

LCS Sample ID: **MLCS-190115** Units: **mg/Kg** Analysis Date: **16-Jan-2019 02:38**
Client ID: Run ID: **FID-14_331094** SeqNo: **4909833** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8355	0.050	1	0	83.5	72 - 121				
Surr: 4-Bromofluorobenzene	*0.0776*	*0.0050*	*0.1*	*0*	*77.6*	*75 - 121*				

MS Sample ID: **HS19010608-15MS** Units: **mg/Kg** Analysis Date: **16-Jan-2019 08:07**
Client ID: **S-15 @ 4'** Run ID: **FID-14_331094** SeqNo: **4909852** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.1506	0.050	0.99	0	15.2	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.03125*	*0.0050*	*0.099*	*0*	*31.6*	*70 - 123*				S

MSD Sample ID: **HS19010608-15MSD** Units: **mg/Kg** Analysis Date: **16-Jan-2019 08:23**
Client ID: **S-15 @ 4'** Run ID: **FID-14_331094** SeqNo: **4909853** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.148	0.048	0.97	0	15.3	70 - 130	0.1506	1.79	30	S
Surr: 4-Bromofluorobenzene	*0.03341*	*0.0048*	*0.097*	*0*	*34.4*	*70 - 123*	*0.03125*	*6.68*	*30*	S

The following samples were analyzed in this batch:

HS19010608-01	HS19010608-02	HS19010608-03	HS19010608-04
HS19010608-05	HS19010608-06	HS19010608-07	HS19010608-08
HS19010608-09	HS19010608-10	HS19010608-11	HS19010608-12
HS19010608-13	HS19010608-14	HS19010608-15	

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: R331087 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS2-011519** Units: **ug/Kg** Analysis Date: **16-Jan-2019 06:33**
Client ID: Run ID: **VOA5_331087** SeqNo: **4909697** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*43.9*	*0*	*50*	*0*	*87.8*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*46.37*	*0*	*50*	*0*	*92.7*	*80 - 120*				
Surr: Dibromofluoromethane	*44.17*	*0*	*50*	*0*	*88.3*	*80 - 119*				
Surr: Toluene-d8	*44.86*	*0*	*50*	*0*	*89.7*	*81 - 118*				

LCS Sample ID: **VLCSS2-011519** Units: **ug/Kg** Analysis Date: **16-Jan-2019 05:44**
Client ID: Run ID: **VOA5_331087** SeqNo: **4909696** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	52.19	5.0	50	0	104	75 - 124				
Ethylbenzene	55.72	5.0	50	0	111	70 - 123				
m,p-Xylene	111.3	10	100	0	111	77 - 125				
o-Xylene	55.73	5.0	50	0	111	78 - 122				
Toluene	53.17	5.0	50	0	106	76 - 122				
Xylenes, Total	167	5.0	150	0	111	77 - 128				
Surr: 1,2-Dichloroethane-d4	*45.64*	*0*	*50*	*0*	*91.3*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*48.01*	*0*	*50*	*0*	*96.0*	*80 - 120*				
Surr: Dibromofluoromethane	*45.08*	*0*	*50*	*0*	*90.2*	*80 - 119*				
Surr: Toluene-d8	*45.06*	*0*	*50*	*0*	*90.1*	*81 - 118*				

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: R331087 **Instrument: VOA5** **Method: SW8260**

MS Sample ID: **HS19010608-01MS** Units: **ug/Kg** Analysis Date: **16-Jan-2019 07:46**
Client ID: **SW-1** Run ID: **VOA5_331087** SeqNo: **4909700** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	41.09	4.8	48.5	0	84.7	70 - 130				
Ethylbenzene	38.33	4.8	48.5	0	79.0	70 - 130				
m,p-Xylene	77.7	9.7	97	0	80.1	70 - 130				
o-Xylene	38.73	4.8	48.5	0	79.9	70 - 130				
Toluene	41.52	4.8	48.5	0	85.6	70 - 130				
Xylenes, Total	116.4	4.8	145.5	0	80.0	70 - 130				
Surr: 1,2-Dichloroethane-d4	*45.27*	*0*	*48.5*	*0*	*93.4*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*44.95*	*0*	*48.5*	*0*	*92.7*	*70 - 130*				
Surr: Dibromofluoromethane	*44.5*	*0*	*48.5*	*0*	*91.7*	*70 - 130*				
Surr: Toluene-d8	*44.12*	*0*	*48.5*	*0*	*91.0*	*70 - 130*				

MSD Sample ID: **HS19010608-01MSD** Units: **ug/Kg** Analysis Date: **16-Jan-2019 08:11**
Client ID: **SW-1** Run ID: **VOA5_331087** SeqNo: **4909701** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	44.17	4.8	47.5	0	93.0	70 - 130	41.09	7.21	30	
Ethylbenzene	42.84	4.8	47.5	0	90.2	70 - 130	38.33	11.1	30	
m,p-Xylene	85.53	9.5	95	0	90.0	70 - 130	77.7	9.6	30	
o-Xylene	41.32	4.8	47.5	0	87.0	70 - 130	38.73	6.47	30	
Toluene	43.78	4.8	47.5	0	92.2	70 - 130	41.52	5.29	30	
Xylenes, Total	126.9	4.8	142.5	0	89.0	70 - 130	116.4	8.57	30	
Surr: 1,2-Dichloroethane-d4	*44.59*	*0*	*47.5*	*0*	*93.9*	*70 - 126*	*45.27*	*1.53*	*30*	
Surr: 4-Bromofluorobenzene	*45.33*	*0*	*47.5*	*0*	*95.4*	*70 - 130*	*44.95*	*0.835*	*30*	
Surr: Dibromofluoromethane	*44.56*	*0*	*47.5*	*0*	*93.8*	*70 - 130*	*44.5*	*0.143*	*30*	
Surr: Toluene-d8	*43.26*	*0*	*47.5*	*0*	*91.1*	*70 - 130*	*44.12*	*1.96*	*30*	

The following samples were analyzed in this batch: HS19010608-01 HS19010608-02 HS19010608-03 HS19010608-04

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: R331152 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS1-011619** Units: **ug/Kg** Analysis Date: **16-Jan-2019 17:19**
Client ID: Run ID: **VOA5_331152** SeqNo: **4911357** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*48.28*	*0*	*50*	*0*	*96.6*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.73*	*0*	*50*	*0*	*99.5*	*80 - 120*				
Surr: Dibromofluoromethane	*49.61*	*0*	*50*	*0*	*99.2*	*80 - 119*				
Surr: Toluene-d8	*49.6*	*0*	*50*	*0*	*99.2*	*81 - 118*				

LCS Sample ID: **VLCSS1-011619** Units: **ug/Kg** Analysis Date: **16-Jan-2019 16:30**
Client ID: Run ID: **VOA5_331152** SeqNo: **4911356** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.47	5.0	50	0	94.9	75 - 124				
Ethylbenzene	47.31	5.0	50	0	94.6	70 - 123				
m,p-Xylene	94.08	10	100	0	94.1	77 - 125				
o-Xylene	46.86	5.0	50	0	93.7	78 - 122				
Toluene	45.57	5.0	50	0	91.1	76 - 122				
Xylenes, Total	140.9	5.0	150	0	94.0	77 - 128				
Surr: 1,2-Dichloroethane-d4	*49.26*	*0*	*50*	*0*	*98.5*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.71*	*0*	*50*	*0*	*99.4*	*80 - 120*				
Surr: Dibromofluoromethane	*50.43*	*0*	*50*	*0*	*101*	*80 - 119*				
Surr: Toluene-d8	*48.51*	*0*	*50*	*0*	*97.0*	*81 - 118*				

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: R331152 **Instrument: VOA5** **Method: SW8260**

MS Sample ID: **HS19010154-11MS** Units: **ug/Kg** Analysis Date: **16-Jan-2019 18:33**
Client ID: Run ID: **VOA5_331152** SeqNo: **4911360** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	35.76	4.8	48	0	74.5	70 - 130				
Ethylbenzene	32.27	4.8	48	0	67.2	70 - 130				S
m,p-Xylene	62.91	9.6	96	0	65.5	70 - 130				S
o-Xylene	31.47	4.8	48	0	65.6	70 - 130				S
Toluene	33.7	4.8	48	0	70.2	70 - 130				
Xylenes, Total	94.38	4.8	144	0	65.5	70 - 130				S
Surr: 1,2-Dichloroethane-d4	*49.52*	*0*	*48*	*0*	*103*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.13*	*0*	*48*	*0*	*102*	*70 - 130*				
Surr: Dibromofluoromethane	*49.11*	*0*	*48*	*0*	*102*	*70 - 130*				
Surr: Toluene-d8	*48.98*	*0*	*48*	*0*	*102*	*70 - 130*				

MSD Sample ID: **HS19010154-11MSD** Units: **ug/Kg** Analysis Date: **16-Jan-2019 18:58**
Client ID: Run ID: **VOA5_331152** SeqNo: **4911361** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	43.61	4.8	48	0	90.9	70 - 130	35.76	19.8	30	
Ethylbenzene	39.55	4.8	48	0	82.4	70 - 130	32.27	20.3	30	
m,p-Xylene	77.54	9.6	96	0	80.8	70 - 130	62.91	20.8	30	
o-Xylene	38.09	4.8	48	0	79.4	70 - 130	31.47	19	30	
Toluene	41.08	4.8	48	0	85.6	70 - 130	33.7	19.8	30	
Xylenes, Total	115.6	4.8	144	0	80.3	70 - 130	94.38	20.2	30	
Surr: 1,2-Dichloroethane-d4	*47.35*	*0*	*48*	*0*	*98.6*	*70 - 126*	*49.52*	*4.48*	*30*	
Surr: 4-Bromofluorobenzene	*47.67*	*0*	*48*	*0*	*99.3*	*70 - 130*	*49.13*	*3.02*	*30*	
Surr: Dibromofluoromethane	*48.53*	*0*	*48*	*0*	*101*	*70 - 130*	*49.11*	*1.2*	*30*	
Surr: Toluene-d8	*48.74*	*0*	*48*	*0*	*102*	*70 - 130*	*48.98*	*0.475*	*30*	

The following samples were analyzed in this batch: HS19010608-05 HS19010608-06 HS19010608-07 HS19010608-08

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: R331163 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS1-011719** Units: **ug/Kg** Analysis Date: **17-Jan-2019 06:05**
Client ID: Run ID: **VOA5_331163** SeqNo: **4911417** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*48.59*	*0*	*50*	*0*	*97.2*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.8*	*0*	*50*	*0*	*99.6*	*80 - 120*				
Surr: Dibromofluoromethane	*48.83*	*0*	*50*	*0*	*97.7*	*80 - 119*				
Surr: Toluene-d8	*49.84*	*0*	*50*	*0*	*99.7*	*81 - 118*				

LCS Sample ID: **VLCSS1-011719** Units: **ug/Kg** Analysis Date: **17-Jan-2019 05:16**
Client ID: Run ID: **VOA5_331163** SeqNo: **4911416** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.83	5.0	50	0	97.7	75 - 124				
Ethylbenzene	47.6	5.0	50	0	95.2	70 - 123				
m,p-Xylene	93.06	10	100	0	93.1	77 - 125				
o-Xylene	47.11	5.0	50	0	94.2	78 - 122				
Toluene	46.14	5.0	50	0	92.3	76 - 122				
Xylenes, Total	140.2	5.0	150	0	93.4	77 - 128				
Surr: 1,2-Dichloroethane-d4	*52.09*	*0*	*50*	*0*	*104*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*52.2*	*0*	*50*	*0*	*104*	*80 - 120*				
Surr: Dibromofluoromethane	*50.69*	*0*	*50*	*0*	*101*	*80 - 119*				
Surr: Toluene-d8	*50.28*	*0*	*50*	*0*	*101*	*81 - 118*				

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: R331163 **Instrument: VOA5** **Method: SW8260**

MS Sample ID: **HS19010608-10MS** Units: **ug/Kg** Analysis Date: **17-Jan-2019 07:53**
Client ID: **S-10 @ 4'** Run ID: **VOA5_331163** SeqNo: **4911421** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	48.41	4.9	49	0	98.8	70 - 130				
Ethylbenzene	46.31	4.9	49	0	94.5	70 - 130				
m,p-Xylene	93.11	9.8	98	0	95.0	70 - 130				
o-Xylene	45.47	4.9	49	0	92.8	70 - 130				
Toluene	46.1	4.9	49	0	94.1	70 - 130				
Xylenes, Total	138.6	4.9	147	0	94.3	70 - 130				
Surr: 1,2-Dichloroethane-d4	*49.76*	*0*	*49*	*0*	*102*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*50.28*	*0*	*49*	*0*	*103*	*70 - 130*				
Surr: Dibromofluoromethane	*49.08*	*0*	*49*	*0*	*100*	*70 - 130*				
Surr: Toluene-d8	*49.1*	*0*	*49*	*0*	*100*	*70 - 130*				

MSD Sample ID: **HS19010608-10MSD** Units: **ug/Kg** Analysis Date: **17-Jan-2019 08:18**
Client ID: **S-10 @ 4'** Run ID: **VOA5_331163** SeqNo: **4911422** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.14	4.8	48.5	0	97.2	70 - 130	48.41	2.66	30	
Ethylbenzene	43.74	4.8	48.5	0	90.2	70 - 130	46.31	5.71	30	
m,p-Xylene	86.63	9.7	97	0	89.3	70 - 130	93.11	7.2	30	
o-Xylene	44.19	4.8	48.5	0	91.1	70 - 130	45.47	2.87	30	
Toluene	43.46	4.8	48.5	0	89.6	70 - 130	46.1	5.89	30	
Xylenes, Total	130.8	4.8	145.5	0	89.9	70 - 130	138.6	5.76	30	
Surr: 1,2-Dichloroethane-d4	*52.83*	*0*	*48.5*	*0*	*109*	*70 - 126*	*49.76*	*6*	*30*	
Surr: 4-Bromofluorobenzene	*49.11*	*0*	*48.5*	*0*	*101*	*70 - 130*	*50.28*	*2.35*	*30*	
Surr: Dibromofluoromethane	*51.13*	*0*	*48.5*	*0*	*105*	*70 - 130*	*49.08*	*4.11*	*30*	
Surr: Toluene-d8	*46.71*	*0*	*48.5*	*0*	*96.3*	*70 - 130*	*49.1*	*4.99*	*30*	

The following samples were analyzed in this batch: HS19010608-09 HS19010608-10 HS19010608-11 HS19010608-12 HS19010608-13 HS19010608-14 HS19010608-15

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: 136620 **Instrument: ICS2100** **Method: E300**

MBLK Sample ID: **MBLK-136620** Units: **mg/Kg** Analysis Date: **16-Jan-2019 18:10**
Client ID: Run ID: **ICS2100_331219** SeqNo: **4912546** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	5.00								

LCS Sample ID: **LCS-136620** Units: **mg/Kg** Analysis Date: **16-Jan-2019 18:24**
Client ID: Run ID: **ICS2100_331219** SeqNo: **4912547** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	206.3	5.00	200	0	103	90 - 110				

LCSD Sample ID: **LCSD-136620** Units: **mg/Kg** Analysis Date: **16-Jan-2019 18:39**
Client ID: Run ID: **ICS2100_331219** SeqNo: **4912548** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	201.5	5.00	200	0	101	90 - 110	206.3	2.35	20	

MS Sample ID: **HS19010608-05MS** Units: **mg/Kg** Analysis Date: **17-Jan-2019 13:28**
Client ID: **SW-5** Run ID: **ICS2100_331219** SeqNo: **4912580** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	181.1	4.99	99.82	85.1	96.2	75 - 125				

MS Sample ID: **HS19010606-13MS** Units: **mg/Kg** Analysis Date: **16-Jan-2019 22:47**
Client ID: Run ID: **ICS2100_331219** SeqNo: **4912564** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	506.4	4.93	98.68	417.7	89.9	75 - 125				O

MSD Sample ID: **HS19010608-05MSD** Units: **mg/Kg** Analysis Date: **17-Jan-2019 13:43**
Client ID: **SW-5** Run ID: **ICS2100_331219** SeqNo: **4912581** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	171.6	4.96	99.14	85.1	87.3	75 - 125	181.1	5.4	20	

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: 136620 **Instrument: ICS2100** **Method: E300**

MSD Sample ID: **HS19010606-13MSD** Units: **mg/Kg** Analysis Date: **16-Jan-2019 23:01**
Client ID: Run ID: **ICS2100_331219** SeqNo: **4912565** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	520.4	4.98	99.65	417.7	103	75 - 125	506.4	2.73	20	O

The following samples were analyzed in this batch: HS19010608-01 HS19010608-02 HS19010608-03 HS19010608-04 HS19010608-05

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: 136621 **Instrument: ICS3K2** **Method: E300**

MBLK Sample ID: **MBLK-136621** Units: **mg/Kg** Analysis Date: **16-Jan-2019 23:28**
Client ID: Run ID: **ICS3K2_331216** SeqNo: **4912447** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	5.00								

LCS Sample ID: **LCS-136621** Units: **mg/Kg** Analysis Date: **16-Jan-2019 23:50**
Client ID: Run ID: **ICS3K2_331216** SeqNo: **4912448** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	190	5.00	200	0	95.0	90 - 110				

LCSD Sample ID: **LCSD-136621** Units: **mg/Kg** Analysis Date: **17-Jan-2019 00:11**
Client ID: Run ID: **ICS3K2_331216** SeqNo: **4912449** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	190.8	5.00	200	0	95.4	90 - 110	190	0.431	20	

MS Sample ID: **HS19010608-13MS** Units: **mg/Kg** Analysis Date: **17-Jan-2019 11:20**
Client ID: **SW-13** Run ID: **ICS3K2_331216** SeqNo: **4912480** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	192.9	4.92	98.34	104	90.4	75 - 125				

MS Sample ID: **HS19010495-07MS** Units: **mg/Kg** Analysis Date: **17-Jan-2019 10:37**
Client ID: Run ID: **ICS3K2_331216** SeqNo: **4912478** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	96.44	4.93	98.55	3.029	94.8	75 - 125				

MSD Sample ID: **HS19010608-13MSD** Units: **mg/Kg** Analysis Date: **17-Jan-2019 04:30**
Client ID: **SW-13** Run ID: **ICS3K2_331216** SeqNo: **4912461** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	210.3	4.99	99.74	104	107	75 - 125	192.9	8.63	20	

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19010608

QC BATCH REPORT

Batch ID: 136621 **Instrument: ICS3K2** **Method: E300**

MSD Sample ID: **HS19010495-07MSD** Units: **mg/Kg** Analysis Date: **17-Jan-2019 10:58**
Client ID: Run ID: **ICS3K2_331216** SeqNo: **4912479** PrepDate: **15-Jan-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	96.29	4.96	99.19	3.029	94.0	75 - 125	96.44	0.154	20	

The following samples were analyzed in this batch:

HS19010608-06	HS19010608-07	HS19010608-08	HS19010608-09
HS19010608-10	HS19010608-11	HS19010608-12	HS19010608-13
HS19010608-14	HS19010608-15		

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: **HS19010608**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
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/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/Kg	Milligrams per Kilogram

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

Client: WSP Environment & Energy
Project: HT-18
Work Order: HS19010608

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS19010608-01	SW-1	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-02	SW-2	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-03	SW-3	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-04	SW-4	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-05	SW-5	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-05	SW-5	Login	1/15/2019 10:15:24 AM	PJM	SPA110
HS19010608-06	SW-6	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-06	SW-6	Login	1/15/2019 10:15:24 AM	PJM	SPA110
HS19010608-07	S-7 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-07	S-7 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	SPA110
HS19010608-08	S-8 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-08	S-8 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	SPA110
HS19010608-09	S-9 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-09	S-9 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	SPA110
HS19010608-10	S-10 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-10	S-10 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	SPA110
HS19010608-11	SW-11	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-12	SW-12	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-13	SW-13	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-14	SW-14	Login	1/15/2019 10:15:24 AM	PJM	VOA236
HS19010608-15	S-15 @ 4'	Login	1/15/2019 10:15:24 AM	PJM	VOA236

Sample Receipt Checklist

Client Name: WSP Dallas
Work Order: HS19010608
Date/Time Received: **15-Jan-2019 08:50**
Received by: **JRM**

Checklist completed by: *Pablo Marinez* eSignature 15-Jan-2019 Date
Reviewed by: *Bernadette A. Fini* eSignature 16-Jan-2019 Date

Matrices: **SOIL**
Carrier name: **FedEx Standard Overnight**

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 ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☑	N/A ☐
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.7C/2.1C UC/C	IR # 11	
Cooler(s)/Kit(s):	44551		
Date/Time sample(s) sent to storage:	1/15/19 10:30		
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:

Corrective Action:

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Form

Page 1 of 2

COC ID: 142356

HS19010608

WSP Environment & Energy

HT-18

MV

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	HT-18	A	TPH GRO
Work Order		Project Number	31401117.005	B	TPH DRO/ORO
Company Name	WSP USA	Bill To Company		C	BTEX
Send Report To	Matthew Boyle	Invoice Attn		D	Chlorides
Address	2777 N Stemmons Suite 1600	Address		E	
				F	
City/State/Zip	Dallas TX	City/State/Zip		G	
Phone	817 7130262	Phone		H	
Fax		Fax		I	
e-Mail Address	Matthew.Boyle@WSP.com	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SW-1	1-10-19	2:00	Soil	Ice	2	X	X	X	X							
2	SW-2		2:05			2											
3	SW-3		2:10			2											
4	SW-4		2:15			2											
5	SW-5		2:20			2											
6	SW-6		2:25			2											
7	S-7 @ 4'		2:30			2											
8	S-8 @ 4'		2:35			2											
9	S-9 @ 4'		2:45			2											
10	S-10 @ 4'		2:50			2											

Sampler(s) Please Print & Sign: Matt Boyle Matthew Boyle

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☐ Other ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Matt Boyle	1-14-19	6:00	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	1/15/19	08:30	J. Williams
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):
	/		

Notes:

Cooler ID	Cooler Temp
	uc
44551	1.7
	1.1
	CF 0.4

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Form

COC ID: 142353

HS19010608

WSP Environment & Energy

HT-18

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	HT 18	A	TPH CORO
Work Order		Project Number		B	TPH DRO/ORO
Company Name	WSP USA	Bill To Company		C	BTEX
Send Report To	Matthew. Beyle	Invoice Attn		D	~~50~~ Chlorides
Address	2777 N Stemmons Suite 1600	Address		E	
City/State/Zip	Dallas TX	City/State/Zip		F	
Phone	817 7130202	Phone		G	
Fax		Fax		H	
e-Mail Address	Matthew.Beyle@wsp.com	e-Mail Address		I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SW-11	1-10-19	2:55	Soil	ICE	2	✓	✓	✓	✓							
2	SW-12	1-10-19	3:00	Soil	ICE	2											
3	SW-13	1-10-19	3:05	Soil	ICE	1											
4	SW-14	1-10-19	3:10	Soil	ICE	1											
5	SW-15 @ 4'	1-10-19	3:15	Soil	ICE	1											
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Matthew Beyle Matthew Beyle

Shipment Method: Fedex

Required Turnaround Time: (Check Box) ☐ Other ____ ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Matthew Beyle	1/14/19	6:00	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	1/15/19	08:30	J. Swanson
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp
	UC
44551	1.7
	IR11
	CF0.4

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

44581

CUSTODY SEAL

Date: 1-14-19 Time: 6:05
Name: M Boyle
Company: WSP

Received By:
Date: 1/15/19

TRK# 0201 7849 7201 1231

TUE – 15 JAN 10:30A
PRIORITY OVERNIGHT

AB SGRA 44581

77099
TX – US IAH

ALS Environmental Analytical Report - Second Remediation

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

February 18, 2019

Matthew Boyle
WSP Environment & Energy
2777 N. Stemmons Fwy. Suite 1600
Dallas, TX 75207

Work Order: **HS19020627**

Laboratory Results for: **HT-18**

Dear Matthew,

ALS Environmental received 4 sample(s) on Feb 13, 2019 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Bernadette A. Fini
Project Manager

Client: WSP Environment & Energy
Project: HT-18
Work Order: HS19020627

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19020627-01	SW-1	Soil		11-Feb-2019 11:00	13-Feb-2019 08:40	☐
HS19020627-02	SW-14	Soil		11-Feb-2019 11:10	13-Feb-2019 08:40	☐
HS19020627-03	SW-16	Soil		11-Feb-2019 11:20	13-Feb-2019 08:40	☐
HS19020627-04	SW-17	Soil		11-Feb-2019 11:30	13-Feb-2019 08:40	☐

Client: WSP Environment & Energy **CASE NARRATIVE**
Project: HT-18
Work Order: HS19020627

GC Semivolatiles by Method SW8015M

Batch ID: 137688

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Volatiles by Method SW8015

Batch ID: R332844

Sample ID: SW-17 (HS19020627-04MS)

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: SW-17 (HS19020627-04MSD)

- Surrogate recoveries were outside of the control limits due to matrix interference.
- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.
- The RPD between the MS and MSD was outside of the control limit.

GCMS Volatiles by Method SW8260

Batch ID: R332843

Sample ID: HS19020632-08MS

- MS and MSD are for an unrelated sample

WetChemistry by Method E300

Batch ID: 137802

Sample ID: HS19020632-10MS

- MS and MSD are for an unrelated sample (Chloride)

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-1
Collection Date: 11-Feb-2019 11:00

ANALYTICAL REPORT
WorkOrder:HS19020627
Lab ID:HS19020627-01
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0048	mg/Kg	1	14-Feb-2019 12:20
Ethylbenzene	ND		0.0048	mg/Kg	1	14-Feb-2019 12:20
m,p-Xylene	ND		0.0097	mg/Kg	1	14-Feb-2019 12:20
o-Xylene	ND		0.0048	mg/Kg	1	14-Feb-2019 12:20
Toluene	ND		0.0048	mg/Kg	1	14-Feb-2019 12:20
Xylenes, Total	ND		0.0048	mg/Kg	1	14-Feb-2019 12:20
Surr: 1,2-Dichloroethane-d4	*91.5*		*70-126*	*%REC*	*1*	*14-Feb-2019 12:20*
Surr: 4-Bromofluorobenzene	*116*		*70-130*	*%REC*	*1*	*14-Feb-2019 12:20*
Surr: Dibromofluoromethane	*93.3*		*70-130*	*%REC*	*1*	*14-Feb-2019 12:20*
Surr: Toluene-d8	*107*		*70-130*	*%REC*	*1*	*14-Feb-2019 12:20*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	13-Feb-2019 17:44
Surr: 4-Bromofluorobenzene	*91.3*		*70-123*	*%REC*	*1*	*13-Feb-2019 17:44*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 13-Feb-2019		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	14-Feb-2019 16:03
TPH (Motor Oil Range)	**9.9**	n	**3.4**	**mg/Kg**	1	14-Feb-2019 16:03
Surr: 2-Fluorobiphenyl	*69.6*		*60-129*	*%REC*	*1*	*14-Feb-2019 16:03*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Feb-2019		Analyst: KMU
Chloride	ND		4.94	mg/Kg	1	18-Feb-2019 13:19

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-14
Collection Date: 11-Feb-2019 11:10

ANALYTICAL REPORT
WorkOrder:HS19020627
Lab ID:HS19020627-02
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0049	mg/Kg	1	14-Feb-2019 12:45
Ethylbenzene	ND		0.0049	mg/Kg	1	14-Feb-2019 12:45
m,p-Xylene	ND		0.0098	mg/Kg	1	14-Feb-2019 12:45
o-Xylene	ND		0.0049	mg/Kg	1	14-Feb-2019 12:45
Toluene	ND		0.0049	mg/Kg	1	14-Feb-2019 12:45
Xylenes, Total	ND		0.0049	mg/Kg	1	14-Feb-2019 12:45
Surr: 1,2-Dichloroethane-d4	*88.7*		*70-126*	*%REC*	*1*	*14-Feb-2019 12:45*
Surr: 4-Bromofluorobenzene	*90.4*		*70-130*	*%REC*	*1*	*14-Feb-2019 12:45*
Surr: Dibromofluoromethane	*94.2*		*70-130*	*%REC*	*1*	*14-Feb-2019 12:45*
Surr: Toluene-d8	*93.0*		*70-130*	*%REC*	*1*	*14-Feb-2019 12:45*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.049	mg/Kg	1	13-Feb-2019 18:00
Surr: 4-Bromofluorobenzene	*89.2*		*70-123*	*%REC*	*1*	*13-Feb-2019 18:00*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 13-Feb-2019		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	14-Feb-2019 17:16
TPH (Motor Oil Range)	ND	n	3.4	mg/Kg	1	14-Feb-2019 17:16
Surr: 2-Fluorobiphenyl	*73.0*		*60-129*	*%REC*	*1*	*14-Feb-2019 17:16*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Feb-2019		Analyst: KMU
Chloride	ND		4.96	mg/Kg	1	16-Feb-2019 08:16

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-16
Collection Date: 11-Feb-2019 11:20

ANALYTICAL REPORT
WorkOrder:HS19020627
Lab ID:HS19020627-03
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0051	mg/Kg	1	14-Feb-2019 13:09
Ethylbenzene	ND		0.0051	mg/Kg	1	14-Feb-2019 13:09
m,p-Xylene	ND		0.010	mg/Kg	1	14-Feb-2019 13:09
o-Xylene	ND		0.0051	mg/Kg	1	14-Feb-2019 13:09
Toluene	ND		0.0051	mg/Kg	1	14-Feb-2019 13:09
Xylenes, Total	ND		0.0051	mg/Kg	1	14-Feb-2019 13:09
Surr: 1,2-Dichloroethane-d4	*91.8*		*70-126*	*%REC*	*1*	*14-Feb-2019 13:09*
Surr: 4-Bromofluorobenzene	*111*		*70-130*	*%REC*	*1*	*14-Feb-2019 13:09*
Surr: Dibromofluoromethane	*92.7*		*70-130*	*%REC*	*1*	*14-Feb-2019 13:09*
Surr: Toluene-d8	*102*		*70-130*	*%REC*	*1*	*14-Feb-2019 13:09*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	13-Feb-2019 18:49
Surr: 4-Bromofluorobenzene	*90.0*		*70-123*	*%REC*	*1*	*13-Feb-2019 18:49*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 13-Feb-2019		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	14-Feb-2019 14:51
TPH (Motor Oil Range)	**12**	n	**3.4**	**mg/Kg**	1	14-Feb-2019 14:51
Surr: 2-Fluorobiphenyl	*76.6*		*60-129*	*%REC*	*1*	*14-Feb-2019 14:51*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Feb-2019		Analyst: KMU
Chloride	ND		4.94	mg/Kg	1	16-Feb-2019 08:30

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

Client: WSP Environment & Energy
Project: HT-18
Sample ID: SW-17
Collection Date: 11-Feb-2019 11:30

ANALYTICAL REPORT
WorkOrder:HS19020627
Lab ID:HS19020627-04
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0048	mg/Kg	1	14-Feb-2019 13:34
Ethylbenzene	ND		0.0048	mg/Kg	1	14-Feb-2019 13:34
m,p-Xylene	ND		0.0096	mg/Kg	1	14-Feb-2019 13:34
o-Xylene	ND		0.0048	mg/Kg	1	14-Feb-2019 13:34
Toluene	ND		0.0048	mg/Kg	1	14-Feb-2019 13:34
Xylenes, Total	ND		0.0048	mg/Kg	1	14-Feb-2019 13:34
Surr: 1,2-Dichloroethane-d4	*93.0*		*70-126*	*%REC*	*1*	*14-Feb-2019 13:34*
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*14-Feb-2019 13:34*
Surr: Dibromofluoromethane	*93.2*		*70-130*	*%REC*	*1*	*14-Feb-2019 13:34*
Surr: Toluene-d8	*102*		*70-130*	*%REC*	*1*	*14-Feb-2019 13:34*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.049	mg/Kg	1	13-Feb-2019 19:05
Surr: 4-Bromofluorobenzene	*88.9*		*70-123*	*%REC*	*1*	*13-Feb-2019 19:05*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 13-Feb-2019		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	14-Feb-2019 17:40
TPH (Motor Oil Range)	**8.7**	n	**3.4**	**mg/Kg**	1	14-Feb-2019 17:40
Surr: 2-Fluorobiphenyl	*69.7*		*60-129*	*%REC*	*1*	*14-Feb-2019 17:40*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 15-Feb-2019		Analyst: KMU
Chloride	**8.35**		**4.96**	**mg/Kg**	1	16-Feb-2019 08:45

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

WEIGHT LOG

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19020627

Batch ID: 2914 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS19020627-01	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS19020627-02	1	5.08 (g)	5 (mL)	0.98	Bulk (5030B)
HS19020627-03	1	5.06 (g)	5 (mL)	0.99	Bulk (5030B)
HS19020627-04	1	5.12 (g)	5 (mL)	0.98	Bulk (5030B)

Batch ID: 2915 **Method:** VOLATILES BY SW8260C

SampID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS19020627-01	1	5.179 (g)	5 (mL)	0.97	Bulk (5030B)
HS19020627-02	1	5.101 (g)	5 (mL)	0.98	Bulk (5030B)
HS19020627-03	1	4.924 (g)	5 (mL)	1.02	Bulk (5030B)
HS19020627-04	1	5.228 (g)	5 (mL)	0.96	Bulk (5030B)

Batch ID: 137688 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19020627-01	1	30.17	1 (mL)	0.03315
HS19020627-02	1	30.07	1 (mL)	0.03326
HS19020627-03	1	30.03	1 (mL)	0.0333
HS19020627-04	1	30.06	1 (mL)	0.03327

Batch ID: 137802 **Method:** ANIONS BY E300.0 **Prep:** 300_S_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19020627-01	1	5.0605	50 (mL)	9.88
HS19020627-02	1	5.0451	50 (mL)	9.911
HS19020627-03	1	5.064	50 (mL)	9.874
HS19020627-04	1	5.0361	50 (mL)	9.928

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19020627

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 137688	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS19020627-01	SW-1	11 Feb 2019 11:00		13 Feb 2019 13:09	14 Feb 2019 16:03	1
HS19020627-02	SW-14	11 Feb 2019 11:10		13 Feb 2019 13:09	14 Feb 2019 17:16	1
HS19020627-03	SW-16	11 Feb 2019 11:20		13 Feb 2019 13:09	14 Feb 2019 14:51	1
HS19020627-04	SW-17	11 Feb 2019 11:30		13 Feb 2019 13:09	14 Feb 2019 17:40	1
Batch ID 137802	**Test Name :** ANIONS BY E300.0			**Matrix:** Soil		
HS19020627-01	SW-1	11 Feb 2019 11:00		15 Feb 2019 15:39	18 Feb 2019 13:19	1
HS19020627-02	SW-14	11 Feb 2019 11:10		15 Feb 2019 15:39	16 Feb 2019 08:16	1
HS19020627-03	SW-16	11 Feb 2019 11:20		15 Feb 2019 15:39	16 Feb 2019 08:30	1
HS19020627-04	SW-17	11 Feb 2019 11:30		15 Feb 2019 15:39	16 Feb 2019 08:45	1
Batch ID R332843	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS19020627-01	SW-1	11 Feb 2019 11:00			14 Feb 2019 12:20	1
HS19020627-02	SW-14	11 Feb 2019 11:10			14 Feb 2019 12:45	1
HS19020627-03	SW-16	11 Feb 2019 11:20			14 Feb 2019 13:09	1
HS19020627-04	SW-17	11 Feb 2019 11:30			14 Feb 2019 13:34	1
Batch ID R332844	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS19020627-01	SW-1	11 Feb 2019 11:00			13 Feb 2019 17:44	1
HS19020627-02	SW-14	11 Feb 2019 11:10			13 Feb 2019 18:00	1
HS19020627-03	SW-16	11 Feb 2019 11:20			13 Feb 2019 18:49	1
HS19020627-04	SW-17	11 Feb 2019 11:30			13 Feb 2019 19:05	1

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19020627

QC BATCH REPORT

Batch ID: 137688 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-137688** Units: **mg/Kg** Analysis Date: **14-Feb-2019 12:24**
Client ID: Run ID: **FID-7_332870** SeqNo: **4949991** PrepDate: **13-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	ND	1.7								
TPH (Motor Oil Range)	ND	3.4								
Surr: 2-Fluorobiphenyl	*2.817*	*0.10*	*3.33*	*0*	*84.6*	*70 - 130*				

LCS Sample ID: **LCS-137688** Units: **mg/Kg** Analysis Date: **14-Feb-2019 12:48**
Client ID: Run ID: **FID-7_332870** SeqNo: **4949992** PrepDate: **13-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	26.93	1.7	33.33	0	80.8	70 - 130				
TPH (Motor Oil Range)	31.35	3.4	33.33	0	94.1	70 - 130				
Surr: 2-Fluorobiphenyl	*2.361*	*0.10*	*3.33*	*0*	*70.9*	*70 - 130*				

MS Sample ID: **HS19020627-03MS** Units: **mg/Kg** Analysis Date: **14-Feb-2019 15:15**
Client ID: **SW-16** Run ID: **FID-7_332870** SeqNo: **4950256** PrepDate: **13-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	33.19	1.7	33.19	0.6661	98.0	70 - 130				
TPH (Motor Oil Range)	44.77	3.4	33.19	12.13	98.3	70 - 130				
Surr: 2-Fluorobiphenyl	*2.956*	*0.10*	*3.316*	*0*	*89.1*	*60 - 129*				

MSD Sample ID: **HS19020627-03MSD** Units: **mg/Kg** Analysis Date: **14-Feb-2019 15:39**
Client ID: **SW-16** Run ID: **FID-7_332870** SeqNo: **4950257** PrepDate: **13-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	35.46	1.7	33.23	0.6661	105	70 - 130	33.19	6.62	30	
TPH (Motor Oil Range)	49.54	3.4	33.23	12.13	113	70 - 130	44.77	10.1	30	
Surr: 2-Fluorobiphenyl	*2.774*	*0.10*	*3.32*	*0*	*83.5*	*60 - 129*	*2.956*	*6.36*	*30*	

The following samples were analyzed in this batch: HS19020627-01 HS19020627-02 HS19020627-03 HS19020627-04

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19020627

QC BATCH REPORT

Batch ID: R332844 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **MBLK-190213** Units: **mg/Kg** Analysis Date: **13-Feb-2019 16:23**
Client ID: Run ID: **FID-14_332844** SeqNo: **4949494** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.08612*	*0.0050*	*0.1*	*0*	*86.1*	*75 - 121*				

LCS Sample ID: **GLCS-190213** Units: **mg/Kg** Analysis Date: **13-Feb-2019 15:50**
Client ID: Run ID: **FID-14_332844** SeqNo: **4949492** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9386	0.050	1	0	93.9	72 - 121				
Surr: 4-Bromofluorobenzene	*0.1122*	*0.0050*	*0.1*	*0*	*112*	*75 - 121*				

LCSD Sample ID: **GLCSD-190213** Units: **mg/Kg** Analysis Date: **13-Feb-2019 16:06**
Client ID: Run ID: **FID-14_332844** SeqNo: **4949493** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9747	0.050	1	0	97.5	70 - 121	0.9386	3.77	30	
Surr: 4-Bromofluorobenzene	*0.1156*	*0.0050*	*0.1*	*0*	*116*	*75 - 121*	*0.1122*	*2.96*	*30*	

MS Sample ID: **HS19020627-04MS** Units: **mg/Kg** Analysis Date: **13-Feb-2019 19:21**
Client ID: **SW-17** Run ID: **FID-14_332844** SeqNo: **4949505** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.4316	0.049	0.98	0	44.0	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.0689*	*0.0049*	*0.098*	*0*	*70.3*	*70 - 123*				

MSD Sample ID: **HS19020627-04MSD** Units: **mg/Kg** Analysis Date: **13-Feb-2019 19:37**
Client ID: **SW-17** Run ID: **FID-14_332844** SeqNo: **4949506** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.3081	0.050	0.99	0	31.1	70 - 130	0.4316	33.4	30	SR
Surr: 4-Bromofluorobenzene	*0.03519*	*0.0050*	*0.099*	*0*	*35.5*	*70 - 123*	*0.0689*	*64.8*	*30*	SR

The following samples were analyzed in this batch: HS19020627-01 HS19020627-02 HS19020627-03 HS19020627-04

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19020627

QC BATCH REPORT

Batch ID: R332843 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS1-021419** Units: **ug/Kg** Analysis Date: **14-Feb-2019 09:28**
Client ID: Run ID: **VOA5_332843** SeqNo: **4949485** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	5.0								
Ethylbenzene	ND	5.0								
m,p-Xylene	ND	10								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*45*	*0*	*50*	*0*	*90.0*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.86*	*0*	*50*	*0*	*99.7*	*80 - 120*				
Surr: Dibromofluoromethane	*47.38*	*0*	*50*	*0*	*94.8*	*80 - 119*				
Surr: Toluene-d8	*44.33*	*0*	*50*	*0*	*88.7*	*81 - 118*				

LCS Sample ID: **VLCSS1-021419** Units: **ug/Kg** Analysis Date: **14-Feb-2019 08:39**
Client ID: Run ID: **VOA5_332843** SeqNo: **4949484** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	42.79	5.0	50	0	85.6	75 - 124				
Ethylbenzene	45.45	5.0	50	0	90.9	70 - 123				
m,p-Xylene	90.37	10	100	0	90.4	77 - 125				
o-Xylene	47.48	5.0	50	0	95.0	78 - 122				
Toluene	42.8	5.0	50	0	85.6	76 - 122				
Xylenes, Total	137.9	5.0	150	0	91.9	77 - 128				
Surr: 1,2-Dichloroethane-d4	*45.73*	*0*	*50*	*0*	*91.5*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*52.08*	*0*	*50*	*0*	*104*	*80 - 120*				
Surr: Dibromofluoromethane	*48.05*	*0*	*50*	*0*	*96.1*	*80 - 119*				
Surr: Toluene-d8	*44.52*	*0*	*50*	*0*	*89.0*	*81 - 118*				

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19020627

QC BATCH REPORT

Batch ID: R332843 **Instrument: VOA5** **Method: SW8260**

MS Sample ID: **HS19020632-08MS** Units: **ug/Kg** Analysis Date: **14-Feb-2019 11:31**
Client ID: Run ID: **VOA5_332843** SeqNo: **4949725** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	36.58	5.0	50.5	0	72.4	70 - 130				
Ethylbenzene	34.11	5.0	50.5	0	67.5	70 - 130				S
m,p-Xylene	65.99	10	101	0	65.3	70 - 130				S
o-Xylene	35.05	5.0	50.5	0	69.4	70 - 130				S
Toluene	38.81	5.0	50.5	0	76.9	70 - 130				
Xylenes, Total	101	5.0	151.5	0	66.7	70 - 130				S
Surr: 1,2-Dichloroethane-d4	*49.09*	*0*	*50.5*	*0*	*97.2*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*52.68*	*0*	*50.5*	*0*	*104*	*70 - 130*				
Surr: Dibromofluoromethane	*48.4*	*0*	*50.5*	*0*	*95.8*	*70 - 130*				
Surr: Toluene-d8	*45.93*	*0*	*50.5*	*0*	*90.9*	*70 - 130*				

MSD Sample ID: **HS19020632-08MSD** Units: **ug/Kg** Analysis Date: **14-Feb-2019 11:55**
Client ID: Run ID: **VOA5_332843** SeqNo: **4949726** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Benzene	37.16	5.0	49.5	0	75.1	70 - 130	36.58	1.57	30	
Ethylbenzene	37.37	5.0	49.5	0	75.5	70 - 130	34.11	9.12	30	
m,p-Xylene	68.14	9.9	99	0	68.8	70 - 130	65.99	3.19	30	S
o-Xylene	42.46	5.0	49.5	0	85.8	70 - 130	35.05	19.1	30	
Toluene	42.62	5.0	49.5	0	86.1	70 - 130	38.81	9.34	30	
Xylenes, Total	110.6	5.0	148.5	0	74.5	70 - 130	101	9.03	30	
Surr: 1,2-Dichloroethane-d4	*48.94*	*0*	*49.5*	*0*	*98.9*	*70 - 126*	*49.09*	*0.295*	*30*	
Surr: 4-Bromofluorobenzene	*59.09*	*0*	*49.5*	*0*	*119*	*70 - 130*	*52.68*	*11.5*	*30*	
Surr: Dibromofluoromethane	*49.04*	*0*	*49.5*	*0*	*99.1*	*70 - 130*	*48.4*	*1.32*	*30*	
Surr: Toluene-d8	*52.19*	*0*	*49.5*	*0*	*105*	*70 - 130*	*45.93*	*12.8*	*30*	

The following samples were analyzed in this batch: HS19020627-01 HS19020627-02 HS19020627-03 HS19020627-04

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19020627

QC BATCH REPORT

Batch ID: 137802 **Instrument: ICS2100** **Method: E300**

MBLK Sample ID: **MBLK-137802** Units: **mg/Kg** Analysis Date: **16-Feb-2019 07:17**
Client ID: Run ID: **ICS2100_333053** SeqNo: **4953759** PrepDate: **15-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	5.00								

LCS Sample ID: **LCS-137802** Units: **mg/Kg** Analysis Date: **16-Feb-2019 07:32**
Client ID: Run ID: **ICS2100_333053** SeqNo: **4953760** PrepDate: **15-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	194.5	5.00	200	0	97.2	90 - 110				

LCSD Sample ID: **LCSD-137802** Units: **mg/Kg** Analysis Date: **16-Feb-2019 07:46**
Client ID: Run ID: **ICS2100_333053** SeqNo: **4953762** PrepDate: **15-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	200.4	5.00	200	0	100	90 - 110	194.5	2.99	20	

MS Sample ID: **HS19020632-10MS** Units: **mg/Kg** Analysis Date: **16-Feb-2019 13:21**
Client ID: Run ID: **ICS2100_333053** SeqNo: **4953800** PrepDate: **15-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2335	5.00	99.99	2299	35.6	75 - 125				SEO

MS Sample ID: **HS19020627-04MS** Units: **mg/Kg** Analysis Date: **16-Feb-2019 08:59**
Client ID: **SW-17** Run ID: **ICS2100_333053** SeqNo: **4953774** PrepDate: **15-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	113.5	4.98	99.52	8.35	106	75 - 125				

MSD Sample ID: **HS19020632-10MSD** Units: **mg/Kg** Analysis Date: **16-Feb-2019 13:36**
Client ID: Run ID: **ICS2100_333053** SeqNo: **4953801** PrepDate: **15-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2333	4.95	98.97	2299	33.7	75 - 125	2335	0.093	20	SEO

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: HS19020627

QC BATCH REPORT

Batch ID: 137802 **Instrument: ICS2100** **Method: E300**

MSD Sample ID: **HS19020627-04MSD** Units: **mg/Kg** Analysis Date: **16-Feb-2019 09:14**
Client ID: **SW-17** Run ID: **ICS2100_333053** SeqNo: **4953775** PrepDate: **15-Feb-2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	113.9	4.95	98.98	8.35	107	75 - 125	113.5	0.381	20	

The following samples were analyzed in this batch: HS19020627-01 HS19020627-02 HS19020627-03 HS19020627-04

Client: WSP Environment & Energy
Project: HT-18
WorkOrder: **HS19020627**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
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/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/Kg	Milligrams per Kilogram

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	ANAB L2231	20-Dec-2021
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019
North Carolina	624-2019	31-Dec-2019
California	2919, 2018-2019	30-Apr-2019
Maryland	343, 2018-2019	30-Jun-2019

Sample Receipt Checklist

Client Name: WSP Dallas
Work Order: HS19020627
Date/Time Received: **13-Feb-2019 08:40**
Received by: **RPG**

Checklist completed by: *Raegen Giga* 13-Feb-2019
eSignature | Date

Reviewed by: _____
eSignature | Date

Matrices: **soil**
Carrier name: **FedEx Priority Overnight**

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 ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☑	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:192605
Samplers name present on COC?	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 ☐	
Temperature(s)/Thermometer(s):	0.9c/1.3c uc/c		IR 11
Cooler(s)/Kit(s):	Green		
Date/Time sample(s) sent to storage:	02/13/2019 10:40		
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:

Corrective Action:

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Middletown, PA +1 717 944 5541
Spring City, PA +1 610 948 4903
Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 192605

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	31401117.005	Project Name	~~Aikman SWD~~ HT -18	A	300_S (Chloride soil)
Work Order		Project Number	31401117.005	B	TPH GRO
Company Name	WSP Environment & Energy	Bill To Company	WSP Environment & Energy	C	TPH DRO/ORO
Send Report To	Matthew Boyle	Invoice Attn	Accounts Payable	D	BTEX
Address	2777 N. Stemmons Fwy. Suite 1600	Address	2777 N. Stemmons Fwy. Suite 1600	E	
				F	
City/State/Zip	Dallas, TX 75207	City/State/Zip	Dallas TX 75207	G	
Phone	(817) 713-0262	Phone	(817) 713-0262	H	
Fax		Fax		I	
e-Mail Address	matthew.boyle@wsp.com	e-Mail Address	Accountspayable@WSPGroup.com	J	

HS19020627
WSP Environment & Energy
Aikman SWD

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SW-1	2-11-19	11:00	Soil	ICE	1	✓	✓	✓	✓							
2	SW-14	"	11:10	"	"	1	✓	✓	✓	✓							
3	S-16	"	11:20	"	"	1	✓	✓	✓	✓							
4	S-17	"	11:30	"	"	1	✓	✓	✓	✓							
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Matth Byl Matthew Boyle

Shipment Method: FedEX

Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ~~☐~~ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☒ Other 48 hr

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
Matth Byl	2-11-19	3:00	
Relinquished by:	Date:	Time:	Received by (Laboratory):
			R Ciga 2/13/19 08:40
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

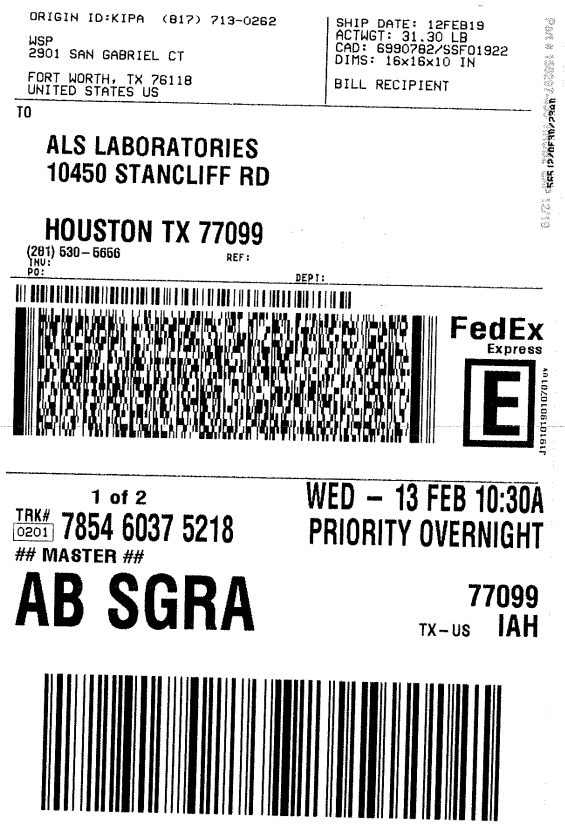
Notes: WSP Aikman SWD

Cooler ID	Cooler Temp. °C
GREEN	0.9c
IR 11	
CF+0.3c	

QC Package: (Check One Box Below)
☒ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other
☐ TRRP Checklist
☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.


ORIGIN ID:KIPA (817) 713-0262

WSP
2901 SAN GABRIEL CT

FORT WORTH, TX 76118
UNITED STATES US

SHIP DATE: 12FEB19
ACTWGT: 31.30 LB
CAD: 6990782/SSF01922
DIMS: 16x16x10 IN

BILL RECIPIENT

TO

ALS LABORATORIES
10450 STANCLIFF RD

HOUSTON TX 77099
(281) 530-5656 REF:
INV:
PO: DEPT:

FedEx
Express

1 of 2

TRK# 0201 7854 6037 5218

WED - 13 FEB 10:30A
PRIORITY OVERNIGHT

MASTER

AB SGRA

77099
TX-US IAH