State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP-5083
Facility ID	
Application ID	

NMOCD approves 1RP-5083 for closure.

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: 12/12/2018

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.

APPROVED
By CHernandez at 3:37 pm, Jan 14, 2019

Closure Approved by: _____

Printed Name: _____ Title: _____

December 12, 2018

Ms. Christina Hernandez/Ms. Olivia Yu
New Mexico Oil Conservation Division – District 1
1625 N. French Drive
Hobbs, NM 88240

RE: Release Closure Request
Percussion Petroleum
West Lovington Tank Battery
Lea County, New Mexico
NMOCD Case Number – 1RP-5083

Ms. Hernandez/Ms. Yu:

WSP USA, Inc. (WSP) was engaged by Percussion Petroleum, LLC (Percussion) to perform soil assessment and remediation services at the West Lovington 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 26, 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 21, 2018 approximately 80 barrels of oil was released from the West Lovington Tank Battery as a result of the tanks overfilling. Approximately 50 barrels was recovered via vacuum truck. The incident was reported to Ms. Olivia Yu at the Hobbs District 1 office of the New Mexico Oil Conservation Division (NMOCD) at 11:00 AM Mountain Standard Time on June 1, 2018.

BACKGROUND INFORMATION

The West Lovington facility is located 10 miles northwest of Hobbs, New Mexico. The legal location description for the site is Section 20, Township 17S, Range 37E 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 Kimbrough-Lea complex, 0 to 3 percent slopes. Kimbrough-Lea soils are described as loams with cemented material at approximately 10 inches in depth. The New Mexico State Engineer's office identified the nearest water well, with groundwater depth information available, to be located in Section 20, Township 17S, Range 37E, 2,800 feet to the northwest of the West Lovington facility. The depth to groundwater was identified at 68 feet below ground surface (bgs). The referenced groundwater data has been included in the appendix.

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 between 53 and 68 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 10, the correlating action levels for this ranking score are 10 parts per million (ppm) for benzene, 50 ppm for benzene, toluene, ethylbenzene, and total xylenes, and 1,000 ppm for TPH- GRO/DRO/ORO. A chloride level of 600 ppm was used as an action level. The depth to groundwater was identified using the USGS National Water Information System, a map showing the wells is included in the appendix as Figure 2, the water level reports have been included in the Appendix. 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 June 4, 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/DRO/ORO, BTEX and chlorides. The preliminary analytical results have been summarized in the attached Table 1 and the attached Figure 4 identifies the sample locations. Based on the 1993 site ranking criteria and corresponding action levels, WSP identified concentrations of TPH GRO/DRO/ORO and BTEX in the upper 1 foot of three sample locations on the pad site. WSP oversaw P2 Construction, Inc. (P2) excavating approximately 600 cubic yards of petroleum hydrocarbon and chloride impacted soil from the impacted area, ranging from approximately 2.0 feet in depth. All soil was transported to R360 Environmental Solutions (R360) landfill in Lea County. On November 16, 2018 WSP staff collected soil samples from the impacted area to confirm the effectiveness of the remediation efforts by Percussion. Additional excavation was performed on to a depth of 4 feet and the areas were resampled on December 6, 2018 under the previously described sampling protocol.

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 Figures 5 and 6.

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, 1000 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-5083.

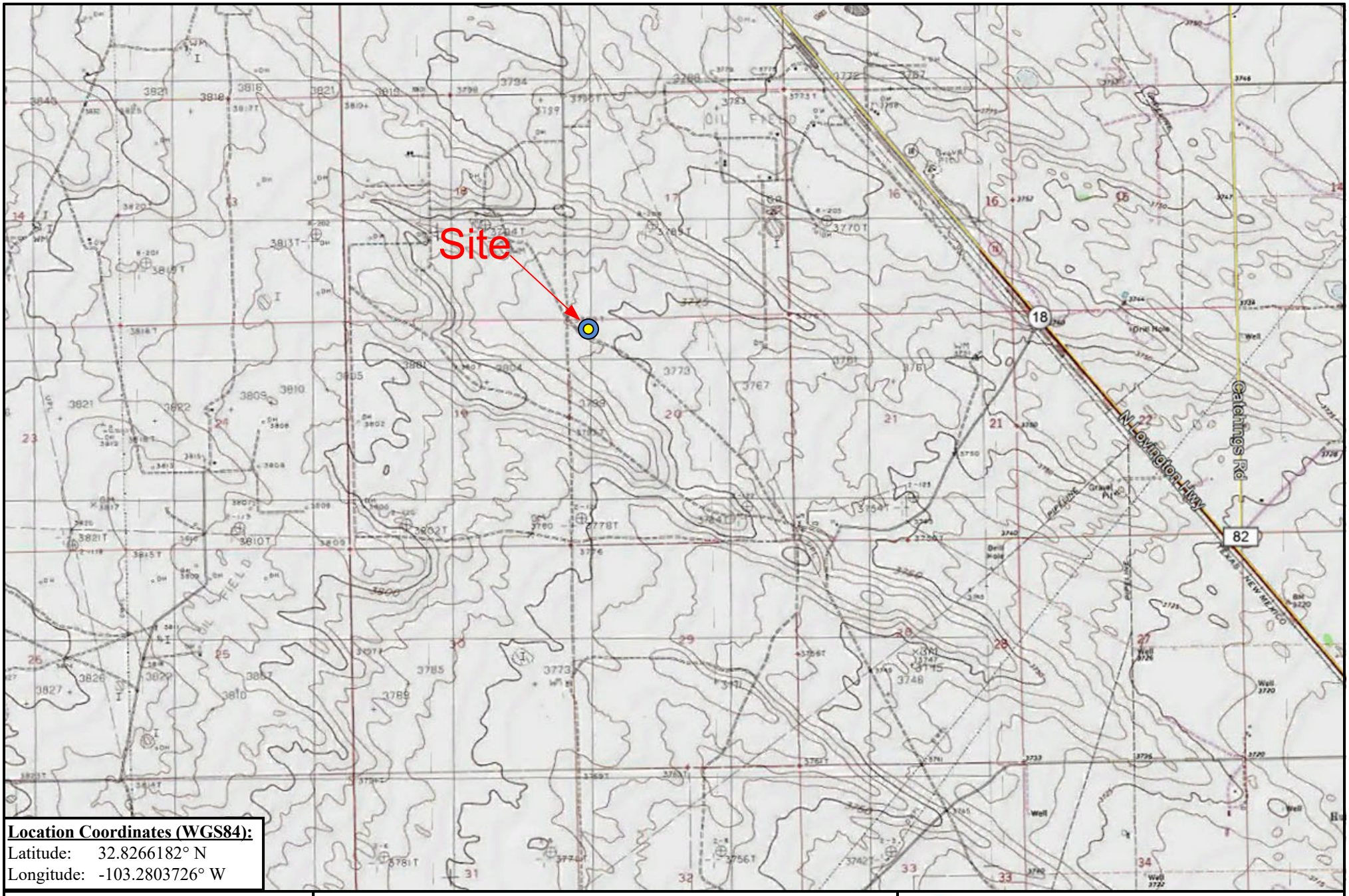
If you have any questions or require additional information , please contact Matthew Boyle at (214) 561-7424 or (817) 713-0262.

Sincerely,

Matthew Boyle
Sr. Environmental Scientist

Charles D. Harlan, P.G.
Director, Business Development – Water & Environment
TX/Mountain Region

Figures



Location Coordinates (WGS84):
Latitude: 32.8266182° N
Longitude: -103.2803726° W

Percussion Petroleum
West Lovington 20 #1
Lea County, New Mexico

Legend:

- Site Location

(Source): Google Earth

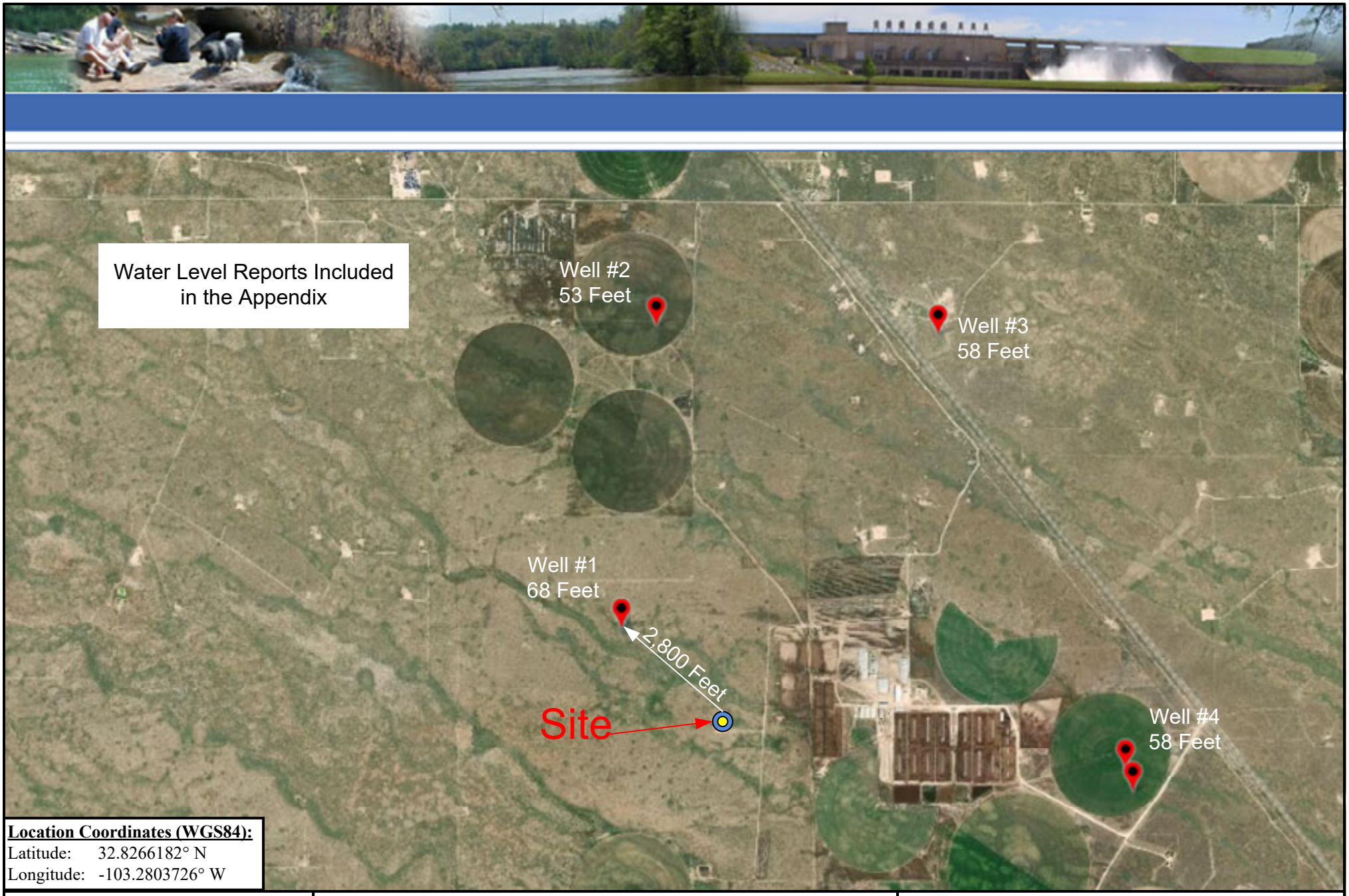
N

(Not to Scale)

wsp

Site Location Map

WSP Project#: 31401117.008	7/25/2018	Figure 1



Percussion Petroleum
West Lovington 20 #1
Lea County, New Mexico

Legend:

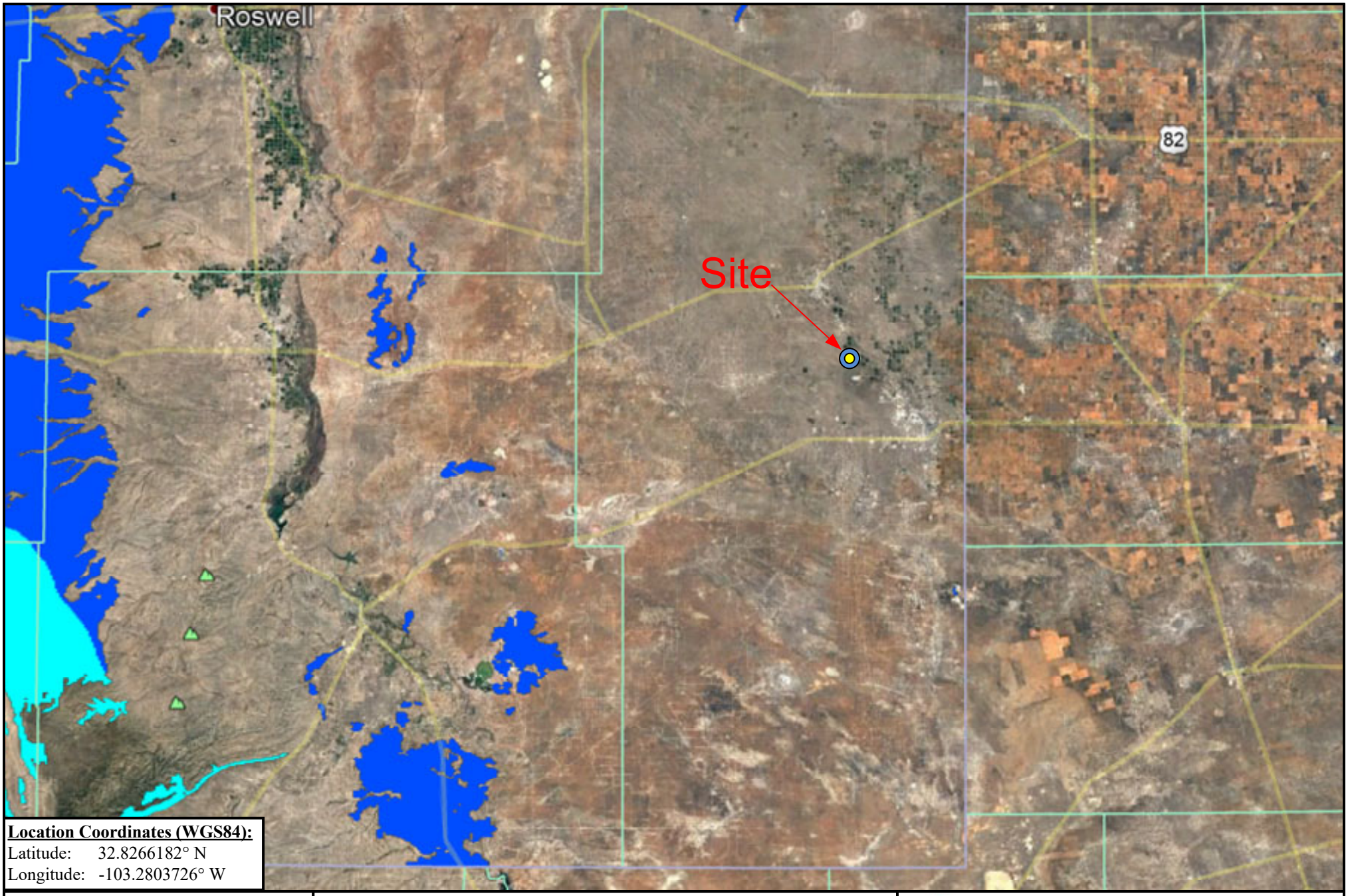
Sample Location

N

1" = 25'

USGS Water Well Location Map

WSP Project#: 31401117.008	12/8/2018	Figure 2



Location Coordinates (WGS84):
Latitude: 32.8266182° N
Longitude: -103.2803726° W

Percussion Petroleum
West Lovington 20 #1
Lea County, New Mexico

Legend:

Sample Location

N

(Not to Scale)

wsp

USGS Karst Topography Map

WSP Project#: 31401117.008	12/8/2018	Figure 3

Location Coordinates (WGS84):
Latitude: 32.8266182° N
Longitude: -103.2803726° W

Percussion Petroleum
West Lovington 20 #1
Lea County, New Mexico

Legend:

Impacted Area

Sample Location

N

1" = 25'

Post Spill Sample Location Map

WSP Project#: 31401117.008	12/8/2018	Figure 4

Location Coordinates (WGS84):
Latitude: 32.8266182° N
Longitude: -103.2803726° W

Percussion Petroleum
West Lovington 20 #1
Lea County, New Mexico

Legend:

First Remediation Excavation

Sample Location

N

1" = 25'

wsp

Remediation Excavation / Sample Location Map

WSP Project#: 31401117.008	12/8/2018	Figure 5

Location Coordinates (WGS84):
Latitude: 32.8266182° N
Longitude: -103.2803726° W

Percussion Petroleum
West Lovington 20 #1
Lea County, New Mexico

Legend:

Second Remediation Excavation

Sample Location

N

1" = 25'

Remediation Excavation / Sample Location Map

WSP Project#: 31401117.008	12/8/2018	Figure 6

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			600	1,000				10			
								50			
S-1	1'	6/4/2018	22.3	7,900	7,100	9,800	**24,800**	3.7	**76**	**57**	**210**
S-1	2'	6/4/2018	38.6	1.8	150	160	312	u	0.032	0.012	0.1
S-1	3'	6/4/2018	49.1	u	u	7	7	u	u	u	u
S-1	4'	6/4/2018	50	0.055	u	6.7	6.755	u	u	u	u
S-2	1'	6/4/2018	25	9,100	9,800	9,000	**27,900**	**13**	**82**	47	**240**
S-2	2'	6/4/2018	11.60	3.8	9.9	19	32.7	0.047	0.19	0.13	0.34
S-2	3'	6/4/2018	6.53	0.22	u	7.2	7.42	u	u	u	u
S-2	4'	6/4/2018	166	0.12	3.1	7.4	10.62	u	u	u	u
S-3	1'	6/4/2018	7.82	2,000	6,300	7,600	**15,900**	1.3	16	6.9	37
S-3	2'	6/4/2018	35	0.46	8.6	15	24.06	u	u	u	0.018
S-3	3'	6/4/2018	98.7	u	10	36	46	u	u	u	u
S-3	4'	6/4/2018	11.3	u	u	11	11	u	u	u	u
Post Remediation Sampling											
SW-1	1'	11/16/2018	41.4	16	870	900	**1,786**	u	0.066	0.064	0.430
SW-2	1'	11/16/2018	17.8	1,400	160	120	**1,680**	u	0.860	2.3	15.0
SW-3	1'	11/16/2018	58	610	1,100	770	**2,480**	u	0.030	0.030	8.1
SW-4	1'	11/16/2018	17.5	650	2,600	1,600	**4,850**	u	0.460	1.2	7.2
SW-5	1'	11/16/2018	94.3	2.7	430	530	962	u	u	u	u
SW-6	1'	11/16/2018	66.9	0.8	100	120	221	u	u	u	u
SW-7	1'	11/16/2018	50.3	6.2	1,900	2,700	**4,606**	u	u	0.015	0.055
SW-8	1'	11/16/2018	61.7	2.5	7,100	8,200	**15,302**	u	u	u	0.009
SW-9	1'	11/16/2018	u	u	u	3.6	3.6	u	u	u	u
SW-10	1'	11/16/2018	u	u	u	20	20	u	u	u	u
S-1 1'	1'	11/16/2018	17.2	u	19	49	68	u	u	u	u
S-1 2'	2'	11/16/2018	25.1	0.15	430	450	880	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			600	1,000				10			
								50			
S-2 1'	1'	11/16/2018	u	u	u	3.7	3.7	u	u	u	u
S-2 2'	2'	11/16/2018	20	u	18	29	47	u	u	u	u
S-3 1'	1'	11/16/2018	u	0	110	160	270	u	u	u	u
S-3 2'	2'	11/16/2018	9.09	4	1,600	2,000	**3,604**	u	u	u	u
S-4 1'	1'	11/16/2018	u	u	u	u	u	u	u	u	u
S-4 2'	2'	11/16/2018	u	u	6.0	21	27	u	u	u	u
S-5 1'	1'	11/16/2018	303	u	14	32	46	u	u	u	u
S-5 2'	2'	11/16/2018	399	u	73	160	233	u	u	u	u
S-6 1'	1'	11/16/2018	u	u	u	3.6	3.6	u	u	u	u
S-6 2'	2'	11/16/2018	u	u	u	4.4	4.4	u	u	u	u
S-7 1'	1'	11/16/2018	55.4	780	2,700	2,400	**5,880**	u	0.046	0.028	7.3
S-7 2'	2'	11/16/2018	68.1	9	570	620	**1,199**	u	u	u	0.12
Post Remediation Re-Sampling											
SW-1R	1'	12/6/2018	u	u	u	u	u	u	u	u	u
SW-2R	1'	12/6/2018	5.93	u	5.8	12	17.8	u	u	u	u
SW-3R	1'	12/6/2018	568	u	3.8	4.6	8.4	u	u	u	u
SW-4R	1'	12/6/2018	484	0.059	35	35	70	u	u	u	u
SW-5R	1'	12/6/2018	25.1	0.12	52	64	116.1	u	u	u	u
SW-8R	1'	12/6/2018	144	u	2	u	2	u	u	u	u
SW-7R	1'	12/6/2018	52.5	u	21	22	43	u	u	u	u
SW-9R	1'	12/6/2018	52.5	u	20	53	73	u	u	u	u
S-1R	3'	12/6/2018	8.52	u	21	34	55	u	u	u	u
S-2R	3'	12/6/2018	193	u	7.7	23	30.7	u	u	u	u
S-3R	3'	12/6/2018	385	u	6.6	9.7	16.3	u	u	u	u
S-7R	3'	12/6/2018	62.2	u	4.1	4.6	8.7	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			600	1,000				10			
								50			
SW-11	1'	12/6/2018	163	u	15	27	42	u	u	u	u
SW-12	1'	12/6/2018	91.8	0	100	80	180	u	u	u	u

U - Not Detected - less than Standard Detection Limit

"Action Levels" represents the NMOCD Action Levels which the BLM utilizes

Bold numbers exhibit concentrations above the RRC PCL.

Site Photographs

PHOTOGRAPHIC LOG		
Percussion Petroleum	**West Lovington**	**WSP Project #: 31401117.008**

Photo No.	**Date**
1	June 4, 2018

Post Spill Assessment

Photo No.	**Date**
2	June 4, 2018

Post Spill Assessment

PHOTOGRAPHIC LOG		
Percussion Petroleum	**West Lovington**	**WSP Project #: 31401117.008**

Photo No.	**Date**
3	June 4, 2018

Post Spill Assessment

Photo No.	**Date**
4	November 16, 2018

Remediation Excavation

PHOTOGRAPHIC LOG		
Percussion Petroleum	**West Lovington**	**WSP Project #: 31401117.008**

Photo No.	**Date**
5	December 6, 2018

Excavation

Photo No.	**Date**
6	December 6, 2018

Excavation

PHOTOGRAPHIC LOG		
Percussion Petroleum	**West Lovington**	**WSP Project #: 31401117.008**

Photo No.	**Date**
7	December 6, 2018

Excavation

Photo No.	**Date**
8	December 6, 2018

Depth of excavation

PHOTOGRAPHIC LOG		
Percussion Petroleum	**West Lovington**	**WSP Project #: 31401117.008**

Photo No.	**Date**
9	December 6, 2018

Depth of excavation

Photo No.	**Date**
10	December 6, 2018

Sampling

PHOTOGRAPHIC LOG		
Percussion Petroleum	**West Lovington**	**WSP Project #: 31401117.008**

Photo No.	**Date**
11	December 6, 2018

Backfill

Groundwater Data

WELL #1

National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

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USGS 324943103165901 17S.37E.18.41424

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°49'58.42", Longitude 103°17'13.77" NAD83
Lea County, New Mexico , Hydrologic Unit 12080003
Well depth: not determined.
Land surface altitude: 3,786.00 feet above NGVD29.
Well completed in "High Plains aquifer" (N100HGHPLN) national aquifer.
Well completed in "Ogallala Formation" (121OGLL) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1961-03-27	2016-02-03	12
Revisions	Unavailable (site:0) (timeseries:0)		
Additional Data Sources	**Begin Date**	**End Date**	**Count**
Annual Water-Data Report (pdf) **offsite**	2011	2011	1

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center

Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

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U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=324943103165901

Page Contact Information: New Mexico Water Data Support Team
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0.25 0.24 sdww01

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- 324943103165901

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 324943103165901 17S.37E.18.41424

Lea County, New Mexico
Latitude 32°49'58.42", Longitude 103°17'13.77" NAD83
Land-surface elevation 3,786.00 feet above NGVD29
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
1961-03-27		D	36.99			2		U		
1966-02-24		D	38.62			2		U		
1971-02-10		D	40.82			2	R	U		
1976-02-25		D	42.71			2		U		
1981-01-07		D	45.09			2		U		
1986-01-14		D	47.77			2		U		
1991-01-24		D	50.16			2		U		
1996-02-01		D	50.62			2		S		
2001-02-09		D	53.77			2		S		
2006-01-20	15:43 MST	m	56.71			2		S	USGS	
2010-12-22	15:10 MST	m	62.43			2		E	USGS	
2016-02-03	16:40 MST	m	68.17			2	S	S	USGS	

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level

Section	Code	Description
Status	R	Site had been pumped recently.
Status	S	Nearby site that taps the same aquifer was being pumped.
Method of measurement	E	Estimated.
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2018-12-12 09:49:23 EST
1.27 0.45 nadww01

WELL #2

USGS 325051103165201 17S.37E.07.24342

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°51'01", Longitude 103°17'03" NAD27
Lea County, New Mexico , Hydrologic Unit 12080003
Well depth: 95 feet
Land surface altitude: 3,794.00 feet above NGVD29.
Well completed in "Ogallala Formation" (121OGLL) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1981-01-07	1991-01-24	3
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

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U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=325051103165201

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2018-12-12 09:52:53 EST
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Agency code = usgs
site_no list =
- 325051103165201

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 325051103165201 17S.37E.07.24342

Lea County, New Mexico
Latitude 32°51'01", Longitude 103°17'03" NAD27
Land-surface elevation 3,794.00 feet above NGVD29
The depth of the well is 95 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
1981-01-07		D	48.45			2		U		
1986-01-14		D	51.41			2		U		
1991-01-24		D	53.44			2		U		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
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Accessibility Plug-Ins FOIA Privacy Policies and Notices
U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2018-12-12 09:53:44 EST
0.55 0.46 nadww01

WELL #3

National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

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USGS 325051103153801 17S.37E.09.13332

Available data for this site: SUMMARY OF ALL AVAILABLE DATA | GO

Well Site

DESCRIPTION:

Latitude 32°50'59", Longitude 103°15'51" NAD27
Lea County, New Mexico , Hydrologic Unit 12080003
Well depth: 185 feet
Land surface altitude: 3,781.00 feet above NGVD29.
Well completed in "Ogallala Formation" (121OGLL) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1981-09-25	1991-01-24	3
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

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Questions about sites/data?
Feedback on this web site

Automated retrievals
Help
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U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=325051103153801

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2018-12-12 09:55:37 EST
0.41 0.35 sdww01

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Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 325051103153801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 325051103153801 17S.37E.09.13332

Lea County, New Mexico
Latitude 32°50'59", Longitude 103°15'51" NAD27
Land-surface elevation 3,781.00 feet above NGVD29
The depth of the well is 185 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
1981-09-25		D	54.20			2		U		
1986-01-14		D	56.60			2		U		
1991-01-24		D	58.24			2		U		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms

Subscribe for system changes
News

Accessibility Plug-Ins FOIA Privacy Policies and Notices
U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2018-12-12 09:56:26 EST
1.15 0.42 nadww01

WELL #4

National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

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- Please see news on new formats
- Full News

USGS 324917103144801 17S.37E.21.22300

Available data for this site: SUMMARY OF ALL AVAILABLE DATA | GO

Well Site

DESCRIPTION:

Latitude 32°49'29", Longitude 103°15'03" NAD27
Lea County, New Mexico , Hydrologic Unit 12080003
Well depth: not determined.
Land surface altitude: 3,750.00 feet above NGVD29.
Well completed in "Ogallala Formation" (121OGLL) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1961-02-16	1986-01-29	6
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

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Questions about sites/data?
Feedback on this web site

Automated retrievals
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Accessibility Plug-Ins FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=324917103144801

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2018-12-12 09:57:22 EST
0.34 0.32 sdww01

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- Please see news on new formats
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 324917103144801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 324917103144801 17S.37E.21.22300

Lea County, New Mexico
Latitude 32°49'29", Longitude 103°15'03" NAD27
Land-surface elevation 3,750.00 feet above NGVD29
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurem
1961-02-16		D	42.53			2	P	U		
1966-02-24		D	46.38			2		U		
1971-02-10		D	46.46			2	R	U		
1976-02-25		D	47.00			2		U		
1981-01-07		D	49.65			2		U		
1986-01-29		D	52.14			2		U		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Status	P	Site was being pumped.
Status	R	Site had been pumped recently.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
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News

Accessibility Plug-Ins FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2018-12-12 10:05:03 EST
0.85 0.43 nadww01

ALS Environmental Analytical Report - Post Spill

10450 Stancliff Rd. Suite 210
Houston, TX 77099
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June 13, 2018

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

Work Order: **HS18060287**

Laboratory Results for: **Percussion West Lovington**

Dear Matthew,

ALS Environmental received 12 sample(s) on Jun 06, 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: Percussion West Lovington
Work Order: HS18060287

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18060287-01	S-1 1'	Soil		04-Jun-2018 06:45	06-Jun-2018 08:48	☐
HS18060287-02	S-1 2'	Soil		04-Jun-2018 06:50	06-Jun-2018 08:48	☐
HS18060287-03	S-1 3'	Soil		04-Jun-2018 06:55	06-Jun-2018 08:48	☐
HS18060287-04	S-1 4'	Soil		04-Jun-2018 07:00	06-Jun-2018 08:48	☐
HS18060287-05	S-2 1'	Soil		04-Jun-2018 07:10	06-Jun-2018 08:48	☐
HS18060287-06	S-2 2'	Soil		04-Jun-2018 07:15	06-Jun-2018 08:48	☐
HS18060287-07	S-2 3'	Soil		04-Jun-2018 07:20	06-Jun-2018 08:48	☐
HS18060287-08	S-2 4'	Soil		04-Jun-2018 07:25	06-Jun-2018 08:48	☐
HS18060287-09	S-3 1'	Soil		04-Jun-2018 07:35	06-Jun-2018 08:48	☐
HS18060287-10	S-3 2'	Soil		04-Jun-2018 07:40	06-Jun-2018 08:48	☐
HS18060287-11	S-3 3'	Soil		04-Jun-2018 07:45	06-Jun-2018 08:48	☐
HS18060287-12	S-3 4'	Soil		04-Jun-2018 07:50	06-Jun-2018 08:48	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff **CASE NARRATIVE**
Project: Percussion West Lovington
Work Order: HS18060287

GC Semivolatiles by Method SW8015M

Batch ID: 129222

Sample ID: S-1 1' (HS18060287-01)

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

Sample ID: S-2 1' (HS18060287-05)

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

Sample ID: S-3 1' (HS18060287-09)

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

Sample ID: S-1 2' (HS18060287-02MS)

- 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' (HS18060287-02MSD)

- 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 Volatile Organics by Method SW8015

Batch ID: R317908

Sample ID: S-3 1' (HS18060287-09)

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

GC Volatiles by Method SW8015

Batch ID: R317908

Sample ID: S-1 1' (HS18060287-01)

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

Sample ID: S-2 1' (HS18060287-05)

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

Batch ID: R317671

Sample ID: S-1 2' (HS18060287-02MS)

- The matrix spike duplicate recovery was outside of the control limits. However, the matrix spike recovery and the RPD between the MS and MSD was in control. (Gasoline Range Organics)

GCMS Volatiles by Method SW8260

Batch ID: R317605,R317760

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

Batch ID: R317684

Sample ID: S-1 1' (HS18060287-01)

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff **CASE NARRATIVE**
Project: Percussion West Lovington
Work Order: HS18060287

GCMS Volatiles by Method SW8260

Batch ID: R317684

• Surrogates failure for HS18060287-01 confirmed by reanalysis.

Sample ID: S-3 1' (HS18060287-09)

• Surrogates failure for HS18060287-09 confirmed by reanalysis.

Batch ID: R317681

Sample ID: S-3 2' (HS18060287-10)

• Surrogate failure for HS18060287-10 confirmed by reanalysis.

Batch ID: R317598

Sample ID: S-1 2' (HS18060287-02MS)

• MS/MSD failed QC limits for some compounds.

GCMS Volatiles by Method SW8260

Batch ID: R317684

Sample ID: S-2 1' (HS18060287-05)

• Surrogates failure for HS18060287-05 confirmed by reanalysis.

WetChemistry by Method E300

Batch ID: 129235

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-1 1'
Collection Date: 04-Jun-2018 06:45

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-01
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**3.7**		**2.5**	**mg/Kg**	500	11-Jun-2018 17:39
Ethylbenzene	**57**		**2.5**	**mg/Kg**	500	11-Jun-2018 17:39
m,p-Xylene	**140**		**50**	**mg/Kg**	5000	12-Jun-2018 10:09
o-Xylene	**71**		**25**	**mg/Kg**	5000	12-Jun-2018 10:09
Toluene	**76**		**2.5**	**mg/Kg**	500	11-Jun-2018 17:39
Xylenes, Total	**210**		**25**	**mg/Kg**	5000	12-Jun-2018 10:09
Surr: 1,2-Dichloroethane-d4	*96.0*		*70-126*	*%REC*	*500*	*11-Jun-2018 17:39*
Surr: 1,2-Dichloroethane-d4	*105*		*70-126*	*%REC*	*5000*	*12-Jun-2018 10:09*
Surr: 4-Bromofluorobenzene	*143*	*S*	*70-130*	*%REC*	*500*	*11-Jun-2018 17:39*
Surr: 4-Bromofluorobenzene	*110*		*70-130*	*%REC*	*5000*	*12-Jun-2018 10:09*
Surr: Dibromofluoromethane	*101*		*70-130*	*%REC*	*500*	*11-Jun-2018 17:39*
Surr: Dibromofluoromethane	*97.4*		*70-130*	*%REC*	*5000*	*12-Jun-2018 10:09*
Surr: Toluene-d8	*103*		*70-130*	*%REC*	*500*	*11-Jun-2018 17:39*
Surr: Toluene-d8	*106*		*70-130*	*%REC*	*5000*	*12-Jun-2018 10:09*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**7,900**		**21**	**mg/Kg**	500	13-Jun-2018 14:53
Surr: 4-Bromofluorobenzene	*203*	*S*	*70-123*	*%REC*	*500*	*13-Jun-2018 14:53*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	**7,100**		**1300**	**mg/Kg**	500	12-Jun-2018 20:54
TPH (Motor Oil Range)	**9,800**	n	**2500**	**mg/Kg**	500	12-Jun-2018 20:54
Surr: 2-Fluorobiphenyl	*2830*	*S*	*60-129*	*%REC*	*500*	*12-Jun-2018 20:54*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**22.3**		**4.99**	**mg/Kg**	1	11-Jun-2018 12:36

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-1 2'
Collection Date: 04-Jun-2018 06:50

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-02
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	07-Jun-2018 23:39
Ethylbenzene	**0.012**		**0.0048**	**mg/Kg**	1	07-Jun-2018 23:39
m,p-Xylene	**0.063**		**0.0097**	**mg/Kg**	1	07-Jun-2018 23:39
o-Xylene	**0.041**		**0.0048**	**mg/Kg**	1	07-Jun-2018 23:39
Toluene	**0.032**		**0.0048**	**mg/Kg**	1	07-Jun-2018 23:39
Xylenes, Total	**0.10**		**0.0048**	**mg/Kg**	1	07-Jun-2018 23:39
Surr: 1,2-Dichloroethane-d4	*89.8*		*70-126*	*%REC*	*1*	*07-Jun-2018 23:39*
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*07-Jun-2018 23:39*
Surr: Dibromofluoromethane	*93.0*		*70-130*	*%REC*	*1*	*07-Jun-2018 23:39*
Surr: Toluene-d8	*100*		*70-130*	*%REC*	*1*	*07-Jun-2018 23:39*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**1.8**		**0.050**	**mg/Kg**	1	08-Jun-2018 13:57
Surr: 4-Bromofluorobenzene	*92.7*		*70-123*	*%REC*	*1*	*08-Jun-2018 13:57*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	**150**		**8.5**	**mg/Kg**	5	12-Jun-2018 21:42
TPH (Motor Oil Range)	**160**	n	**17**	**mg/Kg**	5	12-Jun-2018 21:42
Surr: 2-Fluorobiphenyl	*115*		*60-129*	*%REC*	*5*	*12-Jun-2018 21:42*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**38.6**		**4.93**	**mg/Kg**	1	11-Jun-2018 12:58

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-1 3'
Collection Date: 04-Jun-2018 06:55

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-03
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	08-Jun-2018 02:23
Ethylbenzene	ND		0.0050	mg/Kg	1	08-Jun-2018 02:23
m,p-Xylene	ND		0.010	mg/Kg	1	08-Jun-2018 02:23
o-Xylene	ND		0.0050	mg/Kg	1	08-Jun-2018 02:23
Toluene	ND		0.0050	mg/Kg	1	08-Jun-2018 02:23
Xylenes, Total	ND		0.0050	mg/Kg	1	08-Jun-2018 02:23
Surr: 1,2-Dichloroethane-d4	*93.2*		*70-126*	*%REC*	*1*	*08-Jun-2018 02:23*
Surr: 4-Bromofluorobenzene	*99.4*		*70-130*	*%REC*	*1*	*08-Jun-2018 02:23*
Surr: Dibromofluoromethane	*99.0*		*70-130*	*%REC*	*1*	*08-Jun-2018 02:23*
Surr: Toluene-d8	*103*		*70-130*	*%REC*	*1*	*08-Jun-2018 02:23*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Jun-2018 13:41
Surr: 4-Bromofluorobenzene	*97.9*		*70-123*	*%REC*	*1*	*08-Jun-2018 13:41*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	13-Jun-2018 00:05
TPH (Motor Oil Range)	**7.0**	n	**3.4**	**mg/Kg**	1	13-Jun-2018 00:05
Surr: 2-Fluorobiphenyl	*63.6*		*60-129*	*%REC*	*1*	*13-Jun-2018 00:05*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**49.1**		**4.99**	**mg/Kg**	1	11-Jun-2018 13:20

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-1 4'
Collection Date: 04-Jun-2018 07:00

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-04
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	08-Jun-2018 02:47
Ethylbenzene	ND		0.0050	mg/Kg	1	08-Jun-2018 02:47
m,p-Xylene	ND		0.010	mg/Kg	1	08-Jun-2018 02:47
o-Xylene	ND		0.0050	mg/Kg	1	08-Jun-2018 02:47
Toluene	ND		0.0050	mg/Kg	1	08-Jun-2018 02:47
Xylenes, Total	ND		0.0050	mg/Kg	1	08-Jun-2018 02:47
Surr: 1,2-Dichloroethane-d4	*94.2*		*70-126*	*%REC*	*1*	*08-Jun-2018 02:47*
Surr: 4-Bromofluorobenzene	*97.5*		*70-130*	*%REC*	*1*	*08-Jun-2018 02:47*
Surr: Dibromofluoromethane	*96.3*		*70-130*	*%REC*	*1*	*08-Jun-2018 02:47*
Surr: Toluene-d8	*101*		*70-130*	*%REC*	*1*	*08-Jun-2018 02:47*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.055**		**0.050**	**mg/Kg**	1	08-Jun-2018 15:35
Surr: 4-Bromofluorobenzene	*106*		*70-123*	*%REC*	*1*	*08-Jun-2018 15:35*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	13-Jun-2018 01:17
TPH (Motor Oil Range)	**6.7**	n	**3.4**	**mg/Kg**	1	13-Jun-2018 01:17
Surr: 2-Fluorobiphenyl	*62.9*		*60-129*	*%REC*	*1*	*13-Jun-2018 01:17*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**50.0**		**5.00**	**mg/Kg**	1	11-Jun-2018 13:42

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-2 1'
Collection Date: 04-Jun-2018 07:10

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-05
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**13**		**2.5**	**mg/Kg**	500	11-Jun-2018 17:13
Ethylbenzene	**47**		**2.5**	**mg/Kg**	500	11-Jun-2018 17:13
m,p-Xylene	**170**		**5.0**	**mg/Kg**	500	11-Jun-2018 17:13
o-Xylene	**76**		**2.5**	**mg/Kg**	500	11-Jun-2018 17:13
Toluene	**82**		**25**	**mg/Kg**	5000	12-Jun-2018 09:44
Xylenes, Total	**240**		**2.5**	**mg/Kg**	500	11-Jun-2018 17:13
Surr: 1,2-Dichloroethane-d4	*104*		*70-126*	*%REC*	*500*	*11-Jun-2018 17:13*
Surr: 1,2-Dichloroethane-d4	*108*		*70-126*	*%REC*	*5000*	*12-Jun-2018 09:44*
Surr: 4-Bromofluorobenzene	*130*	*S*	*70-130*	*%REC*	*500*	*11-Jun-2018 17:13*
Surr: 4-Bromofluorobenzene	*112*		*70-130*	*%REC*	*5000*	*12-Jun-2018 09:44*
Surr: Dibromofluoromethane	*101*		*70-130*	*%REC*	*500*	*11-Jun-2018 17:13*
Surr: Dibromofluoromethane	*102*		*70-130*	*%REC*	*5000*	*12-Jun-2018 09:44*
Surr: Toluene-d8	*99.7*		*70-130*	*%REC*	*500*	*11-Jun-2018 17:13*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*5000*	*12-Jun-2018 09:44*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**9,100**		**25**	**mg/Kg**	500	13-Jun-2018 15:09
Surr: 4-Bromofluorobenzene	*171*	*S*	*70-123*	*%REC*	*500*	*13-Jun-2018 15:09*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	**9,800**		**1300**	**mg/Kg**	500	13-Jun-2018 01:40
TPH (Motor Oil Range)	**9,000**	n	**2500**	**mg/Kg**	500	13-Jun-2018 01:40
Surr: 2-Fluorobiphenyl	*3730*	*S*	*60-129*	*%REC*	*500*	*13-Jun-2018 01:40*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**24.8**		**4.95**	**mg/Kg**	1	11-Jun-2018 16:13

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-2 2'
Collection Date: 04-Jun-2018 07:15

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-06
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**0.047**		**0.0050**	**mg/Kg**	1	08-Jun-2018 03:10
Ethylbenzene	**0.13**		**0.0050**	**mg/Kg**	1	08-Jun-2018 03:10
m,p-Xylene	**0.23**		**0.089**	**mg/Kg**	10	08-Jun-2018 16:56
o-Xylene	**0.12**		**0.044**	**mg/Kg**	10	08-Jun-2018 16:56
Toluene	**0.19**		**0.044**	**mg/Kg**	10	08-Jun-2018 16:56
Xylenes, Total	**0.34**		**0.044**	**mg/Kg**	10	08-Jun-2018 16:56
Surr: 1,2-Dichloroethane-d4	*85.7*		*70-126*	*%REC*	*1*	*08-Jun-2018 03:10*
Surr: 1,2-Dichloroethane-d4	*85.9*		*70-126*	*%REC*	*10*	*08-Jun-2018 16:56*
Surr: 4-Bromofluorobenzene	*99.7*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:10*
Surr: 4-Bromofluorobenzene	*95.7*		*70-130*	*%REC*	*10*	*08-Jun-2018 16:56*
Surr: Dibromofluoromethane	*94.3*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:10*
Surr: Dibromofluoromethane	*90.5*		*70-130*	*%REC*	*10*	*08-Jun-2018 16:56*
Surr: Toluene-d8	*108*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:10*
Surr: Toluene-d8	*97.0*		*70-130*	*%REC*	*10*	*08-Jun-2018 16:56*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**3.8**		**0.050**	**mg/Kg**	1	08-Jun-2018 16:08
Surr: 4-Bromofluorobenzene	*82.5*		*70-123*	*%REC*	*1*	*08-Jun-2018 16:08*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	**9.9**		**1.7**	**mg/Kg**	1	13-Jun-2018 02:28
TPH (Motor Oil Range)	**19**	n	**3.4**	**mg/Kg**	1	13-Jun-2018 02:28
Surr: 2-Fluorobiphenyl	*62.5*		*60-129*	*%REC*	*1*	*13-Jun-2018 02:28*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**11.6**		**4.95**	**mg/Kg**	1	11-Jun-2018 15:08

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-2 3'
Collection Date: 04-Jun-2018 07:20

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-07
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	08-Jun-2018 03:33
Ethylbenzene	ND		0.0049	mg/Kg	1	08-Jun-2018 03:33
m,p-Xylene	ND		0.0098	mg/Kg	1	08-Jun-2018 03:33
o-Xylene	ND		0.0049	mg/Kg	1	08-Jun-2018 03:33
Toluene	ND		0.0049	mg/Kg	1	08-Jun-2018 03:33
Xylenes, Total	ND		0.0049	mg/Kg	1	08-Jun-2018 03:33
Surr: 1,2-Dichloroethane-d4	*89.9*		*70-126*	*%REC*	*1*	*08-Jun-2018 03:33*
Surr: 4-Bromofluorobenzene	*99.1*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:33*
Surr: Dibromofluoromethane	*94.6*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:33*
Surr: Toluene-d8	*103*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:33*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.22**		**0.050**	**mg/Kg**	1	08-Jun-2018 16:24
Surr: 4-Bromofluorobenzene	*107*		*70-123*	*%REC*	*1*	*08-Jun-2018 16:24*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	13-Jun-2018 02:51
TPH (Motor Oil Range)	**7.2**	n	**3.4**	**mg/Kg**	1	13-Jun-2018 02:51
Surr: 2-Fluorobiphenyl	*63.1*		*60-129*	*%REC*	*1*	*13-Jun-2018 02:51*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**6.53**		**4.95**	**mg/Kg**	1	11-Jun-2018 16:35

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-2 4'
Collection Date: 04-Jun-2018 07:25

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-08
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	08-Jun-2018 03:57
Ethylbenzene	ND		0.0050	mg/Kg	1	08-Jun-2018 03:57
m,p-Xylene	ND		0.0099	mg/Kg	1	08-Jun-2018 03:57
o-Xylene	ND		0.0050	mg/Kg	1	08-Jun-2018 03:57
Toluene	ND		0.0050	mg/Kg	1	08-Jun-2018 03:57
Xylenes, Total	ND		0.0050	mg/Kg	1	08-Jun-2018 03:57
Surr: 1,2-Dichloroethane-d4	*90.3*		*70-126*	*%REC*	*1*	*08-Jun-2018 03:57*
Surr: 4-Bromofluorobenzene	*99.8*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:57*
Surr: Dibromofluoromethane	*95.9*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:57*
Surr: Toluene-d8	*102*		*70-130*	*%REC*	*1*	*08-Jun-2018 03:57*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.12**		**0.050**	**mg/Kg**	1	08-Jun-2018 16:40
Surr: 4-Bromofluorobenzene	*109*		*70-123*	*%REC*	*1*	*08-Jun-2018 16:40*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	**3.1**		**1.7**	**mg/Kg**	1	13-Jun-2018 03:15
TPH (Motor Oil Range)	**7.4**	n	**3.4**	**mg/Kg**	1	13-Jun-2018 03:15
Surr: 2-Fluorobiphenyl	*65.2*		*60-129*	*%REC*	*1*	*13-Jun-2018 03:15*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**166**		**4.26**	**mg/Kg**	1	11-Jun-2018 16:57

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-3 1'
Collection Date: 04-Jun-2018 07:35

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-09
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	**1.3**		**0.25**	**mg/Kg**	50	11-Jun-2018 16:46
Ethylbenzene	**6.9**		**2.5**	**mg/Kg**	500	12-Jun-2018 10:33
m,p-Xylene	**25**		**5.0**	**mg/Kg**	500	12-Jun-2018 10:33
o-Xylene	**12**		**2.5**	**mg/Kg**	500	12-Jun-2018 10:33
Toluene	**16**		**2.5**	**mg/Kg**	500	12-Jun-2018 10:33
Xylenes, Total	**37**		**2.5**	**mg/Kg**	500	12-Jun-2018 10:33
Surr: 1,2-Dichloroethane-d4	*97.6*		*70-126*	*%REC*	*50*	*11-Jun-2018 16:46*
Surr: 1,2-Dichloroethane-d4	*106*		*70-126*	*%REC*	*500*	*12-Jun-2018 10:33*
Surr: 4-Bromofluorobenzene	*178*	*S*	*70-130*	*%REC*	*50*	*11-Jun-2018 16:46*
Surr: 4-Bromofluorobenzene	*113*		*70-130*	*%REC*	*500*	*12-Jun-2018 10:33*
Surr: Dibromofluoromethane	*101*		*70-130*	*%REC*	*50*	*11-Jun-2018 16:46*
Surr: Dibromofluoromethane	*101*		*70-130*	*%REC*	*500*	*12-Jun-2018 10:33*
Surr: Toluene-d8	*99.7*		*70-130*	*%REC*	*50*	*11-Jun-2018 16:46*
Surr: Toluene-d8	*107*		*70-130*	*%REC*	*500*	*12-Jun-2018 10:33*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**2,000**		**2.5**	**mg/Kg**	50	13-Jun-2018 13:17
Surr: 4-Bromofluorobenzene	*408*	*S*	*70-123*	*%REC*	*50*	*13-Jun-2018 13:17*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	**6,300**		**680**	**mg/Kg**	200	13-Jun-2018 03:39
TPH (Motor Oil Range)	**7,600**	n	**1400**	**mg/Kg**	200	13-Jun-2018 03:39
Surr: 2-Fluorobiphenyl	*2250*	*S*	*60-129*	*%REC*	*200*	*13-Jun-2018 03:39*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**7.82**		**4.97**	**mg/Kg**	1	11-Jun-2018 17:18

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-3 2'
Collection Date: 04-Jun-2018 07:40

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-10
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	09-Jun-2018 12:11
Ethylbenzene	ND		0.0050	mg/Kg	1	09-Jun-2018 12:11
m,p-Xylene	ND		0.010	mg/Kg	1	09-Jun-2018 12:11
o-Xylene	**0.011**		**0.0050**	**mg/Kg**	1	09-Jun-2018 12:11
Toluene	ND		0.0050	mg/Kg	1	09-Jun-2018 12:11
Xylenes, Total	**0.018**		**0.0050**	**mg/Kg**	1	09-Jun-2018 12:11
Surr: 1,2-Dichloroethane-d4	*71.5*		*70-126*	*%REC*	*1*	*09-Jun-2018 12:11*
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*09-Jun-2018 12:11*
Surr: Dibromofluoromethane	*65.8*	*S*	*70-130*	*%REC*	*1*	*09-Jun-2018 12:11*
Surr: Toluene-d8	*93.7*		*70-130*	*%REC*	*1*	*09-Jun-2018 12:11*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	**0.46**		**0.050**	**mg/Kg**	1	08-Jun-2018 17:13
Surr: 4-Bromofluorobenzene	*110*		*70-123*	*%REC*	*1*	*08-Jun-2018 17:13*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	**8.6**		**1.7**	**mg/Kg**	1	13-Jun-2018 04:26
TPH (Motor Oil Range)	**15**	n	**3.4**	**mg/Kg**	1	13-Jun-2018 04:26
Surr: 2-Fluorobiphenyl	*62.3*		*60-129*	*%REC*	*1*	*13-Jun-2018 04:26*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**35.4**		**4.96**	**mg/Kg**	1	11-Jun-2018 17:40

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-3 3'
Collection Date: 04-Jun-2018 07:45

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-11
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	08-Jun-2018 05:07
Ethylbenzene	ND		0.0049	mg/Kg	1	08-Jun-2018 05:07
m,p-Xylene	ND		0.0098	mg/Kg	1	08-Jun-2018 05:07
o-Xylene	ND		0.0049	mg/Kg	1	08-Jun-2018 05:07
Toluene	ND		0.0049	mg/Kg	1	08-Jun-2018 05:07
Xylenes, Total	ND		0.0049	mg/Kg	1	08-Jun-2018 05:07
Surr: 1,2-Dichloroethane-d4	*88.9*		*70-126*	*%REC*	*1*	*08-Jun-2018 05:07*
Surr: 4-Bromofluorobenzene	*98.9*		*70-130*	*%REC*	*1*	*08-Jun-2018 05:07*
Surr: Dibromofluoromethane	*90.9*		*70-130*	*%REC*	*1*	*08-Jun-2018 05:07*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*1*	*08-Jun-2018 05:07*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Jun-2018 17:29
Surr: 4-Bromofluorobenzene	*106*		*70-123*	*%REC*	*1*	*08-Jun-2018 17:29*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	**10**		**1.7**	**mg/Kg**	1	13-Jun-2018 04:50
TPH (Motor Oil Range)	**36**	n	**3.4**	**mg/Kg**	1	13-Jun-2018 04:50
Surr: 2-Fluorobiphenyl	*70.0*		*60-129*	*%REC*	*1*	*13-Jun-2018 04:50*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**98.7**		**4.90**	**mg/Kg**	1	11-Jun-2018 18:02

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
Sample ID: S-3 4'
Collection Date: 04-Jun-2018 07:50

ANALYTICAL REPORT
WorkOrder:HS18060287
Lab ID:HS18060287-12
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	08-Jun-2018 05:30
Ethylbenzene	ND		0.0050	mg/Kg	1	08-Jun-2018 05:30
m,p-Xylene	ND		0.0099	mg/Kg	1	08-Jun-2018 05:30
o-Xylene	ND		0.0050	mg/Kg	1	08-Jun-2018 05:30
Toluene	ND		0.0050	mg/Kg	1	08-Jun-2018 05:30
Xylenes, Total	ND		0.0050	mg/Kg	1	08-Jun-2018 05:30
Surr: 1,2-Dichloroethane-d4	*91.0*		*70-126*	*%REC*	*1*	*08-Jun-2018 05:30*
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*08-Jun-2018 05:30*
Surr: Dibromofluoromethane	*93.0*		*70-130*	*%REC*	*1*	*08-Jun-2018 05:30*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*1*	*08-Jun-2018 05:30*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: CL
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Jun-2018 18:18
Surr: 4-Bromofluorobenzene	*109*		*70-123*	*%REC*	*1*	*08-Jun-2018 18:18*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 08-Jun-2018		Analyst: AP
TPH (Diesel Range)	ND		1.7	mg/Kg	1	13-Jun-2018 05:14
TPH (Motor Oil Range)	**11**	n	**3.4**	**mg/Kg**	1	13-Jun-2018 05:14
Surr: 2-Fluorobiphenyl	*72.1*		*60-129*	*%REC*	*1*	*13-Jun-2018 05:14*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 08-Jun-2018		Analyst: KMU
Chloride	**11.3**		**4.94**	**mg/Kg**	1	11-Jun-2018 18:24

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

RIGHT SOLUTIONS | RIGHT PARTNER

WEIGHT LOG

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

Batch ID: 2449 **Method:** VOLATILES BY SW8260C

SampID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS18060287-01	1	5.068 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-02	1	5.145 (g)	5 (mL)	0.97	Bulk (5030B)
HS18060287-03	1	5.022 (g)	5 (mL)	1	Bulk (5030B)
HS18060287-04	1	5 (g)	5 (mL)	1	Bulk (5030B)
HS18060287-05	1	5.055 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-06	1	0.56 (g)	0.5 (mL)	0.89	Bulk (5030B)
HS18060287-06	1	0.56 (g)	0.5 (mL)	0.99	Bulk (5030B)
HS18060287-07	1	5.091 (g)	5 (mL)	0.98	Bulk (5030B)
HS18060287-08	1	5.029 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-09	1	5.026 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-10	1	4.99 (g)	5 (mL)	1	Bulk (5030B)
HS18060287-11	1	5.08 (g)	5 (mL)	0.98	Bulk (5030B)
HS18060287-12	1	5.032 (g)	5 (mL)	0.99	Bulk (5030B)

Batch ID: 2452 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS18060287-01	1	5.91 (g)	5 (mL)	0.85	Bulk (5030B)
HS18060287-02	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18060287-03	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-04	1	5.07 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-05	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-06	1	5.07 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-07	1	5.07 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-08	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18060287-09	1	5.04 (g)	5 (mL)	1	Bulk (5030B)
HS18060287-10	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-11	1	5.07 (g)	5 (mL)	0.99	Bulk (5030B)
HS18060287-12	1	5 (g)	5 (mL)	1	Bulk (5030B)

Batch ID: 129222 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060287-01	1	30.02	1.5 (mL)	0.04997
HS18060287-02	1	30.05	1 (mL)	0.03328
HS18060287-03	1	30.08	1 (mL)	0.03324
HS18060287-04	1	30.07	1 (mL)	0.03326
HS18060287-05	1	30.05	1.5 (mL)	0.04992
HS18060287-06	1	30.02	1 (mL)	0.03331
HS18060287-07	1	30.04	1 (mL)	0.03329
HS18060287-08	1	30.07	1 (mL)	0.03326
HS18060287-09	1	30.08	2 (mL)	0.06649
HS18060287-10	1	30.09	1 (mL)	0.03323
HS18060287-11	1	30.04	1 (mL)	0.03329
HS18060287-12	1	30.05	1 (mL)	0.03328

RIGHT SOLUTIONS | RIGHT PARTNER

WEIGHT LOG

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

Batch ID: 129235 **Method:** ANIONS BY E300.0 **Prep:** 300_S_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18060287-01	1	5.0128	50 (mL)	9.974
HS18060287-02	1	5.0718	50 (mL)	9.858
HS18060287-03	1	5.0081	50 (mL)	9.984
HS18060287-04	1	5.0041	50 (mL)	9.992
HS18060287-05	1	5.0554	50 (mL)	9.89
HS18060287-06	1	5.0461	50 (mL)	9.909
HS18060287-07	1	5.0455	50 (mL)	9.91
HS18060287-08	1	5.8728	50 (mL)	8.514
HS18060287-09	1	5.0346	50 (mL)	9.931
HS18060287-10	1	5.0441	50 (mL)	9.913
HS18060287-11	1	5.1029	50 (mL)	9.798
HS18060287-12	1	5.0658	50 (mL)	9.87

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 129222	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS18060287-01	S-1 1'	04 Jun 2018 06:45		08 Jun 2018 16:00	12 Jun 2018 20:54	500
HS18060287-02	S-1 2'	04 Jun 2018 06:50		08 Jun 2018 16:00	12 Jun 2018 21:42	5
HS18060287-03	S-1 3'	04 Jun 2018 06:55		08 Jun 2018 16:00	13 Jun 2018 00:05	1
HS18060287-04	S-1 4'	04 Jun 2018 07:00		08 Jun 2018 16:00	13 Jun 2018 01:17	1
HS18060287-05	S-2 1'	04 Jun 2018 07:10		08 Jun 2018 16:00	13 Jun 2018 01:40	500
HS18060287-06	S-2 2'	04 Jun 2018 07:15		08 Jun 2018 16:00	13 Jun 2018 02:28	1
HS18060287-07	S-2 3'	04 Jun 2018 07:20		08 Jun 2018 16:00	13 Jun 2018 02:51	1
HS18060287-08	S-2 4'	04 Jun 2018 07:25		08 Jun 2018 16:00	13 Jun 2018 03:15	1
HS18060287-09	S-3 1'	04 Jun 2018 07:35		08 Jun 2018 16:00	13 Jun 2018 03:39	200
HS18060287-10	S-3 2'	04 Jun 2018 07:40		08 Jun 2018 16:00	13 Jun 2018 04:26	1
HS18060287-11	S-3 3'	04 Jun 2018 07:45		08 Jun 2018 16:00	13 Jun 2018 04:50	1
HS18060287-12	S-3 4'	04 Jun 2018 07:50		08 Jun 2018 16:00	13 Jun 2018 05:14	1
Batch ID 129235	**Test Name :** ANIONS BY E300.0			**Matrix:** Soil		
HS18060287-01	S-1 1'	04 Jun 2018 06:45		08 Jun 2018 12:00	11 Jun 2018 12:36	1
HS18060287-02	S-1 2'	04 Jun 2018 06:50		08 Jun 2018 12:00	11 Jun 2018 12:58	1
HS18060287-03	S-1 3'	04 Jun 2018 06:55		08 Jun 2018 12:00	11 Jun 2018 13:20	1
HS18060287-04	S-1 4'	04 Jun 2018 07:00		08 Jun 2018 12:00	11 Jun 2018 13:42	1
HS18060287-05	S-2 1'	04 Jun 2018 07:10		08 Jun 2018 12:00	11 Jun 2018 16:13	1
HS18060287-06	S-2 2'	04 Jun 2018 07:15		08 Jun 2018 12:00	11 Jun 2018 15:08	1
HS18060287-07	S-2 3'	04 Jun 2018 07:20		08 Jun 2018 12:00	11 Jun 2018 16:35	1
HS18060287-08	S-2 4'	04 Jun 2018 07:25		08 Jun 2018 12:00	11 Jun 2018 16:57	1
HS18060287-09	S-3 1'	04 Jun 2018 07:35		08 Jun 2018 12:00	11 Jun 2018 17:18	1
HS18060287-10	S-3 2'	04 Jun 2018 07:40		08 Jun 2018 12:00	11 Jun 2018 17:40	1
HS18060287-11	S-3 3'	04 Jun 2018 07:45		08 Jun 2018 12:00	11 Jun 2018 18:02	1
HS18060287-12	S-3 4'	04 Jun 2018 07:50		08 Jun 2018 12:00	11 Jun 2018 18:24	1
Batch ID R317598	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18060287-02	S-1 2'	04 Jun 2018 06:50			07 Jun 2018 23:39	1
HS18060287-03	S-1 3'	04 Jun 2018 06:55			08 Jun 2018 02:23	1
HS18060287-04	S-1 4'	04 Jun 2018 07:00			08 Jun 2018 02:47	1
HS18060287-06	S-2 2'	04 Jun 2018 07:15			08 Jun 2018 03:10	1
HS18060287-07	S-2 3'	04 Jun 2018 07:20			08 Jun 2018 03:33	1
HS18060287-08	S-2 4'	04 Jun 2018 07:25			08 Jun 2018 03:57	1
HS18060287-11	S-3 3'	04 Jun 2018 07:45			08 Jun 2018 05:07	1
HS18060287-12	S-3 4'	04 Jun 2018 07:50			08 Jun 2018 05:30	1
Batch ID R317605	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18060287-06	S-2 2'	04 Jun 2018 07:15			08 Jun 2018 16:56	10

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R317671	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS18060287-02	S-1 2'	04 Jun 2018 06:50			08 Jun 2018 13:57	1
HS18060287-03	S-1 3'	04 Jun 2018 06:55			08 Jun 2018 13:41	1
HS18060287-04	S-1 4'	04 Jun 2018 07:00			08 Jun 2018 15:35	1
HS18060287-06	S-2 2'	04 Jun 2018 07:15			08 Jun 2018 16:08	1
HS18060287-07	S-2 3'	04 Jun 2018 07:20			08 Jun 2018 16:24	1
HS18060287-08	S-2 4'	04 Jun 2018 07:25			08 Jun 2018 16:40	1
HS18060287-10	S-3 2'	04 Jun 2018 07:40			08 Jun 2018 17:13	1
HS18060287-11	S-3 3'	04 Jun 2018 07:45			08 Jun 2018 17:29	1
HS18060287-12	S-3 4'	04 Jun 2018 07:50			08 Jun 2018 18:18	1
Batch ID R317681	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18060287-10	S-3 2'	04 Jun 2018 07:40			09 Jun 2018 12:11	1
Batch ID R317684	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18060287-01	S-1 1'	04 Jun 2018 06:45			11 Jun 2018 17:39	500
HS18060287-05	S-2 1'	04 Jun 2018 07:10			11 Jun 2018 17:13	500
HS18060287-09	S-3 1'	04 Jun 2018 07:35			11 Jun 2018 16:46	50
Batch ID R317760	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18060287-01	S-1 1'	04 Jun 2018 06:45			12 Jun 2018 10:09	5000
HS18060287-05	S-2 1'	04 Jun 2018 07:10			12 Jun 2018 09:44	5000
HS18060287-09	S-3 1'	04 Jun 2018 07:35			12 Jun 2018 10:33	500
Batch ID R317908	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS18060287-01	S-1 1'	04 Jun 2018 06:45			13 Jun 2018 14:53	500
HS18060287-05	S-2 1'	04 Jun 2018 07:10			13 Jun 2018 15:09	500
HS18060287-09	S-3 1'	04 Jun 2018 07:35			13 Jun 2018 13:17	50

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: 129222 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-129222** Units: **mg/Kg** Analysis Date: **12-Jun-2018 20:07**
Client ID: Run ID: **FID-7_317915** SeqNo: **4607744** PrepDate: **08-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	*2.338*	*0.10*	*3.33*	*0*	*70.2*	*70 - 130*				

LCS Sample ID: **LCS-129222** Units: **mg/Kg** Analysis Date: **12-Jun-2018 20:31**
Client ID: Run ID: **FID-7_317915** SeqNo: **4607745** PrepDate: **08-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)	30.56	1.7	33.33	0	91.7	70 - 130				
TPH (Motor Oil Range)	37.67	3.4	33.33	0	113	70 - 130				
Surr: 2-Fluorobiphenyl	*2.998*	*0.10*	*3.33*	*0*	*90.0*	*70 - 130*				

MS Sample ID: **HS18060287-02MS** Units: **mg/Kg** Analysis Date: **12-Jun-2018 22:30**
Client ID: **S-1 2'** Run ID: **FID-7_317915** SeqNo: **4607748** PrepDate: **08-Jun-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	201	8.5	33.26	148.5	158	70 - 130				SO
TPH (Motor Oil Range)	223.8	17	33.26	162.1	186	70 - 130				SO
Surr: 2-Fluorobiphenyl	*4.475*	*0.50*	*3.323*	*0*	*135*	*60 - 129*				S

MSD Sample ID: **HS18060287-02MSD** Units: **mg/Kg** Analysis Date: **12-Jun-2018 23:17**
Client ID: **S-1 2'** Run ID: **FID-7_317915** SeqNo: **4607749** PrepDate: **08-Jun-2018** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	192.9	8.5	33.23	148.5	134	70 - 130	201	4.12	30	SO
TPH (Motor Oil Range)	216.8	17	33.23	162.1	165	70 - 130	223.8	3.2	30	SO
Surr: 2-Fluorobiphenyl	*4.374*	*0.50*	*3.32*	*0*	*132*	*60 - 129*	*4.475*	*2.27*	*30*	S

The following samples were analyzed in this batch:

HS18060287-01	HS18060287-02	HS18060287-03	HS18060287-04
HS18060287-05	HS18060287-06	HS18060287-07	HS18060287-08
HS18060287-09	HS18060287-10	HS18060287-11	HS18060287-12

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317671 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **GMBLK-180608** Units: **mg/Kg** Analysis Date: **08-Jun-2018 12:04**
Client ID: Run ID: **FID-14_317671** SeqNo: **4593425** 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	*0.0835*	*0.0050*	*0.1*	*0*	*83.5*	*75 - 121*				

LCS Sample ID: **GLCS-180608** Units: **mg/Kg** Analysis Date: **08-Jun-2018 11:47**
Client ID: Run ID: **FID-14_317671** SeqNo: **4593424** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9255	0.050	1	0	92.6	72 - 121				
Surr: 4-Bromofluorobenzene	*0.07527*	*0.0050*	*0.1*	*0*	*75.3*	*75 - 121*				

MS Sample ID: **HS18060287-02MS** Units: **mg/Kg** Analysis Date: **08-Jun-2018 15:02**
Client ID: **S-1 2'** Run ID: **FID-14_317671** SeqNo: **4593434** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.763	0.050	1	1.762	0.0676	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.09139*	*0.0050*	*0.1*	*0*	*91.4*	*70 - 123*				

MSD Sample ID: **HS18060287-02MSD** Units: **mg/Kg** Analysis Date: **08-Jun-2018 15:18**
Client ID: **S-1 2'** Run ID: **FID-14_317671** SeqNo: **4593435** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.725	0.050	1	1.762	-3.73	70 - 130	1.763	2.18	30	S
Surr: 4-Bromofluorobenzene	*0.08462*	*0.0050*	*0.1*	*0*	*84.6*	*70 - 123*	*0.09139*	*7.69*	*30*	

The following samples were analyzed in this batch: HS18060287-02, HS18060287-03, HS18060287-04, HS18060287-06, HS18060287-07, HS18060287-08, HS18060287-10, HS18060287-11, HS18060287-12

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317908 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **GBLKW-180613** Units: **mg/L** Analysis Date: **13-Jun-2018 11:56**
Client ID: Run ID: **FID-14_317908** SeqNo: **4607588** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	2.50								
Surr: 4-Bromofluorobenzene	*4.293*	*0.250*	*5*	*0*	*85.9*	*70 - 121*				

LCS Sample ID: **GLCSW-180613** Units: **mg/L** Analysis Date: **13-Jun-2018 11:24**
Client ID: Run ID: **FID-14_317908** SeqNo: **4607587** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.115	0.0500	1	0	112	73 - 112				
Surr: 4-Bromofluorobenzene	*0.1027*	*0.00500*	*0.1*	*0*	*103*	*70 - 121*				

MS Sample ID: **HS18060368-23MS** Units: **mg/L** Analysis Date: **13-Jun-2018 12:28**
Client ID: Run ID: **FID-14_317908** SeqNo: **4607822** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	58.85	2.50	50	2.809	112	70 - 130				
Surr: 4-Bromofluorobenzene	*5.111*	*0.250*	*5*	*0*	*102*	*70 - 123*				

MSD Sample ID: **HS18060368-23MSD** Units: **mg/L** Analysis Date: **13-Jun-2018 12:44**
Client ID: Run ID: **FID-14_317908** SeqNo: **4607823** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	56.55	2.50	50	2.809	107	70 - 130	58.85	3.98	20	
Surr: 4-Bromofluorobenzene	*4.972*	*0.250*	*5*	*0*	*99.4*	*70 - 123*	*5.111*	*2.77*	*20*	

The following samples were analyzed in this batch: HS18060287-01 HS18060287-05 HS18060287-09

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317598 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS1-060818** Units: **ug/Kg** Analysis Date: **07-Jun-2018 22:29**
Client ID: Run ID: **VOA5_317598** SeqNo: **4591799** 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	*47.45*	*0*	*50*	*0*	*94.9*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*48.47*	*0*	*50*	*0*	*96.9*	*83 - 120*				
Surr: Dibromofluoromethane	*47.71*	*0*	*50*	*0*	*95.4*	*80 - 119*				
Surr: Toluene-d8	*49.99*	*0*	*50*	*0*	*100.0*	*81 - 118*				

LCS Sample ID: **VLCSS1-060818** Units: **ug/Kg** Analysis Date: **07-Jun-2018 21:42**
Client ID: Run ID: **VOA5_317598** SeqNo: **4591798** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.12	5.0	50	0	90.2	75 - 124				
Ethylbenzene	44.84	5.0	50	0	89.7	70 - 123				
m,p-Xylene	89.88	10	100	0	89.9	77 - 125				
o-Xylene	45.44	5.0	50	0	90.9	78 - 122				
Toluene	44.95	5.0	50	0	89.9	76 - 122				
Xylenes, Total	135.3	5.0	150	0	90.2	77 - 128				
Surr: 1,2-Dichloroethane-d4	*50.47*	*0*	*50*	*0*	*101*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*51.45*	*0*	*50*	*0*	*103*	*83 - 120*				
Surr: Dibromofluoromethane	*51.01*	*0*	*50*	*0*	*102*	*80 - 119*				
Surr: Toluene-d8	*50.82*	*0*	*50*	*0*	*102*	*81 - 118*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317598 **Instrument: VOA5** **Method: SW8260**

MS Sample ID: **HS18060287-02MS** Units: **ug/Kg** Analysis Date: **08-Jun-2018 00:03**
Client ID: **S-1 2'** Run ID: **VOA5_317598** SeqNo: **4591803** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	36.69	4.9	49	2.953	68.9	70 - 130				S
Ethylbenzene	42.92	4.9	49	12.39	62.3	70 - 130				S
m,p-Xylene	109.9	9.8	98	63.01	47.8	70 - 130				S
o-Xylene	61.53	4.9	49	41.46	41.0	70 - 130				S
Toluene	58.21	4.9	49	31.65	54.2	70 - 130				S
Xylenes, Total	171.4	4.9	147	104.5	45.5	70 - 130				S
Surr: 1,2-Dichloroethane-d4	*49.19*	*0*	*49*	*0*	*100*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.58*	*0*	*49*	*0*	*101*	*70 - 130*				
Surr: Dibromofluoromethane	*50.17*	*0*	*49*	*0*	*102*	*70 - 130*				
Surr: Toluene-d8	*47.89*	*0*	*49*	*0*	*97.7*	*70 - 130*				

MSD Sample ID: **HS18060287-02MSD** Units: **ug/Kg** Analysis Date: **08-Jun-2018 00:26**
Client ID: **S-1 2'** Run ID: **VOA5_317598** SeqNo: **4591804** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	40.86	5.0	49.5	2.953	76.6	70 - 130	36.69	10.7	30	
Ethylbenzene	48.37	5.0	49.5	12.39	72.7	70 - 130	42.92	12	30	
m,p-Xylene	122.8	9.9	99	63.01	60.4	70 - 130	109.9	11.1	30	S
o-Xylene	68.99	5.0	49.5	41.46	55.6	70 - 130	61.53	11.4	30	S
Toluene	67.04	5.0	49.5	31.65	71.5	70 - 130	58.21	14.1	30	
Xylenes, Total	191.8	5.0	148.5	104.5	58.8	70 - 130	171.4	11.2	30	S
Surr: 1,2-Dichloroethane-d4	*48.94*	*0*	*49.5*	*0*	*98.9*	*70 - 126*	*49.19*	*0.511*	*30*	
Surr: 4-Bromofluorobenzene	*51.18*	*0*	*49.5*	*0*	*103*	*70 - 130*	*49.58*	*3.18*	*30*	
Surr: Dibromofluoromethane	*49.16*	*0*	*49.5*	*0*	*99.3*	*70 - 130*	*50.17*	*2.04*	*30*	
Surr: Toluene-d8	*51.35*	*0*	*49.5*	*0*	*104*	*70 - 130*	*47.89*	*6.98*	*30*	

The following samples were analyzed in this batch:

HS18060287-02	HS18060287-03	HS18060287-04	HS18060287-06
HS18060287-07	HS18060287-08	HS18060287-11	HS18060287-12

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317605 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS2-060818** Units: **ug/Kg** Analysis Date: **08-Jun-2018 09:24**
Client ID: Run ID: **VOA5_317605** SeqNo: **4592151** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	ND	10								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	5.0								
Surr: 1,2-Dichloroethane-d4	*46.77*	*0*	*50*	*0*	*93.5*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.47*	*0*	*50*	*0*	*101*	*83 - 120*				
Surr: Dibromofluoromethane	*47.92*	*0*	*50*	*0*	*95.8*	*80 - 119*				
Surr: Toluene-d8	*51.62*	*0*	*50*	*0*	*103*	*81 - 118*				

LCS Sample ID: **VLCSS2-060818** Units: **ug/Kg** Analysis Date: **08-Jun-2018 08:37**
Client ID: Run ID: **VOA5_317605** SeqNo: **4592150** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	105.8	10	100	0	106	77 - 125				
o-Xylene	52.08	5.0	50	0	104	78 - 122				
Toluene	51.99	5.0	50	0	104	76 - 122				
Xylenes, Total	157.9	5.0	150	0	105	77 - 128				
Surr: 1,2-Dichloroethane-d4	*50.33*	*0*	*50*	*0*	*101*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*51.6*	*0*	*50*	*0*	*103*	*83 - 120*				
Surr: Dibromofluoromethane	*51.63*	*0*	*50*	*0*	*103*	*80 - 119*				
Surr: Toluene-d8	*50.68*	*0*	*50*	*0*	*101*	*81 - 118*				

MS Sample ID: **HS18060192-04MS** Units: **ug/Kg** Analysis Date: **08-Jun-2018 13:21**
Client ID: Run ID: **VOA5_317605** SeqNo: **4592801** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	102.2	8.7	87	0	118	70 - 130				
o-Xylene	50.12	4.4	43.5	0	115	70 - 130				
Toluene	50.38	4.4	43.5	0	116	70 - 130				
Xylenes, Total	152.4	4.4	130.5	0	117	70 - 130				
Surr: 1,2-Dichloroethane-d4	*36.79*	*0*	*43.5*	*0*	*84.6*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*41.57*	*0*	*43.5*	*0*	*95.6*	*70 - 130*				
Surr: Dibromofluoromethane	*39.29*	*0*	*43.5*	*0*	*90.3*	*70 - 130*				
Surr: Toluene-d8	*42.47*	*0*	*43.5*	*0*	*97.6*	*70 - 130*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317605 **Instrument: VOA5** **Method: SW8260**

MSD Sample ID: **HS18060192-04MSD** Units: **ug/Kg** Analysis Date: **08-Jun-2018 13:45**
Client ID: Run ID: **VOA5_317605** SeqNo: **4592802** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	96.65	8.1	81	0	119	70 - 130	102.2	5.61	30	
o-Xylene	48.2	4.0	40.5	0	119	70 - 130	50.12	3.91	30	
Toluene	47.59	4.0	40.5	0	118	70 - 130	50.38	5.7	30	
Xylenes, Total	144.9	4.0	121.5	0	119	70 - 130	152.4	5.05	30	
Surr: 1,2-Dichloroethane-d4	*36.4*	*0*	*40.5*	*0*	*89.9*	*70 - 126*	*36.79*	*1.07*	*30*	
Surr: 4-Bromofluorobenzene	*39.83*	*0*	*40.5*	*0*	*98.3*	*70 - 130*	*41.57*	*4.28*	*30*	
Surr: Dibromofluoromethane	*37.96*	*0*	*40.5*	*0*	*93.7*	*70 - 130*	*39.29*	*3.44*	*30*	
Surr: Toluene-d8	*39.09*	*0*	*40.5*	*0*	*96.5*	*70 - 130*	*42.47*	*8.28*	*30*	

The following samples were analyzed in this batch: HS18060287-06

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317681 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS2-060918** Units: **ug/Kg** Analysis Date: **09-Jun-2018 10:13**
Client ID: Run ID: **VOA5_317681** SeqNo: **4593945** 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	*41.54*	*0*	*50*	*0*	*83.1*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*47.76*	*0*	*50*	*0*	*95.5*	*83 - 120*				
Surr: Dibromofluoromethane	*44.15*	*0*	*50*	*0*	*88.3*	*80 - 119*				
Surr: Toluene-d8	*49.21*	*0*	*50*	*0*	*98.4*	*81 - 118*				

LCS Sample ID: **VLCSS2-060918** Units: **ug/Kg** Analysis Date: **09-Jun-2018 09:27**
Client ID: Run ID: **VOA5_317681** SeqNo: **4593944** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	50.98	5.0	50	0	102	75 - 124				
Ethylbenzene	52.89	5.0	50	0	106	70 - 123				
m,p-Xylene	106.8	10	100	0	107	77 - 125				
o-Xylene	52.69	5.0	50	0	105	78 - 122				
Toluene	52.54	5.0	50	0	105	76 - 122				
Xylenes, Total	159.5	5.0	150	0	106	77 - 128				
Surr: 1,2-Dichloroethane-d4	*43.25*	*0*	*50*	*0*	*86.5*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.44*	*0*	*50*	*0*	*98.9*	*83 - 120*				
Surr: Dibromofluoromethane	*44.52*	*0*	*50*	*0*	*89.0*	*80 - 119*				
Surr: Toluene-d8	*48.54*	*0*	*50*	*0*	*97.1*	*81 - 118*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317681 **Instrument: VOA5** **Method: SW8260**

MS Sample ID: **HS18060369-01MS** Units: **ug/Kg** Analysis Date: **09-Jun-2018 12:34**
Client ID: Run ID: **VOA5_317681** SeqNo: **4593951** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.21	5.0	49.5	0	87.3	70 - 130				
Ethylbenzene	42.87	5.0	49.5	0	86.6	70 - 130				
m,p-Xylene	85.29	9.9	99	0	86.1	70 - 130				
o-Xylene	43.02	5.0	49.5	0	86.9	70 - 130				
Toluene	43.63	5.0	49.5	0	88.1	70 - 130				
Xylenes, Total	128.3	5.0	148.5	0	86.4	70 - 130				
Surr: 1,2-Dichloroethane-d4	*40.55*	*0*	*49.5*	*0*	*81.9*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*47.42*	*0*	*49.5*	*0*	*95.8*	*70 - 130*				
Surr: Dibromofluoromethane	*43.73*	*0*	*49.5*	*0*	*88.3*	*70 - 130*				
Surr: Toluene-d8	*48.22*	*0*	*49.5*	*0*	*97.4*	*70 - 130*				

MSD Sample ID: **HS18060369-01MSD** Units: **ug/Kg** Analysis Date: **09-Jun-2018 12:57**
Client ID: Run ID: **VOA5_317681** SeqNo: **4593952** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	42.34	5.0	50	0	84.7	70 - 130	43.21	2.04	30	
Ethylbenzene	41.78	5.0	50	0	83.6	70 - 130	42.87	2.57	30	
m,p-Xylene	81.3	10	100	0	81.3	70 - 130	85.29	4.79	30	
o-Xylene	41.71	5.0	50	0	83.4	70 - 130	43.02	3.09	30	
Toluene	42.26	5.0	50	0	84.5	70 - 130	43.63	3.18	30	
Xylenes, Total	123	5.0	150	0	82.0	70 - 130	128.3	4.22	30	
Surr: 1,2-Dichloroethane-d4	*43.72*	*0*	*50*	*0*	*87.4*	*70 - 126*	*40.55*	*7.52*	*30*	
Surr: 4-Bromofluorobenzene	*49.21*	*0*	*50*	*0*	*98.4*	*70 - 130*	*47.42*	*3.71*	*30*	
Surr: Dibromofluoromethane	*45.69*	*0*	*50*	*0*	*91.4*	*70 - 130*	*43.73*	*4.38*	*30*	
Surr: Toluene-d8	*49.04*	*0*	*50*	*0*	*98.1*	*70 - 130*	*48.22*	*1.69*	*30*	

The following samples were analyzed in this batch: HS18060287-10

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317684 **Instrument: VOA8** **Method: SW8260**

MBLK Sample ID: **MBLKW1-061118** Units: **ug/Kg** Analysis Date: **11-Jun-2018 09:33**
Client ID: Run ID: **VOA8_317684** SeqNo: **4594177** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	250								
Ethylbenzene	ND	250								
m,p-Xylene	ND	500								
o-Xylene	ND	250								
Toluene	ND	250								
Xylenes, Total	ND	250								
Surr: 1,2-Dichloroethane-d4	*2628*	*0*	*2500*	*0*	*105*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*2382*	*0*	*2500*	*0*	*95.3*	*83 - 120*				
Surr: Dibromofluoromethane	*2540*	*0*	*2500*	*0*	*102*	*80 - 119*				
Surr: Toluene-d8	*2675*	*0*	*2500*	*0*	*107*	*81 - 118*				

LCS Sample ID: **VLCSW1-061118** Units: **ug/Kg** Analysis Date: **11-Jun-2018 08:45**
Client ID: Run ID: **VOA8_317684** SeqNo: **4594176** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.62	5.0	50	0	87.2	75 - 124				
Ethylbenzene	45.93	5.0	50	0	91.9	70 - 123				
m,p-Xylene	93.85	10	100	0	93.8	77 - 125				
o-Xylene	46.31	5.0	50	0	92.6	78 - 122				
Toluene	43.86	5.0	50	0	87.7	76 - 122				
Xylenes, Total	140.2	5.0	150	0	93.4	77 - 128				
Surr: 1,2-Dichloroethane-d4	*53.64*	*0*	*50*	*0*	*107*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*56*	*0*	*50*	*0*	*112*	*83 - 120*				
Surr: Dibromofluoromethane	*47.25*	*0*	*50*	*0*	*94.5*	*80 - 119*				
Surr: Toluene-d8	*50.48*	*0*	*50*	*0*	*101*	*81 - 118*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317684 **Instrument: VOA8** **Method: SW8260**

MS Sample ID: **HS18060449-01MS** Units: **ug/Kg** Analysis Date: **11-Jun-2018 14:10**
Client ID: Run ID: **VOA8_317684** SeqNo: **4595535** PrepDate: DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	23540	2500	25250	0	93.2	70 - 130				
Ethylbenzene	25520	2500	25250	0	101	70 - 130				
m,p-Xylene	52420	5000	50500	0	104	70 - 130				
o-Xylene	26140	2500	25250	0	104	70 - 130				
Toluene	35660	2500	25250	10750	98.7	70 - 130				
Xylenes, Total	78550	2500	75750	0	104	70 - 130				
Surr: 1,2-Dichloroethane-d4	*27740*	*0*	*25250*	*0*	*110*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*30200*	*0*	*25250*	*0*	*120*	*70 - 130*				
Surr: Dibromofluoromethane	*23560*	*0*	*25250*	*0*	*93.3*	*70 - 130*				
Surr: Toluene-d8	*25080*	*0*	*25250*	*0*	*99.3*	*70 - 130*				

MSD Sample ID: **HS18060449-01MSD** Units: **ug/Kg** Analysis Date: **11-Jun-2018 14:36**
Client ID: Run ID: **VOA8_317684** SeqNo: **4595536** PrepDate: DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	24650	2500	25250	0	97.6	70 - 130	23540	4.61	30	
Ethylbenzene	26760	2500	25250	0	106	70 - 130	25520	4.73	30	
m,p-Xylene	55010	5000	50500	0	109	70 - 130	52420	4.82	30	
o-Xylene	26780	2500	25250	0	106	70 - 130	26140	2.44	30	
Toluene	38580	2500	25250	10750	110	70 - 130	35660	7.86	30	
Xylenes, Total	81790	2500	75750	0	108	70 - 130	78550	4.04	30	
Surr: 1,2-Dichloroethane-d4	*26630*	*0*	*25250*	*0*	*105*	*70 - 126*	*27740*	*4.07*	*30*	
Surr: 4-Bromofluorobenzene	*28900*	*0*	*25250*	*0*	*114*	*70 - 130*	*30200*	*4.4*	*30*	
Surr: Dibromofluoromethane	*23960*	*0*	*25250*	*0*	*94.9*	*70 - 130*	*23560*	*1.7*	*30*	
Surr: Toluene-d8	*25220*	*0*	*25250*	*0*	*99.9*	*70 - 130*	*25080*	*0.552*	*30*	

The following samples were analyzed in this batch: HS18060287-01 HS18060287-05 HS18060287-09

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317760 **Instrument: VOA8** **Method: SW8260**

MBLK Sample ID: **MBLKW1-061218** Units: **ug/Kg** Analysis Date: **12-Jun-2018 08:53**
Client ID: Run ID: **VOA8_317760** SeqNo: **4596235** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	250								
m,p-Xylene	ND	500								
o-Xylene	ND	250								
Toluene	ND	250								
Xylenes, Total	ND	250								
Surr: 1,2-Dichloroethane-d4	*2640*	*0*	*2500*	*0*	*106*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*2391*	*0*	*2500*	*0*	*95.7*	*83 - 120*				
Surr: Dibromofluoromethane	*2461*	*0*	*2500*	*0*	*98.5*	*80 - 119*				
Surr: Toluene-d8	*2718*	*0*	*2500*	*0*	*109*	*81 - 118*				

LCS Sample ID: **VLCSW1-061218** Units: **ug/Kg** Analysis Date: **12-Jun-2018 08:04**
Client ID: Run ID: **VOA8_317760** SeqNo: **4596234** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	46.45	5.0	50	0	92.9	70 - 123				
m,p-Xylene	93.83	10	100	0	93.8	77 - 125				
o-Xylene	46.71	5.0	50	0	93.4	78 - 122				
Toluene	44.08	5.0	50	0	88.2	76 - 122				
Xylenes, Total	140.5	5.0	150	0	93.7	77 - 128				
Surr: 1,2-Dichloroethane-d4	*54.97*	*0*	*50*	*0*	*110*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*54.53*	*0*	*50*	*0*	*109*	*83 - 120*				
Surr: Dibromofluoromethane	*47.71*	*0*	*50*	*0*	*95.4*	*80 - 119*				
Surr: Toluene-d8	*52.48*	*0*	*50*	*0*	*105*	*81 - 118*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: R317760 **Instrument: VOA8** **Method: SW8260**

MS Sample ID: **HS18060287-05MS** Units: **ug/Kg** Analysis Date: **12-Jun-2018 10:59**
Client ID: **S-2 1'** Run ID: **VOA8_317760** SeqNo: **4596813** PrepDate: DF: **5000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	294500	25000	247500	28370	108	70 - 130				
m,p-Xylene	641400	50000	495000	97360	110	70 - 130				
o-Xylene	319600	25000	247500	49370	109	70 - 130				
Toluene	333500	25000	247500	81880	102	70 - 130				
Xylenes, Total	960900	25000	742500	146700	110	70 - 130				
Surr: 1,2-Dichloroethane-d4	*224100*	*0*	*247500*	*0*	*90.5*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*281300*	*0*	*247500*	*0*	*114*	*70 - 130*				
Surr: Dibromofluoromethane	*232700*	*0*	*247500*	*0*	*94.0*	*70 - 130*				
Surr: Toluene-d8	*257700*	*0*	*247500*	*0*	*104*	*70 - 130*				

MSD Sample ID: **HS18060287-05MSD** Units: **ug/Kg** Analysis Date: **12-Jun-2018 11:24**
Client ID: **S-2 1'** Run ID: **VOA8_317760** SeqNo: **4596814** PrepDate: DF: **5000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	311200	25000	247500	28370	114	70 - 130	294500	5.52	30	
m,p-Xylene	673500	50000	495000	97360	116	70 - 130	641400	4.9	30	
o-Xylene	335100	25000	247500	49370	115	70 - 130	319600	4.74	30	
Toluene	345200	25000	247500	81880	106	70 - 130	333500	3.47	30	
Xylenes, Total	1009000	25000	742500	146700	116	70 - 130	960900	4.84	30	
Surr: 1,2-Dichloroethane-d4	*223900*	*0*	*247500*	*0*	*90.4*	*70 - 126*	*224100*	*0.109*	*30*	
Surr: 4-Bromofluorobenzene	*282100*	*0*	*247500*	*0*	*114*	*70 - 130*	*281300*	*0.283*	*30*	
Surr: Dibromofluoromethane	*231500*	*0*	*247500*	*0*	*93.5*	*70 - 130*	*232700*	*0.537*	*30*	
Surr: Toluene-d8	*256000*	*0*	*247500*	*0*	*103*	*70 - 130*	*257700*	*0.661*	*30*	

The following samples were analyzed in this batch: HS18060287-01 HS18060287-05 HS18060287-09

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: 129235 **Instrument: ICS3K2** **Method: E300**

MBLK Sample ID: **MBLK-129235** Units: **mg/Kg** Analysis Date: **09-Jun-2018 03:41**
Client ID: Run ID: **ICS3K2_317746** SeqNo: **4595720** PrepDate: **08-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-129235** Units: **mg/Kg** Analysis Date: **09-Jun-2018 04:02**
Client ID: Run ID: **ICS3K2_317746** SeqNo: **4595721** PrepDate: **08-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	201.8	5.00	200	0	101	90 - 110				

LCSD Sample ID: **LCSD-129235** Units: **mg/Kg** Analysis Date: **09-Jun-2018 04:24**
Client ID: Run ID: **ICS3K2_317746** SeqNo: **4595722** PrepDate: **08-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	203.1	5.00	200	0	102	90 - 110	201.8	0.662	20	

MS Sample ID: **HS18060287-06MS** Units: **mg/Kg** Analysis Date: **11-Jun-2018 15:30**
Client ID: **S-2 2'** Run ID: **ICS3K2_317746** SeqNo: **4597133** PrepDate: **08-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	106	4.90	98.08	11.62	96.2	75 - 125				

MS Sample ID: **HS18060127-02MS** Units: **mg/Kg** Analysis Date: **09-Jun-2018 05:29**
Client ID: Run ID: **ICS3K2_317746** SeqNo: **4595725** PrepDate: **08-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	120.6	4.95	99.05	23.7	97.9	75 - 125				

MS Sample ID: **HS18060127-01MS** Units: **mg/Kg** Analysis Date: **11-Jun-2018 19:50**
Client ID: Run ID: **ICS3K2_317746** SeqNo: **4597144** PrepDate: **08-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	135.5	4.95	99.06	35.29	101	75 - 125				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: HS18060287

QC BATCH REPORT

Batch ID: 129235 **Instrument: ICS3K2** **Method: E300**

MSD Sample ID: **HS18060287-06MSD** Units: **mg/Kg** Analysis Date: **11-Jun-2018 15:52**
Client ID: **S-2 2'** Run ID: **ICS3K2_317746** SeqNo: **4597134** PrepDate: **08-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	107.2	4.94	98.75	11.62	96.8	75 - 125	106	1.11	20	

MSD Sample ID: **HS18060127-02MSD** Units: **mg/Kg** Analysis Date: **09-Jun-2018 05:51**
Client ID: Run ID: **ICS3K2_317746** SeqNo: **4595726** PrepDate: **08-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	120.4	4.97	99.3	23.7	97.4	75 - 125	120.6	0.17	20	

MSD Sample ID: **HS18060127-01MSD** Units: **mg/Kg** Analysis Date: **11-Jun-2018 20:12**
Client ID: Run ID: **ICS3K2_317746** SeqNo: **4597145** PrepDate: **08-Jun-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	136.9	4.96	99.3	35.29	102	75 - 125	135.5	0.989	20	

The following samples were analyzed in this batch:

HS18060287-01	HS18060287-02	HS18060287-03	HS18060287-04
HS18060287-05	HS18060287-06	HS18060287-07	HS18060287-08
HS18060287-09	HS18060287-10	HS18060287-11	HS18060287-12

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Parsons Brinckerhoff
Project: Percussion West Lovington
WorkOrder: **HS18060287**

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

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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

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Sample Receipt Checklist

Client Name:	LBG Addison Texas	Date/Time Received:	**06-Jun-2018 08:48**
Work Order:	HS18060287	Received by:	**PMG**

Checklist completed by: *Paresh M. Giga* eSignature — 6-Jun-2018 Date

Reviewed by: *Bernadette A. Fini* eSignature — 7-Jun-2018 Date

Matrices: **Soil**

Carrier name: **FedEx**

	Yes	No	Not Present	N/A
Shipping container/cooler in good condition?	☑	☐	☐	
Custody seals intact on shipping container/cooler?	☐	☐	☑	
Custody seals intact on sample bottles?	☐	☐	☑	
Chain of custody present?	☑	☐		
Chain of custody signed when relinquished and received?	☑	☐		
Chain of custody agrees with sample labels?	☑	☐		
Samples in proper container/bottle?	☑	☐		
Sample containers intact?	☑	☐		
TX1005 solids received in hermetically sealed vials?	☐	☑		☐
Sufficient sample volume for indicated test?	☑	☐		
All samples received within holding time?	☑	☐		
Container/Temp Blank temperature in compliance?	☑	☐		

Temperature(s)/Thermometer(s):	0.9c/0.4c U/C	IR11
Cooler(s)/Kit(s):	Brown	
Date/Time sample(s) sent to storage:	6/6/18 20:45	

	Yes	No		
Water - VOA vials have zero headspace?	☐	☐	No VOA vials submitted	☑
Water - pH acceptable upon receipt?	☐	☐	N/A	☑
pH adjusted?	☐	☐	N/A	☑

pH adjusted by:

Login Notes: No dates/times on jar labels

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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ALS Environmental

Cincinnati, OH +1 513 733 5336
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Houston, TX +1 281 530 5656
Middletown, PA +1 717 944 5541
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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 2

COC ID: 140263

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Percussion West Lovington	A	TPH GRO/DRO/ORO Extend
Work Order		Project Number		B	BTEX
Company Name	WSP USA	Bill To Company		C	Chlorides
Send Report To	Matthew Boyle	Invoice Attn		D	
Address	15305 N Stemmons Suite 1600	Address	Same	E	
				F	
City/State/Zip		City/State/Zip		G	
Phone	817 713 0262	Phone		H	
Fax		Fax		I	
e-Mail Address	Matthew.Boyle@wsp.com	e-Mail Address		J	

HS18060287

WSP Parsons Brinckerhoff

Percussion West Lovington

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-1 1'	6-4-18	6:45	Soil	Ice	1	/	/	/								
2	S-1 2'		6:50														
3	S-1 3'		6:55														
4	S-1 4'		7:00														
5	S-2 1'		7:10														
6	S-2 2'		7:15														
7	S-2 3'		7:20														
8	S-2 4'		7:25														
9	S-3 1'		7:35														
10	S-3 2'		7:40														

Sampler(s) Please Print & Sign: Matthew Boyle MATTHEW BOYLE

Shipment Method: FED EX

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 Boyle	6-5-18	7:30	
Relinquished by:	Date:	Time:	Received by (Laboratory):
			6/6/18 08:48
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp
1	0.9°
Brown	#11
	clr -0.3°

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.

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+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, WV
+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: 141026

ALS Project Manager:		ALS Work Order #:	

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Percussion West Lavington	A	TPH GRO/DRO/ORO Extended
Work Order		Project Number		B	BTEX
Company Name	WSP USA	Bill To Company		C	Chlorides
Send Report To	Matthew Boyle	Invoice Attn		D	
Address	15305 N Stemmons Suite 1600	Address	Same	E	
City/State/Zip	Dallas TX 75207	City/State/Zip		F	
Phone	817 7130262	Phone		G	
Fax		Fax		H	
e-Mail Address	Matthew.Boyle@wsp.com	e-Mail Address		I	
				J	

HS18060287
WSP Parsons Brinckerhoff
Percussion West Lovington

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-3 3'	6-4-18	7:45	Soil	Ice	1	✓	✓	✓								
2	S-3 9'	6-4-18	7:50	Soil	Ice	1	✓	✓	✓								
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Martin J Boyle Matthew Boyle

Shipment Method: Fed Ex

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:
Martin J Boyle	6-6-18	7:30	
Relinquished by:	Date:	Time:	Received by (Laboratory):
			6/6/18 8:48
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp

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.

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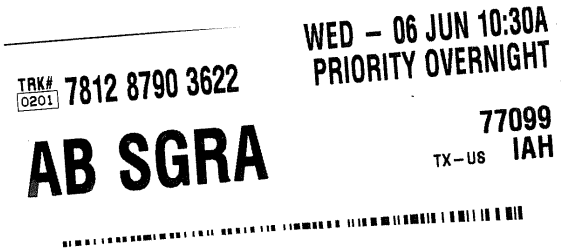

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ALS Environmental Analytical Report - First Remediation

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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November 29, 2018

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

Work Order: **HS18110952**

Laboratory Results for: **West Lovington 20 # 1**

Dear Matthew,

ALS Environmental received 24 sample(s) on Nov 19, 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: DAYNA.FISHER
Bernadette A. Fini
Project Manager

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Work Order: HS18110952

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18110952-01	SW-1	Soil		16-Nov-2018 08:10	19-Nov-2018 09:10	☐
HS18110952-02	SW-2	Soil		16-Nov-2018 08:20	19-Nov-2018 09:10	☐
HS18110952-03	SW-3	Soil		16-Nov-2018 08:30	19-Nov-2018 09:10	☐
HS18110952-04	SW-4	Soil		16-Nov-2018 08:45	19-Nov-2018 09:10	☐
HS18110952-05	SW-5	Soil		16-Nov-2018 08:55	19-Nov-2018 09:10	☐
HS18110952-06	SW-6	Soil		16-Nov-2018 09:00	19-Nov-2018 09:10	☐
HS18110952-07	SW-7	Soil		16-Nov-2018 09:05	19-Nov-2018 09:10	☐
HS18110952-08	SW-8	Soil		16-Nov-2018 09:10	19-Nov-2018 09:10	☐
HS18110952-09	SW-9	Soil		16-Nov-2018 09:15	19-Nov-2018 09:10	☐
HS18110952-10	SW-10	Soil		16-Nov-2018 09:20	19-Nov-2018 09:10	☐
HS18110952-11	S-1 1'	Soil		16-Nov-2018 08:00	19-Nov-2018 09:10	☐
HS18110952-12	S-1 2'	Soil		16-Nov-2018 08:05	19-Nov-2018 09:10	☐
HS18110952-13	S-2 1'	Soil		16-Nov-2018 08:15	19-Nov-2018 09:10	☐
HS18110952-14	S-2 2'	Soil		16-Nov-2018 08:22	19-Nov-2018 09:10	☐
HS18110952-15	S-3 1'	Soil		16-Nov-2018 08:25	19-Nov-2018 09:10	☐
HS18110952-16	S-3 2'	Soil		16-Nov-2018 08:33	19-Nov-2018 09:10	☐
HS18110952-17	S-4 1'	Soil		16-Nov-2018 08:40	19-Nov-2018 09:10	☐
HS18110952-18	S-4 2'	Soil		16-Nov-2018 08:45	19-Nov-2018 09:10	☐
HS18110952-19	S-5 1'	Soil		16-Nov-2018 08:50	19-Nov-2018 09:10	☐
HS18110952-20	S-5 2'	Soil		16-Nov-2018 08:53	19-Nov-2018 09:10	☐
HS18110952-21	S-6 1'	Soil		16-Nov-2018 09:00	19-Nov-2018 09:10	☐
HS18110952-22	S-6 2'	Soil		16-Nov-2018 09:04	19-Nov-2018 09:10	☐
HS18110952-23	S-7 1'	Soil		16-Nov-2018 09:25	19-Nov-2018 09:10	☐
HS18110952-24	S-7 2'	Soil		16-Nov-2018 09:30	19-Nov-2018 09:10	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy **CASE NARRATIVE**
Project: West Lovington 20 # 1
Work Order: HS18110952

GC Semivolatiles by Method SW8015M

Batch ID: 134949

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

Batch ID: 134806

Sample ID: S-7 1' (HS18110952-23)

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

Sample ID: S-7 1' (HS18110952-23MS)

- 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-7 1' (HS18110952-23MSD)

- 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: S-7 2' (HS18110952-24)

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

Batch ID: 134792

Sample ID: S-1 2' (HS18110952-12)

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

Sample ID: S-3 2' (HS18110952-16)

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

Sample ID: SW-1 (HS18110952-01)

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

Sample ID: SW-1 (HS18110952-01MS)

- 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-1 (HS18110952-01MSD)

- 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-3 (HS18110952-03)

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

Sample ID: SW-4 (HS18110952-04)

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

Sample ID: SW-5 (HS18110952-05)

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy **CASE NARRATIVE**
Project: West Lovington 20 # 1
Work Order: HS18110952

GC Semivolatiles by Method SW8015M

Batch ID: 134792

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

Sample ID: SW-7 (HS18110952-07)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

Sample ID: SW-8 (HS18110952-08)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

GC Volatiles by Method SW8015

Batch ID: R327894

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

Batch ID: R327859

Sample ID: S-7 2' (HS18110952-24MS)

• 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-7 2' (HS18110952-24MSD)

• 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.

Batch ID: R327858

Sample ID: S-5 2' (HS18110952-20MS)

• 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-5 2' (HS18110952-20MSD)

• 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.

GCMS Volatiles by Method SW8260

Batch ID: R327849

Sample ID: S-6 2' (HS18110952-22MS)

• MS failed QC limits for few compounds.

Batch ID: R327785

Sample ID: SW-2 (HS18110952-02)

• Surrogate failure for HS18110952-02 confirmed by reanalysis.

Batch ID: R327771

Sample ID: SW-1 (HS18110952-01MS)

• MS/MSD failed QC limits for few compounds.

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Work Order: HS18110952

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R327881

Sample ID: S-7 1' (HS18110952-23)

- Surrogate recovered above upper control limits

WetChemistry by Method E300

Batch ID: 134803

Sample ID: HS18110959-06MS

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

Batch ID: 134777

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-1
Collection Date: 16-Nov-2018 08:10

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-01
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**				Analyst: WLR
Benzene	ND		0.0046	mg/Kg	1	19-Nov-2018 23:01
Ethylbenzene	**0.064**		**0.0046**	**mg/Kg**	1	19-Nov-2018 23:01
m,p-Xylene	**0.26**		**0.0093**	**mg/Kg**	1	19-Nov-2018 23:01
o-Xylene	**0.17**		**0.0046**	**mg/Kg**	1	19-Nov-2018 23:01
Toluene	**0.066**		**0.0046**	**mg/Kg**	1	19-Nov-2018 23:01
Xylenes, Total	**0.43**		**0.0046**	**mg/Kg**	1	19-Nov-2018 23:01
Surr: 1,2-Dichloroethane-d4	*89.6*		*70-126*	*%REC*	*1*	*19-Nov-2018 23:01*
Surr: 4-Bromofluorobenzene	*81.5*		*70-130*	*%REC*	*1*	*19-Nov-2018 23:01*
Surr: Dibromofluoromethane	*96.3*		*70-130*	*%REC*	*1*	*19-Nov-2018 23:01*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*1*	*19-Nov-2018 23:01*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**16**		**0.050**	**mg/Kg**	1	20-Nov-2018 12:12
Surr: 4-Bromofluorobenzene	*82.3*		*70-123*	*%REC*	*1*	*20-Nov-2018 12:12*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**870**		**42**	**mg/Kg**	25	20-Nov-2018 17:34
TPH (Motor Oil Range)	**900**	n	**85**	**mg/Kg**	25	20-Nov-2018 17:34
Surr: 2-Fluorobiphenyl	*295*	*S*	*60-129*	*%REC*	*25*	*20-Nov-2018 17:34*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**41.4**		**4.97**	**mg/Kg**	1	20-Nov-2018 14:40

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-2
Collection Date: 16-Nov-2018 08:20

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-02
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	20-Nov-2018 00:15
Ethylbenzene	**2.3**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:09
m,p-Xylene	**8.9**		**0.49**	**mg/Kg**	50	20-Nov-2018 11:09
o-Xylene	**5.6**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:09
Toluene	**0.86**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:09
Xylenes, Total	**15**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:09
Surr: 1,2-Dichloroethane-d4	*84.9*		*70-126*	*%REC*	*1*	*20-Nov-2018 00:15*
Surr: 1,2-Dichloroethane-d4	*101*		*70-126*	*%REC*	*50*	*20-Nov-2018 11:09*
Surr: 4-Bromofluorobenzene	*97.1*		*70-130*	*%REC*	*1*	*20-Nov-2018 00:15*
Surr: 4-Bromofluorobenzene	*139*	*S*	*70-130*	*%REC*	*50*	*20-Nov-2018 11:09*
Surr: Dibromofluoromethane	*95.5*		*70-130*	*%REC*	*1*	*20-Nov-2018 00:15*
Surr: Dibromofluoromethane	*100*		*70-130*	*%REC*	*50*	*20-Nov-2018 11:09*
Surr: Toluene-d8	*109*		*70-130*	*%REC*	*1*	*20-Nov-2018 00:15*
Surr: Toluene-d8	*97.0*		*70-130*	*%REC*	*50*	*20-Nov-2018 11:09*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**1,400**		**2.4**	**mg/Kg**	50	21-Nov-2018 11:54
Surr: 4-Bromofluorobenzene	*91.9*		*70-123*	*%REC*	*50*	*21-Nov-2018 11:54*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**160**		**8.4**	**mg/Kg**	5	20-Nov-2018 19:33
TPH (Motor Oil Range)	**120**	n	**17**	**mg/Kg**	5	20-Nov-2018 19:33
Surr: 2-Fluorobiphenyl	*124*		*60-129*	*%REC*	*5*	*20-Nov-2018 19:33*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**17.8**		**4.99**	**mg/Kg**	1	20-Nov-2018 13:27

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-3
Collection Date: 16-Nov-2018 08:30

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-03
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	20-Nov-2018 00:40
Ethylbenzene	**0.030**		**0.0048**	**mg/Kg**	1	20-Nov-2018 00:40
m,p-Xylene	**4.6**		**0.49**	**mg/Kg**	50	20-Nov-2018 11:31
o-Xylene	**3.5**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:31
Toluene	**0.030**		**0.0048**	**mg/Kg**	1	20-Nov-2018 00:40
Xylenes, Total	**8.1**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:31
Surr: 1,2-Dichloroethane-d4	*88.2*		*70-126*	*%REC*	*1*	*20-Nov-2018 00:40*
Surr: 1,2-Dichloroethane-d4	*101*		*70-126*	*%REC*	*50*	*20-Nov-2018 11:31*
Surr: 4-Bromofluorobenzene	*88.7*		*70-130*	*%REC*	*1*	*20-Nov-2018 00:40*
Surr: 4-Bromofluorobenzene	*121*		*70-130*	*%REC*	*50*	*20-Nov-2018 11:31*
Surr: Dibromofluoromethane	*91.9*		*70-130*	*%REC*	*1*	*20-Nov-2018 00:40*
Surr: Dibromofluoromethane	*101*		*70-130*	*%REC*	*50*	*20-Nov-2018 11:31*
Surr: Toluene-d8	*108*		*70-130*	*%REC*	*1*	*20-Nov-2018 00:40*
Surr: Toluene-d8	*94.3*		*70-130*	*%REC*	*50*	*20-Nov-2018 11:31*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**610**		**2.4**	**mg/Kg**	50	21-Nov-2018 12:10
Surr: 4-Bromofluorobenzene	*84.9*		*70-123*	*%REC*	*50*	*21-Nov-2018 12:10*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**1,100**		**68**	**mg/Kg**	40	20-Nov-2018 19:57
TPH (Motor Oil Range)	**770**	n	**140**	**mg/Kg**	40	20-Nov-2018 19:57
Surr: 2-Fluorobiphenyl	*451*	*S*	*60-129*	*%REC*	*40*	*20-Nov-2018 19:57*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**58.0**		**4.91**	**mg/Kg**	1	20-Nov-2018 15:24

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-4
Collection Date: 16-Nov-2018 08:45

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-04
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	20-Nov-2018 01:04
Ethylbenzene	**1.2**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:52
m,p-Xylene	**4.3**		**0.47**	**mg/Kg**	50	20-Nov-2018 11:52
o-Xylene	**2.8**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:52
Toluene	**0.46**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:52
Xylenes, Total	**7.2**		**0.24**	**mg/Kg**	50	20-Nov-2018 11:52
Surr: 1,2-Dichloroethane-d4	*89.0*		*70-126*	*%REC*	*1*	*20-Nov-2018 01:04*
Surr: 1,2-Dichloroethane-d4	*102*		*70-126*	*%REC*	*50*	*20-Nov-2018 11:52*
Surr: 4-Bromofluorobenzene	*75.3*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:04*
Surr: 4-Bromofluorobenzene	*120*		*70-130*	*%REC*	*50*	*20-Nov-2018 11:52*
Surr: Dibromofluoromethane	*95.8*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:04*
Surr: Dibromofluoromethane	*100*		*70-130*	*%REC*	*50*	*20-Nov-2018 11:52*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:04*
Surr: Toluene-d8	*94.0*		*70-130*	*%REC*	*50*	*20-Nov-2018 11:52*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**650**		**2.5**	**mg/Kg**	50	21-Nov-2018 12:26
Surr: 4-Bromofluorobenzene	*97.7*		*70-123*	*%REC*	*50*	*21-Nov-2018 12:26*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**2,600**		**170**	**mg/Kg**	100	20-Nov-2018 20:21
TPH (Motor Oil Range)	**1,600**	n	**340**	**mg/Kg**	100	20-Nov-2018 20:21
Surr: 2-Fluorobiphenyl	*1160*	*S*	*60-129*	*%REC*	*100*	*20-Nov-2018 20:21*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**17.5**		**4.80**	**mg/Kg**	1	20-Nov-2018 15:38

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-5
Collection Date: 16-Nov-2018 08:55

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-05
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	20-Nov-2018 01:29
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 01:29
m,p-Xylene	ND		0.0096	mg/Kg	1	20-Nov-2018 01:29
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 01:29
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 01:29
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 01:29
Surr: 1,2-Dichloroethane-d4	*89.2*		*70-126*	*%REC*	*1*	*20-Nov-2018 01:29*
Surr: 4-Bromofluorobenzene	*94.6*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:29*
Surr: Dibromofluoromethane	*91.8*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:29*
Surr: Toluene-d8	*104*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:29*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**2.7**		**0.050**	**mg/Kg**	1	20-Nov-2018 13:17
Surr: 4-Bromofluorobenzene	*112*		*70-123*	*%REC*	*1*	*20-Nov-2018 13:17*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**430**		**34**	**mg/Kg**	20	20-Nov-2018 16:46
TPH (Motor Oil Range)	**530**	n	**68**	**mg/Kg**	20	20-Nov-2018 16:46
Surr: 2-Fluorobiphenyl	*291*	*S*	*60-129*	*%REC*	*20*	*20-Nov-2018 16:46*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**94.3**		**4.95**	**mg/Kg**	1	20-Nov-2018 15:53

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-6
Collection Date: 16-Nov-2018 09:00

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-06
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	20-Nov-2018 01:54
Ethylbenzene	ND		0.0050	mg/Kg	1	20-Nov-2018 01:54
m,p-Xylene	ND		0.0099	mg/Kg	1	20-Nov-2018 01:54
o-Xylene	ND		0.0050	mg/Kg	1	20-Nov-2018 01:54
Toluene	ND		0.0050	mg/Kg	1	20-Nov-2018 01:54
Xylenes, Total	ND		0.0050	mg/Kg	1	20-Nov-2018 01:54
Surr: 1,2-Dichloroethane-d4	*84.6*		*70-126*	*%REC*	*1*	*20-Nov-2018 01:54*
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:54*
Surr: Dibromofluoromethane	*89.3*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:54*
Surr: Toluene-d8	*104*		*70-130*	*%REC*	*1*	*20-Nov-2018 01:54*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**0.83**		**0.050**	**mg/Kg**	1	20-Nov-2018 13:33
Surr: 4-Bromofluorobenzene	*80.8*		*70-123*	*%REC*	*1*	*20-Nov-2018 13:33*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**100**		**8.4**	**mg/Kg**	5	20-Nov-2018 18:45
TPH (Motor Oil Range)	**120**	n	**17**	**mg/Kg**	5	20-Nov-2018 18:45
Surr: 2-Fluorobiphenyl	*103*		*60-129*	*%REC*	*5*	*20-Nov-2018 18:45*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**66.9**		**4.89**	**mg/Kg**	1	20-Nov-2018 16:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-7
Collection Date: 16-Nov-2018 09:05

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-07
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	20-Nov-2018 02:18
Ethylbenzene	**0.015**		**0.0050**	**mg/Kg**	1	20-Nov-2018 02:18
m,p-Xylene	**0.012**		**0.0099**	**mg/Kg**	1	20-Nov-2018 02:18
o-Xylene	**0.043**		**0.0050**	**mg/Kg**	1	20-Nov-2018 02:18
Toluene	ND		0.0050	mg/Kg	1	20-Nov-2018 02:18
Xylenes, Total	**0.055**		**0.0050**	**mg/Kg**	1	20-Nov-2018 02:18
Surr: 1,2-Dichloroethane-d4	*89.7*		*70-126*	*%REC*	*1*	*20-Nov-2018 02:18*
Surr: 4-Bromofluorobenzene	*92.4*		*70-130*	*%REC*	*1*	*20-Nov-2018 02:18*
Surr: Dibromofluoromethane	*95.8*		*70-130*	*%REC*	*1*	*20-Nov-2018 02:18*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*1*	*20-Nov-2018 02:18*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**6.2**		**0.050**	**mg/Kg**	1	20-Nov-2018 14:37
Surr: 4-Bromofluorobenzene	*119*		*70-123*	*%REC*	*1*	*20-Nov-2018 14:37*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**1,900**		**170**	**mg/Kg**	100	21-Nov-2018 12:15
TPH (Motor Oil Range)	**2,700**	n	**340**	**mg/Kg**	100	21-Nov-2018 12:15
Surr: 2-Fluorobiphenyl	*0*	*JS*	*60-129*	*%REC*	*100*	*21-Nov-2018 12:15*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**50.3**		**4.90**	**mg/Kg**	1	20-Nov-2018 16:22

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-8
Collection Date: 16-Nov-2018 09:10

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-08
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	20-Nov-2018 02:43
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 02:43
m,p-Xylene	ND		0.0097	mg/Kg	1	20-Nov-2018 02:43
o-Xylene	**0.0055**		**0.0048**	**mg/Kg**	1	20-Nov-2018 02:43
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 02:43
Xylenes, Total	**0.009**		**0.0048**	**mg/Kg**	1	20-Nov-2018 02:43
Surr: 1,2-Dichloroethane-d4	*88.5*		*70-126*	*%REC*	*1*	*20-Nov-2018 02:43*
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*20-Nov-2018 02:43*
Surr: Dibromofluoromethane	*91.9*		*70-130*	*%REC*	*1*	*20-Nov-2018 02:43*
Surr: Toluene-d8	*107*		*70-130*	*%REC*	*1*	*20-Nov-2018 02:43*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**2.5**		**0.050**	**mg/Kg**	1	20-Nov-2018 14:54
Surr: 4-Bromofluorobenzene	*96.0*		*70-123*	*%REC*	*1*	*20-Nov-2018 14:54*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**7,100**		**680**	**mg/Kg**	400	21-Nov-2018 12:38
TPH (Motor Oil Range)	**8,200**	n	**1400**	**mg/Kg**	400	21-Nov-2018 12:38
Surr: 2-Fluorobiphenyl	*0*	*JS*	*60-129*	*%REC*	*400*	*21-Nov-2018 12:38*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**61.7**		**4.98**	**mg/Kg**	1	20-Nov-2018 16:36

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-9
Collection Date: 16-Nov-2018 09:15

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-09
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	20-Nov-2018 03:08
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 03:08
m,p-Xylene	ND		0.0096	mg/Kg	1	20-Nov-2018 03:08
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 03:08
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 03:08
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 03:08
Surr: 1,2-Dichloroethane-d4	*87.0*		*70-126*	*%REC*	*1*	*20-Nov-2018 03:08*
Surr: 4-Bromofluorobenzene	*100.0*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:08*
Surr: Dibromofluoromethane	*94.4*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:08*
Surr: Toluene-d8	*103*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:08*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 15:10
Surr: 4-Bromofluorobenzene	*99.1*		*70-123*	*%REC*	*1*	*20-Nov-2018 15:10*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	20-Nov-2018 13:44
TPH (Motor Oil Range)	**3.6**	n	**3.4**	**mg/Kg**	1	20-Nov-2018 13:44
Surr: 2-Fluorobiphenyl	*60.3*		*60-129*	*%REC*	*1*	*20-Nov-2018 13:44*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	ND		4.88	mg/Kg	1	20-Nov-2018 16:51

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: SW-10
Collection Date: 16-Nov-2018 09:20

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-10
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	20-Nov-2018 03:32
Ethylbenzene	ND		0.0050	mg/Kg	1	20-Nov-2018 03:32
m,p-Xylene	ND		0.010	mg/Kg	1	20-Nov-2018 03:32
o-Xylene	ND		0.0050	mg/Kg	1	20-Nov-2018 03:32
Toluene	ND		0.0050	mg/Kg	1	20-Nov-2018 03:32
Xylenes, Total	ND		0.0050	mg/Kg	1	20-Nov-2018 03:32
Surr: 1,2-Dichloroethane-d4	*83.5*		*70-126*	*%REC*	*1*	*20-Nov-2018 03:32*
Surr: 4-Bromofluorobenzene	*97.9*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:32*
Surr: Dibromofluoromethane	*92.8*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:32*
Surr: Toluene-d8	*101*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:32*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 15:26
Surr: 4-Bromofluorobenzene	*98.1*		*70-123*	*%REC*	*1*	*20-Nov-2018 15:26*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	19-Nov-2018 22:01
TPH (Motor Oil Range)	**20**	n	**3.4**	**mg/Kg**	1	19-Nov-2018 22:01
Surr: 2-Fluorobiphenyl	*64.0*		*60-129*	*%REC*	*1*	*19-Nov-2018 22:01*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	ND		4.92	mg/Kg	1	20-Nov-2018 17:06

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-1 1'
Collection Date: 16-Nov-2018 08:00

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-11
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	20-Nov-2018 03:57
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 03:57
m,p-Xylene	ND		0.0095	mg/Kg	1	20-Nov-2018 03:57
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 03:57
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 03:57
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 03:57
Surr: 1,2-Dichloroethane-d4	*86.1*		*70-126*	*%REC*	*1*	*20-Nov-2018 03:57*
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:57*
Surr: Dibromofluoromethane	*93.8*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:57*
Surr: Toluene-d8	*103*		*70-130*	*%REC*	*1*	*20-Nov-2018 03:57*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 15:42
Surr: 4-Bromofluorobenzene	*97.7*		*70-123*	*%REC*	*1*	*20-Nov-2018 15:42*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**19**		**1.7**	**mg/Kg**	1	21-Nov-2018 12:15
TPH (Motor Oil Range)	**49**	n	**3.4**	**mg/Kg**	1	21-Nov-2018 12:15
Surr: 2-Fluorobiphenyl	*62.3*		*60-129*	*%REC*	*1*	*21-Nov-2018 12:15*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**17.2**		**4.86**	**mg/Kg**	1	20-Nov-2018 17:20

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-1 2'
Collection Date: 16-Nov-2018 08:05

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-12
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	20-Nov-2018 04:21
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 04:21
m,p-Xylene	ND		0.0097	mg/Kg	1	20-Nov-2018 04:21
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 04:21
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 04:21
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 04:21
Surr: 1,2-Dichloroethane-d4	*82.7*		*70-126*	*%REC*	*1*	*20-Nov-2018 04:21*
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	*1*	*20-Nov-2018 04:21*
Surr: Dibromofluoromethane	*95.4*		*70-130*	*%REC*	*1*	*20-Nov-2018 04:21*
Surr: Toluene-d8	*108*		*70-130*	*%REC*	*1*	*20-Nov-2018 04:21*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**0.15**		**0.050**	**mg/Kg**	1	20-Nov-2018 15:58
Surr: 4-Bromofluorobenzene	*97.4*		*70-123*	*%REC*	*1*	*20-Nov-2018 15:58*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**430**		**17**	**mg/Kg**	10	20-Nov-2018 17:10
TPH (Motor Oil Range)	**450**	n	**34**	**mg/Kg**	10	20-Nov-2018 17:10
Surr: 2-Fluorobiphenyl	*228*	*S*	*60-129*	*%REC*	*10*	*20-Nov-2018 17:10*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**25.1**		**4.95**	**mg/Kg**	1	20-Nov-2018 18:18

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-2 1'
Collection Date: 16-Nov-2018 08:15

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-13
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	20-Nov-2018 04:46
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 04:46
m,p-Xylene	ND		0.0096	mg/Kg	1	20-Nov-2018 04:46
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 04:46
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 04:46
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 04:46
Surr: 1,2-Dichloroethane-d4	*86.3*		*70-126*	*%REC*	*1*	*20-Nov-2018 04:46*
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*20-Nov-2018 04:46*
Surr: Dibromofluoromethane	*90.9*		*70-130*	*%REC*	*1*	*20-Nov-2018 04:46*
Surr: Toluene-d8	*103*		*70-130*	*%REC*	*1*	*20-Nov-2018 04:46*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 16:14
Surr: 4-Bromofluorobenzene	*100*		*70-123*	*%REC*	*1*	*20-Nov-2018 16:14*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	20-Nov-2018 14:46
TPH (Motor Oil Range)	**3.7**	n	**3.4**	**mg/Kg**	1	20-Nov-2018 14:46
Surr: 2-Fluorobiphenyl	*60.8*		*60-129*	*%REC*	*1*	*20-Nov-2018 14:46*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	ND		4.86	mg/Kg	1	20-Nov-2018 17:35

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-2 2'
Collection Date: 16-Nov-2018 08:22

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-14
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	20-Nov-2018 05:11
Ethylbenzene	ND		0.0049	mg/Kg	1	20-Nov-2018 05:11
m,p-Xylene	ND		0.0098	mg/Kg	1	20-Nov-2018 05:11
o-Xylene	ND		0.0049	mg/Kg	1	20-Nov-2018 05:11
Toluene	ND		0.0049	mg/Kg	1	20-Nov-2018 05:11
Xylenes, Total	ND		0.0049	mg/Kg	1	20-Nov-2018 05:11
Surr: 1,2-Dichloroethane-d4	*81.1*		*70-126*	*%REC*	*1*	*20-Nov-2018 05:11*
Surr: 4-Bromofluorobenzene	*98.9*		*70-130*	*%REC*	*1*	*20-Nov-2018 05:11*
Surr: Dibromofluoromethane	*89.7*		*70-130*	*%REC*	*1*	*20-Nov-2018 05:11*
Surr: Toluene-d8	*108*		*70-130*	*%REC*	*1*	*20-Nov-2018 05:11*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 16:31
Surr: 4-Bromofluorobenzene	*101*		*70-123*	*%REC*	*1*	*20-Nov-2018 16:31*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**18**		**1.7**	**mg/Kg**	1	19-Nov-2018 23:37
TPH (Motor Oil Range)	**29**	n	**3.4**	**mg/Kg**	1	19-Nov-2018 23:37
Surr: 2-Fluorobiphenyl	*63.5*		*60-129*	*%REC*	*1*	*19-Nov-2018 23:37*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**20.0**		**4.91**	**mg/Kg**	1	20-Nov-2018 19:02

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-3 1'
Collection Date: 16-Nov-2018 08:25

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-15
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	20-Nov-2018 05:35
Ethylbenzene	ND		0.0050	mg/Kg	1	20-Nov-2018 05:35
m,p-Xylene	ND		0.010	mg/Kg	1	20-Nov-2018 05:35
o-Xylene	ND		0.0050	mg/Kg	1	20-Nov-2018 05:35
Toluene	ND		0.0050	mg/Kg	1	20-Nov-2018 05:35
Xylenes, Total	ND		0.0050	mg/Kg	1	20-Nov-2018 05:35
Surr: 1,2-Dichloroethane-d4	*79.9*		*70-126*	*%REC*	*1*	*20-Nov-2018 05:35*
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*20-Nov-2018 05:35*
Surr: Dibromofluoromethane	*90.8*		*70-130*	*%REC*	*1*	*20-Nov-2018 05:35*
Surr: Toluene-d8	*102*		*70-130*	*%REC*	*1*	*20-Nov-2018 05:35*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**0.32**		**0.050**	**mg/Kg**	1	20-Nov-2018 16:47
Surr: 4-Bromofluorobenzene	*103*		*70-123*	*%REC*	*1*	*20-Nov-2018 16:47*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**110**		**8.5**	**mg/Kg**	5	20-Nov-2018 17:34
TPH (Motor Oil Range)	**160**	n	**17**	**mg/Kg**	5	20-Nov-2018 17:34
Surr: 2-Fluorobiphenyl	*89.8*		*60-129*	*%REC*	*5*	*20-Nov-2018 17:34*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	ND		4.95	mg/Kg	1	20-Nov-2018 19:17

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-3 2'
Collection Date: 16-Nov-2018 08:33

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-16
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	20-Nov-2018 06:00
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:00
m,p-Xylene	ND		0.0097	mg/Kg	1	20-Nov-2018 06:00
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:00
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:00
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 06:00
Surr: 1,2-Dichloroethane-d4	*88.7*		*70-126*	*%REC*	*1*	*20-Nov-2018 06:00*
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:00*
Surr: Dibromofluoromethane	*93.6*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:00*
Surr: Toluene-d8	*108*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:00*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**3.8**		**0.050**	**mg/Kg**	1	20-Nov-2018 17:03
Surr: 4-Bromofluorobenzene	*93.4*		*70-123*	*%REC*	*1*	*20-Nov-2018 17:03*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**1,600**		**85**	**mg/Kg**	50	20-Nov-2018 19:57
TPH (Motor Oil Range)	**2,000**	n	**170**	**mg/Kg**	50	20-Nov-2018 19:57
Surr: 2-Fluorobiphenyl	*788*	*S*	*60-129*	*%REC*	*50*	*20-Nov-2018 19:57*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**9.09**		**4.85**	**mg/Kg**	1	20-Nov-2018 19:31

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-4 1'
Collection Date: 16-Nov-2018 08:40

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-17
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	20-Nov-2018 06:25
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:25
m,p-Xylene	ND		0.0097	mg/Kg	1	20-Nov-2018 06:25
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:25
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:25
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 06:25
Surr: 1,2-Dichloroethane-d4	*84.4*		*70-126*	*%REC*	*1*	*20-Nov-2018 06:25*
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:25*
Surr: Dibromofluoromethane	*92.4*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:25*
Surr: Toluene-d8	*106*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:25*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 18:08
Surr: 4-Bromofluorobenzene	*94.3*		*70-123*	*%REC*	*1*	*20-Nov-2018 18:08*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 26-Nov-2018		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	27-Nov-2018 12:07
TPH (Motor Oil Range)	ND	n	3.4	mg/Kg	1	27-Nov-2018 12:07
Surr: 2-Fluorobiphenyl	*61.1*		*60-129*	*%REC*	*1*	*27-Nov-2018 12:07*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	ND		4.83	mg/Kg	1	20-Nov-2018 19:46

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-4 2'
Collection Date: 16-Nov-2018 08:45

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-18
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	20-Nov-2018 06:49
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:49
m,p-Xylene	ND		0.0095	mg/Kg	1	20-Nov-2018 06:49
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:49
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 06:49
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 06:49
Surr: 1,2-Dichloroethane-d4	*87.6*		*70-126*	*%REC*	*1*	*20-Nov-2018 06:49*
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:49*
Surr: Dibromofluoromethane	*94.0*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:49*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*1*	*20-Nov-2018 06:49*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 18:24
Surr: 4-Bromofluorobenzene	*95.7*		*70-123*	*%REC*	*1*	*20-Nov-2018 18:24*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**6.0**		**1.7**	**mg/Kg**	1	20-Nov-2018 15:34
TPH (Motor Oil Range)	**21**	n	**3.4**	**mg/Kg**	1	20-Nov-2018 15:34
Surr: 2-Fluorobiphenyl	*60.5*		*60-129*	*%REC*	*1*	*20-Nov-2018 15:34*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	ND		4.86	mg/Kg	1	20-Nov-2018 20:00

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-5 1'
Collection Date: 16-Nov-2018 08:50

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-19
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	20-Nov-2018 07:14
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 07:14
m,p-Xylene	ND		0.0095	mg/Kg	1	20-Nov-2018 07:14
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 07:14
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 07:14
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 07:14
Surr: 1,2-Dichloroethane-d4	*73.4*		*70-126*	*%REC*	*1*	*20-Nov-2018 07:14*
Surr: 4-Bromofluorobenzene	*96.5*		*70-130*	*%REC*	*1*	*20-Nov-2018 07:14*
Surr: Dibromofluoromethane	*88.8*		*70-130*	*%REC*	*1*	*20-Nov-2018 07:14*
Surr: Toluene-d8	*106*		*70-130*	*%REC*	*1*	*20-Nov-2018 07:14*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 18:40
Surr: 4-Bromofluorobenzene	*98.2*		*70-123*	*%REC*	*1*	*20-Nov-2018 18:40*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**14**		**1.7**	**mg/Kg**	1	20-Nov-2018 15:58
TPH (Motor Oil Range)	**32**	n	**3.4**	**mg/Kg**	1	20-Nov-2018 15:58
Surr: 2-Fluorobiphenyl	*62.0*		*60-129*	*%REC*	*1*	*20-Nov-2018 15:58*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**303**		**4.91**	**mg/Kg**	1	20-Nov-2018 20:15

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-5 2'
Collection Date: 16-Nov-2018 08:53

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-20
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	20-Nov-2018 07:39
Ethylbenzene	ND		0.0048	mg/Kg	1	20-Nov-2018 07:39
m,p-Xylene	ND		0.0097	mg/Kg	1	20-Nov-2018 07:39
o-Xylene	ND		0.0048	mg/Kg	1	20-Nov-2018 07:39
Toluene	ND		0.0048	mg/Kg	1	20-Nov-2018 07:39
Xylenes, Total	ND		0.0048	mg/Kg	1	20-Nov-2018 07:39
Surr: 1,2-Dichloroethane-d4	*84.0*		*70-126*	*%REC*	*1*	*20-Nov-2018 07:39*
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	*1*	*20-Nov-2018 07:39*
Surr: Dibromofluoromethane	*93.3*		*70-130*	*%REC*	*1*	*20-Nov-2018 07:39*
Surr: Toluene-d8	*106*		*70-130*	*%REC*	*1*	*20-Nov-2018 07:39*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 18:56
Surr: 4-Bromofluorobenzene	*100*		*70-123*	*%REC*	*1*	*20-Nov-2018 18:56*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 19-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**73**		**8.5**	**mg/Kg**	5	20-Nov-2018 16:22
TPH (Motor Oil Range)	**160**	n	**17**	**mg/Kg**	5	20-Nov-2018 16:22
Surr: 2-Fluorobiphenyl	*87.3*		*60-129*	*%REC*	*5*	*20-Nov-2018 16:22*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**399**		**4.87**	**mg/Kg**	1	20-Nov-2018 20:29

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-6 1'
Collection Date: 16-Nov-2018 09:00

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-21
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	21-Nov-2018 01:46
Ethylbenzene	ND		0.0050	mg/Kg	1	21-Nov-2018 01:46
m,p-Xylene	ND		0.010	mg/Kg	1	21-Nov-2018 01:46
o-Xylene	ND		0.0050	mg/Kg	1	21-Nov-2018 01:46
Toluene	ND		0.0050	mg/Kg	1	21-Nov-2018 01:46
Xylenes, Total	ND		0.0050	mg/Kg	1	21-Nov-2018 01:46
Surr: 1,2-Dichloroethane-d4	*86.4*		*70-126*	*%REC*	*1*	*21-Nov-2018 01:46*
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*21-Nov-2018 01:46*
Surr: Dibromofluoromethane	*93.5*		*70-130*	*%REC*	*1*	*21-Nov-2018 01:46*
Surr: Toluene-d8	*104*		*70-130*	*%REC*	*1*	*21-Nov-2018 01:46*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 20:34
Surr: 4-Bromofluorobenzene	*92.4*		*70-123*	*%REC*	*1*	*20-Nov-2018 20:34*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 20-Nov-2018		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	20-Nov-2018 15:10
TPH (Motor Oil Range)	**3.6**	n	**3.4**	**mg/Kg**	1	20-Nov-2018 15:10
Surr: 2-Fluorobiphenyl	*65.4*		*60-129*	*%REC*	*1*	*20-Nov-2018 15:10*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	ND		4.92	mg/Kg	1	20-Nov-2018 21:57

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-6 2'
Collection Date: 16-Nov-2018 09:04

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-22
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	21-Nov-2018 00:08
Ethylbenzene	ND		0.0050	mg/Kg	1	21-Nov-2018 00:08
m,p-Xylene	ND		0.010	mg/Kg	1	21-Nov-2018 00:08
o-Xylene	ND		0.0050	mg/Kg	1	21-Nov-2018 00:08
Toluene	ND		0.0050	mg/Kg	1	21-Nov-2018 00:08
Xylenes, Total	ND		0.0050	mg/Kg	1	21-Nov-2018 00:08
Surr: 1,2-Dichloroethane-d4	*88.6*		*70-126*	*%REC*	*1*	*21-Nov-2018 00:08*
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*21-Nov-2018 00:08*
Surr: Dibromofluoromethane	*97.2*		*70-130*	*%REC*	*1*	*21-Nov-2018 00:08*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*1*	*21-Nov-2018 00:08*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	20-Nov-2018 21:38
Surr: 4-Bromofluorobenzene	*92.1*		*70-123*	*%REC*	*1*	*20-Nov-2018 21:38*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 20-Nov-2018		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	20-Nov-2018 15:34
TPH (Motor Oil Range)	**4.4**	n	**3.4**	**mg/Kg**	1	20-Nov-2018 15:34
Surr: 2-Fluorobiphenyl	*67.9*		*60-129*	*%REC*	*1*	*20-Nov-2018 15:34*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	ND		4.99	mg/Kg	1	20-Nov-2018 22:11

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

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-7 1'
Collection Date: 16-Nov-2018 09:25

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-23
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	21-Nov-2018 02:11
Ethylbenzene	**0.028**		**0.0050**	**mg/Kg**	1	21-Nov-2018 02:11
m,p-Xylene	**4.1**		**0.50**	**mg/Kg**	50	21-Nov-2018 12:01
o-Xylene	**3.2**		**0.25**	**mg/Kg**	50	21-Nov-2018 12:01
Toluene	**0.046**		**0.0050**	**mg/Kg**	1	21-Nov-2018 02:11
Xylenes, Total	**7.3**		**0.25**	**mg/Kg**	50	21-Nov-2018 12:01
Surr: 1,2-Dichloroethane-d4	*85.0*		*70-126*	*%REC*	*1*	*21-Nov-2018 02:11*
Surr: 1,2-Dichloroethane-d4	*103*		*70-126*	*%REC*	*50*	*21-Nov-2018 12:01*
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*21-Nov-2018 02:11*
Surr: 4-Bromofluorobenzene	*137*	*S*	*70-130*	*%REC*	*50*	*21-Nov-2018 12:01*
Surr: Dibromofluoromethane	*95.4*		*70-130*	*%REC*	*1*	*21-Nov-2018 02:11*
Surr: Dibromofluoromethane	*102*		*70-130*	*%REC*	*50*	*21-Nov-2018 12:01*
Surr: Toluene-d8	*105*		*70-130*	*%REC*	*1*	*21-Nov-2018 02:11*
Surr: Toluene-d8	*108*		*70-130*	*%REC*	*50*	*21-Nov-2018 12:01*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**780**		**2.4**	**mg/Kg**	50	21-Nov-2018 12:42
Surr: 4-Bromofluorobenzene	*94.8*		*70-123*	*%REC*	*50*	*21-Nov-2018 12:42*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 20-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**2,700**		**170**	**mg/Kg**	100	20-Nov-2018 19:10
TPH (Motor Oil Range)	**2,400**	n	**340**	**mg/Kg**	100	20-Nov-2018 19:10
Surr: 2-Fluorobiphenyl	*890*	*S*	*60-129*	*%REC*	*100*	*20-Nov-2018 19:10*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**55.4**		**4.94**	**mg/Kg**	1	20-Nov-2018 22:26

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

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Sample ID: S-7 2'
Collection Date: 16-Nov-2018 09:30

ANALYTICAL REPORT
WorkOrder:HS18110952
Lab ID:HS18110952-24
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	21-Nov-2018 02:36
Ethylbenzene	ND		0.0048	mg/Kg	1	21-Nov-2018 02:36
m,p-Xylene	**0.040**		**0.0095**	**mg/Kg**	1	21-Nov-2018 02:36
o-Xylene	**0.082**		**0.0048**	**mg/Kg**	1	21-Nov-2018 02:36
Toluene	ND		0.0048	mg/Kg	1	21-Nov-2018 02:36
Xylenes, Total	**0.12**		**0.0048**	**mg/Kg**	1	21-Nov-2018 02:36
Surr: 1,2-Dichloroethane-d4	*84.1*		*70-126*	*%REC*	*1*	*21-Nov-2018 02:36*
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*21-Nov-2018 02:36*
Surr: Dibromofluoromethane	*94.7*		*70-130*	*%REC*	*1*	*21-Nov-2018 02:36*
Surr: Toluene-d8	*107*		*70-130*	*%REC*	*1*	*21-Nov-2018 02:36*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**9.2**		**0.050**	**mg/Kg**	1	20-Nov-2018 22:10
Surr: 4-Bromofluorobenzene	*88.4*		*70-123*	*%REC*	*1*	*20-Nov-2018 22:10*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 20-Nov-2018		Analyst: PVL
TPH (Diesel Range)	**570**		**17**	**mg/Kg**	10	20-Nov-2018 17:10
TPH (Motor Oil Range)	**620**	n	**34**	**mg/Kg**	10	20-Nov-2018 17:10
Surr: 2-Fluorobiphenyl	*250*	*S*	*60-129*	*%REC*	*10*	*20-Nov-2018 17:10*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 19-Nov-2018		Analyst: KMU
Chloride	**68.1**		**5.00**	**mg/Kg**	1	20-Nov-2018 22:40

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

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WEIGHT LOG

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

Batch ID: 2767 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS18110952-01	1	5.07 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-02	1	5.08 (g)	5 (mL)	0.98	Bulk (5030B)
HS18110952-03	1	5.1 (g)	5 (mL)	0.98	Bulk (5030B)
HS18110952-04	1	5.07 (g)	5 (mL)	0.99	Bulk (5030B)
HS18110952-05	1	5.15 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-06	1	5.14 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-07	1	5.12 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-08	1	5.11 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-09	1	5.18 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-10	1	5.19 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-11	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-12	1	5.02 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-13	1	5.12 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-14	1	5.15 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-15	1	5.11 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-16	1	5.15 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-17	1	5.07 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-18	1	5.13 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-19	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-20	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-21	1	5.12 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-22	1	5.17 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-23	1	5.14 (g)	5 (mL)	0.97	Bulk (5030B)
HS18110952-24	1	5.06 (g)	5 (mL)	1	Bulk (5030B)

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WEIGHT LOG

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

Batch ID: 2768 **Method:** VOLATILES BY SW8260C

SampID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS18110952-01	1	5.352 (g)	5 (mL)	0.93	Bulk (5030B)
HS18110952-02	1	4.97 (g)	5 (mL)	1.01	Bulk (5030B)
HS18110952-02	2	5.098 (g)	5 (mL)	0.98	Bulk (5030B)
HS18110952-03	1	5.189 (g)	5 (mL)	0.96	Bulk (5030B)
HS18110952-03	2	5.117 (g)	5 (mL)	0.98	Bulk (5030B)
HS18110952-04	1	5.142 (g)	5 (mL)	0.97	Bulk (5030B)
HS18110952-04	2	5.34 (g)	5 (mL)	0.94	Bulk (5030B)
HS18110952-05	1	5.201 (g)	5 (mL)	0.96	Bulk (5030B)
HS18110952-06	1	5.043 (g)	5 (mL)	0.99	Bulk (5030B)
HS18110952-07	1	5.046 (g)	5 (mL)	0.99	Bulk (5030B)
HS18110952-08	1	5.148 (g)	5 (mL)	0.97	Bulk (5030B)
HS18110952-09	1	5.23 (g)	5 (mL)	0.96	Bulk (5030B)
HS18110952-10	1	4.956 (g)	5 (mL)	1.01	Bulk (5030B)
HS18110952-11	1	5.272 (g)	5 (mL)	0.95	Bulk (5030B)
HS18110952-12	1	5.158 (g)	5 (mL)	0.97	Bulk (5030B)
HS18110952-13	1	5.22 (g)	5 (mL)	0.96	Bulk (5030B)
HS18110952-14	1	5.125 (g)	5 (mL)	0.98	Bulk (5030B)
HS18110952-15	1	4.961 (g)	5 (mL)	1.01	Bulk (5030B)
HS18110952-16	1	5.161 (g)	5 (mL)	0.97	Bulk (5030B)
HS18110952-17	1	5.141 (g)	5 (mL)	0.97	Bulk (5030B)
HS18110952-18	1	5.241 (g)	5 (mL)	0.95	Bulk (5030B)
HS18110952-19	1	5.247 (g)	5 (mL)	0.95	Bulk (5030B)
HS18110952-20	1	5.151 (g)	5 (mL)	0.97	Bulk (5030B)
HS18110952-21	1	4.945 (g)	5 (mL)	1.01	Bulk (5030B)
HS18110952-22	1	4.991 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-23	1	4.937 (g)	5 (mL)	1	Bulk (5030B)
HS18110952-23	1	4.937 (g)	5 (mL)	1.01	Bulk (5030B)
HS18110952-24	1	5.291 (g)	5 (mL)	0.95	Bulk (5030B)

Batch ID: 134777 **Method:** ANIONS BY E300.0 **Prep:** 300_S_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18110952-01	1	5.0261	50 (mL)	9.948
HS18110952-02	1	5.0136	50 (mL)	9.973
HS18110952-03	1	5.0961	50 (mL)	9.811
HS18110952-04	1	5.2057	50 (mL)	9.605
HS18110952-05	1	5.0518	50 (mL)	9.897
HS18110952-06	1	5.1083	50 (mL)	9.788
HS18110952-07	1	5.1071	50 (mL)	9.79
HS18110952-08	1	5.0193	50 (mL)	9.962
HS18110952-09	1	5.1226	50 (mL)	9.761
HS18110952-10	1	5.08	50 (mL)	9.843
HS18110952-11	1	5.1453	50 (mL)	9.718
HS18110952-12	1	5.048	50 (mL)	9.905
HS18110952-13	1	5.1466	50 (mL)	9.715
HS18110952-14	1	5.0867	50 (mL)	9.83
HS18110952-15	1	5.0543	50 (mL)	9.893
HS18110952-16	1	5.1585	50 (mL)	9.693
HS18110952-17	1	5.1742	50 (mL)	9.663

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WEIGHT LOG

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

Batch ID: 134792 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18110952-01	1	30.1	1 (mL)	0.03322
HS18110952-02	1	30.18	1 (mL)	0.03313
HS18110952-03	1	30.09	1 (mL)	0.03323
HS18110952-04	1	30.02	1 (mL)	0.03331
HS18110952-05	1	30.16	1 (mL)	0.03316
HS18110952-06	1	30.2	1 (mL)	0.03311
HS18110952-07	1	30.04	1 (mL)	0.03329
HS18110952-08	1	30.07	1 (mL)	0.03326
HS18110952-09	1	30.01	1 (mL)	0.03332
HS18110952-10	1	30.13	1 (mL)	0.03319
HS18110952-11	1	30.06	1 (mL)	0.03327
HS18110952-12	1	30.03	1 (mL)	0.0333
HS18110952-13	1	30.22	1 (mL)	0.03309
HS18110952-14	1	30.04	1 (mL)	0.03329
HS18110952-15	1	30.09	1 (mL)	0.03323
HS18110952-16	1	30.12	1 (mL)	0.0332
HS18110952-18	1	30.15	1 (mL)	0.03317
HS18110952-19	1	30.03	1 (mL)	0.0333
HS18110952-20	1	30.08	1 (mL)	0.03324

Batch ID: 134803 **Method:** ANIONS BY E300.0 **Prep:** 300_S_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18110952-18	1	5.1459	50 (mL)	9.716
HS18110952-19	1	5.0893	50 (mL)	9.825
HS18110952-20	1	5.1348	50 (mL)	9.737
HS18110952-21	1	5.0776	50 (mL)	9.847
HS18110952-22	1	5.0135	50 (mL)	9.973
HS18110952-23	1	5.0563	50 (mL)	9.889
HS18110952-24	1	4.9961	50 (mL)	10.01

Batch ID: 134806 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18110952-21	1	30.05	1 (mL)	0.03328
HS18110952-22	1	30.11	1 (mL)	0.03321
HS18110952-23	1	30.08	1 (mL)	0.03324
HS18110952-24	1	30.14	1 (mL)	0.03318

Batch ID: 134949 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18110952-17	1	30.11	1 (mL)	0.03321

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 134777	**Test Name :** ANIONS BY E300.0			**Matrix:** Soil		
HS18110952-01	SW-1	16 Nov 2018 08:10		19 Nov 2018 14:59	20 Nov 2018 14:40	1
HS18110952-02	SW-2	16 Nov 2018 08:20		19 Nov 2018 14:59	20 Nov 2018 13:27	1
HS18110952-03	SW-3	16 Nov 2018 08:30		19 Nov 2018 14:59	20 Nov 2018 15:24	1
HS18110952-04	SW-4	16 Nov 2018 08:45		19 Nov 2018 14:59	20 Nov 2018 15:38	1
HS18110952-05	SW-5	16 Nov 2018 08:55		19 Nov 2018 14:59	20 Nov 2018 15:53	1
HS18110952-06	SW-6	16 Nov 2018 09:00		19 Nov 2018 14:59	20 Nov 2018 16:07	1
HS18110952-07	SW-7	16 Nov 2018 09:05		19 Nov 2018 14:59	20 Nov 2018 16:22	1
HS18110952-08	SW-8	16 Nov 2018 09:10		19 Nov 2018 14:59	20 Nov 2018 16:36	1
HS18110952-09	SW-9	16 Nov 2018 09:15		19 Nov 2018 14:59	20 Nov 2018 16:51	1
HS18110952-10	SW-10	16 Nov 2018 09:20		19 Nov 2018 14:59	20 Nov 2018 17:06	1
HS18110952-11	S-1 1'	16 Nov 2018 08:00		19 Nov 2018 14:59	20 Nov 2018 17:20	1
HS18110952-12	S-1 2'	16 Nov 2018 08:05		19 Nov 2018 14:59	20 Nov 2018 18:18	1
HS18110952-13	S-2 1'	16 Nov 2018 08:15		19 Nov 2018 14:59	20 Nov 2018 17:35	1
HS18110952-14	S-2 2'	16 Nov 2018 08:22		19 Nov 2018 14:59	20 Nov 2018 19:02	1
HS18110952-15	S-3 1'	16 Nov 2018 08:25		19 Nov 2018 14:59	20 Nov 2018 19:17	1
HS18110952-16	S-3 2'	16 Nov 2018 08:33		19 Nov 2018 14:59	20 Nov 2018 19:31	1
HS18110952-17	S-4 1'	16 Nov 2018 08:40		19 Nov 2018 14:59	20 Nov 2018 19:46	1
Batch ID 134792	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS18110952-01	SW-1	16 Nov 2018 08:10		19 Nov 2018 13:00	20 Nov 2018 17:34	25
HS18110952-02	SW-2	16 Nov 2018 08:20		19 Nov 2018 13:00	20 Nov 2018 19:33	5
HS18110952-03	SW-3	16 Nov 2018 08:30		19 Nov 2018 13:00	20 Nov 2018 19:57	40
HS18110952-04	SW-4	16 Nov 2018 08:45		19 Nov 2018 13:00	20 Nov 2018 20:21	100
HS18110952-05	SW-5	16 Nov 2018 08:55		19 Nov 2018 13:00	20 Nov 2018 16:46	20
HS18110952-06	SW-6	16 Nov 2018 09:00		19 Nov 2018 13:00	20 Nov 2018 18:45	5
HS18110952-07	SW-7	16 Nov 2018 09:05		19 Nov 2018 13:00	21 Nov 2018 12:15	100
HS18110952-08	SW-8	16 Nov 2018 09:10		19 Nov 2018 13:00	21 Nov 2018 12:38	400
HS18110952-09	SW-9	16 Nov 2018 09:15		19 Nov 2018 13:00	20 Nov 2018 13:44	1
HS18110952-10	SW-10	16 Nov 2018 09:20		19 Nov 2018 13:00	19 Nov 2018 22:01	1
HS18110952-11	S-1 1'	16 Nov 2018 08:00		19 Nov 2018 13:00	21 Nov 2018 12:15	1
HS18110952-12	S-1 2'	16 Nov 2018 08:05		19 Nov 2018 13:00	20 Nov 2018 17:10	10
HS18110952-13	S-2 1'	16 Nov 2018 08:15		19 Nov 2018 13:00	20 Nov 2018 14:46	1
HS18110952-14	S-2 2'	16 Nov 2018 08:22		19 Nov 2018 13:00	19 Nov 2018 23:37	1
HS18110952-15	S-3 1'	16 Nov 2018 08:25		19 Nov 2018 13:00	20 Nov 2018 17:34	5
HS18110952-16	S-3 2'	16 Nov 2018 08:33		19 Nov 2018 13:00	20 Nov 2018 19:57	50
HS18110952-18	S-4 2'	16 Nov 2018 08:45		19 Nov 2018 13:00	20 Nov 2018 15:34	1
HS18110952-19	S-5 1'	16 Nov 2018 08:50		19 Nov 2018 13:00	20 Nov 2018 15:58	1
HS18110952-20	S-5 2'	16 Nov 2018 08:53		19 Nov 2018 13:00	20 Nov 2018 16:22	5

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 134803	**Test Name :** ANIONS BY E300.0			**Matrix:** Soil		
HS18110952-18	S-4 2'	16 Nov 2018 08:45		19 Nov 2018 18:34	20 Nov 2018 20:00	1
HS18110952-19	S-5 1'	16 Nov 2018 08:50		19 Nov 2018 18:34	20 Nov 2018 20:15	1
HS18110952-20	S-5 2'	16 Nov 2018 08:53		19 Nov 2018 18:34	20 Nov 2018 20:29	1
HS18110952-21	S-6 1'	16 Nov 2018 09:00		19 Nov 2018 18:34	20 Nov 2018 21:57	1
HS18110952-22	S-6 2'	16 Nov 2018 09:04		19 Nov 2018 18:34	20 Nov 2018 22:11	1
HS18110952-23	S-7 1'	16 Nov 2018 09:25		19 Nov 2018 18:34	20 Nov 2018 22:26	1
HS18110952-24	S-7 2'	16 Nov 2018 09:30		19 Nov 2018 18:34	20 Nov 2018 22:40	1
Batch ID 134806	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS18110952-21	S-6 1'	16 Nov 2018 09:00		20 Nov 2018 10:00	20 Nov 2018 15:10	1
HS18110952-22	S-6 2'	16 Nov 2018 09:04		20 Nov 2018 10:00	20 Nov 2018 15:34	1
HS18110952-23	S-7 1'	16 Nov 2018 09:25		20 Nov 2018 10:00	20 Nov 2018 19:10	100
HS18110952-24	S-7 2'	16 Nov 2018 09:30		20 Nov 2018 10:00	20 Nov 2018 17:10	10
Batch ID 134949	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS18110952-17	S-4 1'	16 Nov 2018 08:40		26 Nov 2018 17:00	27 Nov 2018 12:07	1
Batch ID R327771	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18110952-01	SW-1	16 Nov 2018 08:10			19 Nov 2018 23:01	1
HS18110952-02	SW-2	16 Nov 2018 08:20			20 Nov 2018 00:15	1
HS18110952-03	SW-3	16 Nov 2018 08:30			20 Nov 2018 00:40	1
HS18110952-04	SW-4	16 Nov 2018 08:45			20 Nov 2018 01:04	1
HS18110952-05	SW-5	16 Nov 2018 08:55			20 Nov 2018 01:29	1
HS18110952-06	SW-6	16 Nov 2018 09:00			20 Nov 2018 01:54	1
HS18110952-07	SW-7	16 Nov 2018 09:05			20 Nov 2018 02:18	1
HS18110952-08	SW-8	16 Nov 2018 09:10			20 Nov 2018 02:43	1
HS18110952-09	SW-9	16 Nov 2018 09:15			20 Nov 2018 03:08	1
HS18110952-10	SW-10	16 Nov 2018 09:20			20 Nov 2018 03:32	1
HS18110952-11	S-1 1'	16 Nov 2018 08:00			20 Nov 2018 03:57	1
HS18110952-12	S-1 2'	16 Nov 2018 08:05			20 Nov 2018 04:21	1
HS18110952-13	S-2 1'	16 Nov 2018 08:15			20 Nov 2018 04:46	1
HS18110952-14	S-2 2'	16 Nov 2018 08:22			20 Nov 2018 05:11	1
HS18110952-15	S-3 1'	16 Nov 2018 08:25			20 Nov 2018 05:35	1
HS18110952-16	S-3 2'	16 Nov 2018 08:33			20 Nov 2018 06:00	1
HS18110952-17	S-4 1'	16 Nov 2018 08:40			20 Nov 2018 06:25	1
HS18110952-18	S-4 2'	16 Nov 2018 08:45			20 Nov 2018 06:49	1
HS18110952-19	S-5 1'	16 Nov 2018 08:50			20 Nov 2018 07:14	1
HS18110952-20	S-5 2'	16 Nov 2018 08:53			20 Nov 2018 07:39	1

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R327785	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18110952-02	SW-2	16 Nov 2018 08:20			20 Nov 2018 11:09	50
HS18110952-03	SW-3	16 Nov 2018 08:30			20 Nov 2018 11:31	50
HS18110952-04	SW-4	16 Nov 2018 08:45			20 Nov 2018 11:52	50
Batch ID R327849	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18110952-21	S-6 1'	16 Nov 2018 09:00			21 Nov 2018 01:46	1
HS18110952-22	S-6 2'	16 Nov 2018 09:04			21 Nov 2018 00:08	1
HS18110952-23	S-7 1'	16 Nov 2018 09:25			21 Nov 2018 02:11	1
HS18110952-24	S-7 2'	16 Nov 2018 09:30			21 Nov 2018 02:36	1
Batch ID R327858	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS18110952-01	SW-1	16 Nov 2018 08:10			20 Nov 2018 12:12	1
HS18110952-05	SW-5	16 Nov 2018 08:55			20 Nov 2018 13:17	1
HS18110952-06	SW-6	16 Nov 2018 09:00			20 Nov 2018 13:33	1
HS18110952-07	SW-7	16 Nov 2018 09:05			20 Nov 2018 14:37	1
HS18110952-08	SW-8	16 Nov 2018 09:10			20 Nov 2018 14:54	1
HS18110952-09	SW-9	16 Nov 2018 09:15			20 Nov 2018 15:10	1
HS18110952-10	SW-10	16 Nov 2018 09:20			20 Nov 2018 15:26	1
HS18110952-11	S-1 1'	16 Nov 2018 08:00			20 Nov 2018 15:42	1
HS18110952-12	S-1 2'	16 Nov 2018 08:05			20 Nov 2018 15:58	1
HS18110952-13	S-2 1'	16 Nov 2018 08:15			20 Nov 2018 16:14	1
HS18110952-14	S-2 2'	16 Nov 2018 08:22			20 Nov 2018 16:31	1
HS18110952-15	S-3 1'	16 Nov 2018 08:25			20 Nov 2018 16:47	1
HS18110952-16	S-3 2'	16 Nov 2018 08:33			20 Nov 2018 17:03	1
HS18110952-17	S-4 1'	16 Nov 2018 08:40			20 Nov 2018 18:08	1
HS18110952-18	S-4 2'	16 Nov 2018 08:45			20 Nov 2018 18:24	1
HS18110952-19	S-5 1'	16 Nov 2018 08:50			20 Nov 2018 18:40	1
HS18110952-20	S-5 2'	16 Nov 2018 08:53			20 Nov 2018 18:56	1
Batch ID R327859	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS18110952-21	S-6 1'	16 Nov 2018 09:00			20 Nov 2018 20:34	1
HS18110952-22	S-6 2'	16 Nov 2018 09:04			20 Nov 2018 21:38	1
HS18110952-24	S-7 2'	16 Nov 2018 09:30			20 Nov 2018 22:10	1
Batch ID R327881	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS18110952-23	S-7 1'	16 Nov 2018 09:25			21 Nov 2018 12:01	50
Batch ID R327894	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS18110952-02	SW-2	16 Nov 2018 08:20			21 Nov 2018 11:54	50
HS18110952-03	SW-3	16 Nov 2018 08:30			21 Nov 2018 12:10	50
HS18110952-04	SW-4	16 Nov 2018 08:45			21 Nov 2018 12:26	50
HS18110952-23	S-7 1'	16 Nov 2018 09:25			21 Nov 2018 12:42	50

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: 134792 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-134792** Units: **mg/Kg** Analysis Date: **19-Nov-2018 21:13**
Client ID: Run ID: **FID-7_327876** SeqNo: **4832086** PrepDate: **19-Nov-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	*2.793*	*0.10*	*3.323*	*0*	*84.0*	*70 - 130*				

LCS Sample ID: **LCS-134792** Units: **mg/Kg** Analysis Date: **19-Nov-2018 21:37**
Client ID: Run ID: **FID-7_327876** SeqNo: **4832135** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	28.15	1.7	33.32	0	84.5	70 - 130				
TPH (Motor Oil Range)	38.44	3.4	33.32	0	115	70 - 130				
Surr: 2-Fluorobiphenyl	*2.805*	*0.10*	*3.329*	*0*	*84.3*	*70 - 130*				

MS Sample ID: **HS18110952-01MS** Units: **mg/Kg** Analysis Date: **19-Nov-2018 22:25**
Client ID: **SW-1** Run ID: **FID-7_327876** SeqNo: **4832204** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	992	1.7	33.27	741.1	754	70 - 130				SEO
TPH (Motor Oil Range)	768.3	3.4	33.27	632.6	408	70 - 130				SEO
Surr: 2-Fluorobiphenyl	*ND*	*0.10*	*3.324*	*0*	*0*	*60 - 129*				JS

MSD Sample ID: **HS18110952-01MSD** Units: **mg/Kg** Analysis Date: **19-Nov-2018 22:49**
Client ID: **SW-1** Run ID: **FID-7_327876** SeqNo: **4832205** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	771.7	1.7	33.25	741.1	91.9	70 - 130	992	25	30	EO
TPH (Motor Oil Range)	649	3.4	33.25	632.6	49.5	70 - 130	768.3	16.8	30	SEO
Surr: 2-Fluorobiphenyl	*ND*	*0.10*	*3.322*	*0*	*0*	*60 - 129*	*0*	*0*	*30*	JS

The following samples were analyzed in this batch:

HS18110952-01	HS18110952-02	HS18110952-03	HS18110952-04
HS18110952-05	HS18110952-06	HS18110952-07	HS18110952-08
HS18110952-09	HS18110952-10	HS18110952-11	HS18110952-12
HS18110952-13	HS18110952-14	HS18110952-15	HS18110952-16
HS18110952-18	HS18110952-19	HS18110952-20	

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: 134806 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-134806** Units: **mg/Kg** Analysis Date: **20-Nov-2018 13:44**
Client ID: Run ID: **FID-7_327846** SeqNo: **4837775** PrepDate: **20-Nov-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	*2.336*	*0.10*	*3.33*	*0*	*70.2*	*70 - 130*				

LCS Sample ID: **LCS-134806** Units: **mg/Kg** Analysis Date: **20-Nov-2018 14:22**
Client ID: Run ID: **FID-7_327846** SeqNo: **4837776** PrepDate: **20-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	28.49	1.7	33.33	0	85.5	70 - 130				
TPH (Motor Oil Range)	31.24	3.4	33.33	0	93.7	70 - 130				
Surr: 2-Fluorobiphenyl	*2.748*	*0.10*	*3.33*	*0*	*82.5*	*70 - 130*				

MS Sample ID: **HS18110952-23MS** Units: **mg/Kg** Analysis Date: **20-Nov-2018 16:22**
Client ID: **S-7 1'** Run ID: **FID-7_327846** SeqNo: **4831185** PrepDate: **20-Nov-2018** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	2332	34	33.26	2712	-1140	70 - 130				SEO
TPH (Motor Oil Range)	1887	68	33.26	2417	-1590	70 - 130				SEO
Surr: 2-Fluorobiphenyl	*27.53*	*2.0*	*3.323*	*0*	*829*	*60 - 129*				S

MSD Sample ID: **HS18110952-23MSD** Units: **mg/Kg** Analysis Date: **20-Nov-2018 16:46**
Client ID: **S-7 1'** Run ID: **FID-7_327846** SeqNo: **4831186** PrepDate: **20-Nov-2018** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	2492	34	33.23	2712	-663	70 - 130	2332	6.61	30	SEO
TPH (Motor Oil Range)	2099	68	33.23	2417	-957	70 - 130	1887	10.6	30	SEO
Surr: 2-Fluorobiphenyl	*27.81*	*2.0*	*3.32*	*0*	*838*	*60 - 129*	*27.53*	*1*	*30*	S

The following samples were analyzed in this batch: HS18110952-21 HS18110952-22 HS18110952-23 HS18110952-24

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: 134949 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-134949** Units: **mg/Kg** Analysis Date: **27-Nov-2018 12:07**
Client ID: Run ID: **FID-7_328126** SeqNo: **4837559** PrepDate: **26-Nov-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	*2.493*	*0.10*	*3.33*	*0*	*74.9*	*70 - 130*				

LCS Sample ID: **LCS-134949** Units: **mg/Kg** Analysis Date: **27-Nov-2018 12:31**
Client ID: Run ID: **FID-7_328126** SeqNo: **4837560** PrepDate: **26-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	33.88	1.7	33.33	0	102	70 - 130				
TPH (Motor Oil Range)	40.86	3.4	33.33	0	123	70 - 130				
Surr: 2-Fluorobiphenyl	*3.262*	*0.10*	*3.33*	*0*	*97.9*	*70 - 130*				

MS Sample ID: **HS18110952-17MS** Units: **mg/Kg** Analysis Date: **27-Nov-2018 12:31**
Client ID: **S-4 1'** Run ID: **FID-7_328126** SeqNo: **4837589** PrepDate: **26-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	27.79	1.7	33.16	0.3496	82.8	70 - 130				
TPH (Motor Oil Range)	36.4	3.4	33.16	2.358	103	70 - 130				
Surr: 2-Fluorobiphenyl	*2.517*	*0.10*	*3.313*	*0*	*76.0*	*60 - 129*				

MSD Sample ID: **HS18110952-17MSD** Units: **mg/Kg** Analysis Date: **27-Nov-2018 12:55**
Client ID: **S-4 1'** Run ID: **FID-7_328126** SeqNo: **4837590** PrepDate: **26-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	28.47	1.7	33.16	0.3496	84.8	70 - 130	27.79	2.39	30	
TPH (Motor Oil Range)	35.65	3.4	33.16	2.358	100	70 - 130	36.4	2.09	30	
Surr: 2-Fluorobiphenyl	*2.551*	*0.10*	*3.313*	*0*	*77.0*	*60 - 129*	*2.517*	*1.34*	*30*	

The following samples were analyzed in this batch: HS18110952-17

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Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327858 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **MBLK-181120** Units: **mg/Kg** Analysis Date: **20-Nov-2018 11:39**
Client ID: Run ID: **FID-14_327858** SeqNo: **4831806** 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	*0.08305*	*0.0050*	*0.1*	*0*	*83.1*	*75 - 121*				

LCS Sample ID: **GLCS-181120** Units: **mg/Kg** Analysis Date: **20-Nov-2018 11:07**
Client ID: Run ID: **FID-14_327858** SeqNo: **4831804** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.037	0.050	1	0	104	72 - 121				
Surr: 4-Bromofluorobenzene	*0.1165*	*0.0050*	*0.1*	*0*	*116*	*75 - 121*				

LCSD Sample ID: **GLCSD-181120** Units: **mg/Kg** Analysis Date: **20-Nov-2018 11:23**
Client ID: Run ID: **FID-14_327858** SeqNo: **4831805** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9434	0.050	1	0	94.3	70 - 121	1.037	9.44	30	
Surr: 4-Bromofluorobenzene	*0.1076*	*0.0050*	*0.1*	*0*	*108*	*75 - 121*	*0.1165*	*7.89*	*30*	

MS Sample ID: **HS18110952-20MS** Units: **mg/Kg** Analysis Date: **20-Nov-2018 19:13**
Client ID: **S-5 2'** Run ID: **FID-14_327858** SeqNo: **4831828** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.0726	0.050	1	0	7.26	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.1192*	*0.0050*	*0.1*	*0*	*119*	*70 - 123*				

MSD Sample ID: **HS18110952-20MSD** Units: **mg/Kg** Analysis Date: **20-Nov-2018 19:29**
Client ID: **S-5 2'** Run ID: **FID-14_327858** SeqNo: **4831829** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.06035	0.050	1	0	6.04	70 - 130	0.0726	18.4	30	S
Surr: 4-Bromofluorobenzene	*0.1152*	*0.0050*	*0.1*	*0*	*115*	*70 - 123*	*0.1192*	*3.47*	*30*	

The following samples were analyzed in this batch:

HS18110952-01	HS18110952-05	HS18110952-06	HS18110952-07
HS18110952-08	HS18110952-09	HS18110952-10	HS18110952-11
HS18110952-12	HS18110952-13	HS18110952-14	HS18110952-15
HS18110952-16	HS18110952-17	HS18110952-18	HS18110952-19
HS18110952-20			

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327859 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **MBLK-181120** Units: **mg/Kg** Analysis Date: **20-Nov-2018 20:17**
Client ID: Run ID: **FID-14_327859** SeqNo: **4831865** 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	*0.08902*	*0.0050*	*0.1*	*0*	*89.0*	*75 - 121*				

LCS Sample ID: **MLCS-181120** Units: **mg/Kg** Analysis Date: **20-Nov-2018 19:45**
Client ID: Run ID: **FID-14_327859** SeqNo: **4831863** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8896	0.050	1	0	89.0	72 - 121				
Surr: 4-Bromofluorobenzene	*0.1082*	*0.0050*	*0.1*	*0*	*108*	*75 - 121*				

LCSD Sample ID: **MLCSD-181120** Units: **mg/Kg** Analysis Date: **20-Nov-2018 20:01**
Client ID: Run ID: **FID-14_327859** SeqNo: **4831864** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8925	0.050	1	0	89.2	70 - 121	0.8896	0.32	30	
Surr: 4-Bromofluorobenzene	*0.1003*	*0.0050*	*0.1*	*0*	*100*	*75 - 121*	*0.1082*	*7.59*	*30*	

MS Sample ID: **HS18110952-24MS** Units: **mg/Kg** Analysis Date: **20-Nov-2018 22:27**
Client ID: **S-7 2'** Run ID: **FID-14_327859** SeqNo: **4831871** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	8.067	0.050	1	9.237	-117	70 - 130				SO
Surr: 4-Bromofluorobenzene	*0.09342*	*0.0050*	*0.1*	*0*	*93.4*	*70 - 123*				

MSD Sample ID: **HS18110952-24MSD** Units: **mg/Kg** Analysis Date: **20-Nov-2018 22:43**
Client ID: **S-7 2'** Run ID: **FID-14_327859** SeqNo: **4831872** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	4.583	0.050	1	9.237	-465	70 - 130	8.067	55.1	30	SRO
Surr: 4-Bromofluorobenzene	*0.09088*	*0.0050*	*0.1*	*0*	*90.9*	*70 - 123*	*0.09342*	*2.75*	*30*	

The following samples were analyzed in this batch: HS18110952-21 HS18110952-22 HS18110952-24

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327894 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **MBLK-181121** Units: **mg/L** Analysis Date: **21-Nov-2018 11:38**
Client ID: Run ID: **FID-14_327894** SeqNo: **4832442** 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	0.0500								
Surr: 4-Bromofluorobenzene	*0.108*	*0.00500*	*0.1*	*0*	*108*	*75 - 121*				

LCS Sample ID: **MLCS-181121** Units: **mg/L** Analysis Date: **21-Nov-2018 11:06**
Client ID: Run ID: **FID-14_327894** SeqNo: **4832440** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8414	0.0500	1	0	84.1	72 - 121				
Surr: 4-Bromofluorobenzene	*0.115*	*0.00500*	*0.1*	*0*	*115*	*75 - 121*				

LCSD Sample ID: **MLCSD-181121** Units: **mg/L** Analysis Date: **21-Nov-2018 11:22**
Client ID: Run ID: **FID-14_327894** SeqNo: **4832441** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8622	0.0500	1	0	86.2	70 - 121	0.8414	2.45	30	
Surr: 4-Bromofluorobenzene	*0.1106*	*0.00500*	*0.1*	*0*	*111*	*75 - 121*	*0.115*	*3.94*	*30*	

The following samples were analyzed in this batch: HS18110952-02 HS18110952-03 HS18110952-04 HS18110952-23

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327771 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS2-111918** Units: **ug/Kg** Analysis Date: **19-Nov-2018 22:36**
Client ID: Run ID: **VOA5_327771** SeqNo: **4829635** 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	*43.63*	*0*	*50*	*0*	*87.3*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.82*	*0*	*50*	*0*	*102*	*80 - 120*				
Surr: Dibromofluoromethane	*48.22*	*0*	*50*	*0*	*96.4*	*80 - 119*				
Surr: Toluene-d8	*50.85*	*0*	*50*	*0*	*102*	*81 - 118*				

LCS Sample ID: **VLCSS2-111918** Units: **ug/Kg** Analysis Date: **19-Nov-2018 21:47**
Client ID: Run ID: **VOA5_327771** SeqNo: **4829634** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	44.38	5.0	50	0	88.8	75 - 124				
Ethylbenzene	45.87	5.0	50	0	91.7	70 - 123				
m,p-Xylene	92.98	10	100	0	93.0	77 - 125				
o-Xylene	44.2	5.0	50	0	88.4	78 - 122				
Toluene	43.94	5.0	50	0	87.9	76 - 122				
Xylenes, Total	137.2	5.0	150	0	91.5	77 - 128				
Surr: 1,2-Dichloroethane-d4	*43.51*	*0*	*50*	*0*	*87.0*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*49.91*	*0*	*50*	*0*	*99.8*	*80 - 120*				
Surr: Dibromofluoromethane	*47.95*	*0*	*50*	*0*	*95.9*	*80 - 119*				
Surr: Toluene-d8	*50.19*	*0*	*50*	*0*	*100*	*81 - 118*				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327771 **Instrument: VOA5** **Method: SW8260**

MS Sample ID: **HS18110952-01MS** Units: **ug/Kg** Analysis Date: **19-Nov-2018 23:26**
Client ID: **SW-1** Run ID: **VOA5_327771** SeqNo: **4829637** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	16.16	5.0	50.5	0	32.0	70 - 130				S
Ethylbenzene	99.28	5.0	50.5	63.92	70.0	70 - 130				
m,p-Xylene	384.2	10	101	262.5	121	70 - 130				
o-Xylene	245.1	5.0	50.5	169.6	149	70 - 130				SE
Toluene	95	5.0	50.5	65.61	58.2	70 - 130				S
Xylenes, Total	629.3	5.0	151.5	432.1	130	70 - 130				SE
Surr: 1,2-Dichloroethane-d4	*50.38*	*0*	*50.5*	*0*	*99.8*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*45.38*	*0*	*50.5*	*0*	*89.9*	*70 - 130*				
Surr: Dibromofluoromethane	*51.21*	*0*	*50.5*	*0*	*101*	*70 - 130*				
Surr: Toluene-d8	*54.91*	*0*	*50.5*	*0*	*109*	*70 - 130*				

MSD Sample ID: **HS18110952-01MSD** Units: **ug/Kg** Analysis Date: **19-Nov-2018 23:50**
Client ID: **SW-1** Run ID: **VOA5_327771** SeqNo: **4829638** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.83	5.0	49.5	0	36.0	70 - 130	16.16	9.82	30	S
Ethylbenzene	94.37	5.0	49.5	63.92	61.5	70 - 130	99.28	5.07	30	S
m,p-Xylene	354.1	9.9	99	262.5	92.6	70 - 130	384.2	8.15	30	
o-Xylene	227	5.0	49.5	169.6	116	70 - 130	245.1	7.68	30	E
Toluene	88.59	5.0	49.5	65.61	46.4	70 - 130	95	6.99	30	S
Xylenes, Total	581.1	5.0	148.5	432.1	100	70 - 130	629.3	7.97	30	
Surr: 1,2-Dichloroethane-d4	*49.88*	*0*	*49.5*	*0*	*101*	*70 - 126*	*50.38*	*1.01*	*30*	
Surr: 4-Bromofluorobenzene	*39.52*	*0*	*49.5*	*0*	*79.8*	*70 - 130*	*45.38*	*13.8*	*30*	
Surr: Dibromofluoromethane	*48.9*	*0*	*49.5*	*0*	*98.8*	*70 - 130*	*51.21*	*4.63*	*30*	
Surr: Toluene-d8	*53.05*	*0*	*49.5*	*0*	*107*	*70 - 130*	*54.91*	*3.43*	*30*	

The following samples were analyzed in this batch:

HS18110952-01	HS18110952-02	HS18110952-03	HS18110952-04
HS18110952-05	HS18110952-06	HS18110952-07	HS18110952-08
HS18110952-09	HS18110952-10	HS18110952-11	HS18110952-12
HS18110952-13	HS18110952-14	HS18110952-15	HS18110952-16
HS18110952-17	HS18110952-18	HS18110952-19	HS18110952-20

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327785 **Instrument: VOA8** **Method: SW8260**

MBLK Sample ID: **MBLKW1-112018** Units: **ug/Kg** Analysis Date: **20-Nov-2018 08:59**
Client ID: Run ID: **VOA8_327785** SeqNo: **4830019** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	ND	250								
m,p-Xylene	ND	500								
o-Xylene	ND	250								
Toluene	ND	250								
Xylenes, Total	ND	250								
Surr: 1,2-Dichloroethane-d4	*2562*	*0*	*2500*	*0*	*102*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*2466*	*0*	*2500*	*0*	*98.7*	*80 - 120*				
Surr: Dibromofluoromethane	*2544*	*0*	*2500*	*0*	*102*	*80 - 119*				
Surr: Toluene-d8	*2469*	*0*	*2500*	*0*	*98.8*	*81 - 118*				

LCS Sample ID: **VLCSW1-112018** Units: **ug/Kg** Analysis Date: **20-Nov-2018 08:14**
Client ID: Run ID: **VOA8_327785** SeqNo: **4830018** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	49.99	5.0	50	0	100.0	70 - 123				
m,p-Xylene	99.41	10	100	0	99.4	77 - 125				
o-Xylene	49.38	5.0	50	0	98.8	78 - 122				
Toluene	45.15	5.0	50	0	90.3	76 - 122				
Xylenes, Total	148.8	5.0	150	0	99.2	77 - 128				
Surr: 1,2-Dichloroethane-d4	*42.98*	*0*	*50*	*0*	*86.0*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.67*	*0*	*50*	*0*	*101*	*80 - 120*				
Surr: Dibromofluoromethane	*46.81*	*0*	*50*	*0*	*93.6*	*80 - 119*				
Surr: Toluene-d8	*47.64*	*0*	*50*	*0*	*95.3*	*81 - 118*				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327785 **Instrument: VOA8** **Method: SW8260**

MS Sample ID: **HS18110720-02MS** Units: **ug/Kg** Analysis Date: **20-Nov-2018 10:26**
Client ID: Run ID: **VOA8_327785** SeqNo: **4830069** PrepDate: DF: **5000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	285500	18000	180000	64520	123	70 - 130				
m,p-Xylene	684000	36000	360000	247400	121	70 - 130				
o-Xylene	220100	18000	180000	5109	119	70 - 130				
Toluene	199700	18000	180000	3293	109	70 - 130				
Xylenes, Total	904100	18000	540000	252500	121	70 - 130				
Surr: 1,2-Dichloroethane-d4	*155700*	*0*	*180000*	*0*	*86.5*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*189400*	*0*	*180000*	*0*	*105*	*70 - 130*				
Surr: Dibromofluoromethane	*167700*	*0*	*180000*	*0*	*93.2*	*70 - 130*				
Surr: Toluene-d8	*171400*	*0*	*180000*	*0*	*95.2*	*70 - 130*				

MSD Sample ID: **HS18110720-02MSD** Units: **ug/Kg** Analysis Date: **20-Nov-2018 10:47**
Client ID: Run ID: **VOA8_327785** SeqNo: **4830070** PrepDate: DF: **5000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethylbenzene	281400	18000	180000	64520	121	70 - 130	285500	1.44	30	
m,p-Xylene	674600	36000	360000	247400	119	70 - 130	684000	1.38	30	
o-Xylene	215300	18000	180000	5109	117	70 - 130	220100	2.23	30	
Toluene	195300	18000	180000	3293	107	70 - 130	199700	2.2	30	
Xylenes, Total	889900	18000	540000	252500	118	70 - 130	904100	1.59	30	
Surr: 1,2-Dichloroethane-d4	*156200*	*0*	*180000*	*0*	*86.8*	*70 - 126*	*155700*	*0.363*	*30*	
Surr: 4-Bromofluorobenzene	*187100*	*0*	*180000*	*0*	*104*	*70 - 130*	*189400*	*1.25*	*30*	
Surr: Dibromofluoromethane	*167800*	*0*	*180000*	*0*	*93.2*	*70 - 130*	*167700*	*0.0935*	*30*	
Surr: Toluene-d8	*171100*	*0*	*180000*	*0*	*95.0*	*70 - 130*	*171400*	*0.197*	*30*	

The following samples were analyzed in this batch: HS18110952-02 HS18110952-03 HS18110952-04

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327849 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS2-112018** Units: **ug/Kg** Analysis Date: **20-Nov-2018 23:43**
Client ID: Run ID: **VOA5_327849** SeqNo: **4831317** 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	*47.87*	*0*	*50*	*0*	*95.7*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.18*	*0*	*50*	*0*	*100*	*80 - 120*				
Surr: Dibromofluoromethane	*48.98*	*0*	*50*	*0*	*98.0*	*80 - 119*				
Surr: Toluene-d8	*50.84*	*0*	*50*	*0*	*102*	*81 - 118*				

LCS Sample ID: **VLCSS2-112018** Units: **ug/Kg** Analysis Date: **20-Nov-2018 22:54**
Client ID: Run ID: **VOA5_327849** SeqNo: **4831316** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.56	5.0	50	0	95.1	75 - 124				
Ethylbenzene	47.56	5.0	50	0	95.1	70 - 123				
m,p-Xylene	95.64	10	100	0	95.6	77 - 125				
o-Xylene	47.92	5.0	50	0	95.8	78 - 122				
Toluene	47.49	5.0	50	0	95.0	76 - 122				
Xylenes, Total	143.6	5.0	150	0	95.7	77 - 128				
Surr: 1,2-Dichloroethane-d4	*47.78*	*0*	*50*	*0*	*95.6*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*53.06*	*0*	*50*	*0*	*106*	*80 - 120*				
Surr: Dibromofluoromethane	*48.82*	*0*	*50*	*0*	*97.6*	*80 - 119*				
Surr: Toluene-d8	*50.25*	*0*	*50*	*0*	*100*	*81 - 118*				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327849 **Instrument: VOA5** **Method: SW8260**

MS Sample ID: **HS18110952-22MS** Units: **ug/Kg** Analysis Date: **21-Nov-2018 00:57**
Client ID: **S-6 2'** Run ID: **VOA5_327849** SeqNo: **4831320** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	38.21	5.0	49.5	0	77.2	70 - 130				
Ethylbenzene	36.54	5.0	49.5	0	73.8	70 - 130				
m,p-Xylene	64.88	9.9	99	0	65.5	70 - 130				S
o-Xylene	37.43	5.0	49.5	0	75.6	70 - 130				
Toluene	38.94	5.0	49.5	0	78.7	70 - 130				
Xylenes, Total	102.3	5.0	148.5	0	68.9	70 - 130				S
Surr: 1,2-Dichloroethane-d4	*45.43*	*0*	*49.5*	*0*	*91.8*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*50.37*	*0*	*49.5*	*0*	*102*	*70 - 130*				
Surr: Dibromofluoromethane	*49.24*	*0*	*49.5*	*0*	*99.5*	*70 - 130*				
Surr: Toluene-d8	*50.72*	*0*	*49.5*	*0*	*102*	*70 - 130*				

MSD Sample ID: **HS18110952-22MSD** Units: **ug/Kg** Analysis Date: **21-Nov-2018 01:22**
Client ID: **S-6 2'** Run ID: **VOA5_327849** SeqNo: **4831321** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.59	5.0	50	0	87.2	70 - 130	38.21	13.2	30	
Ethylbenzene	43.79	5.0	50	0	87.6	70 - 130	36.54	18	30	
m,p-Xylene	80.56	10	100	0	80.6	70 - 130	64.88	21.6	30	
o-Xylene	42.32	5.0	50	0	84.6	70 - 130	37.43	12.2	30	
Toluene	45.15	5.0	50	0	90.3	70 - 130	38.94	14.8	30	
Xylenes, Total	122.9	5.0	150	0	81.9	70 - 130	102.3	18.3	30	
Surr: 1,2-Dichloroethane-d4	*44.88*	*0*	*50*	*0*	*89.8*	*70 - 126*	*45.43*	*1.21*	*30*	
Surr: 4-Bromofluorobenzene	*53.11*	*0*	*50*	*0*	*106*	*70 - 130*	*50.37*	*5.29*	*30*	
Surr: Dibromofluoromethane	*47.83*	*0*	*50*	*0*	*95.7*	*70 - 130*	*49.24*	*2.91*	*30*	
Surr: Toluene-d8	*54.21*	*0*	*50*	*0*	*108*	*70 - 130*	*50.72*	*6.65*	*30*	

The following samples were analyzed in this batch: HS18110952-21 HS18110952-22 HS18110952-23 HS18110952-24

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327881 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKM-181120** Units: **ug/Kg** Analysis Date: **21-Nov-2018 02:47**
Client ID: Run ID: **VOA6_327881** SeqNo: **4832189** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	ND	500								
o-Xylene	ND	250								
Xylenes, Total	ND	250								
Surr: 1,2-Dichloroethane-d4	*2492*	*0*	*2500*	*0*	*99.7*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*2559*	*0*	*2500*	*0*	*102*	*80 - 120*				
Surr: Dibromofluoromethane	*2503*	*0*	*2500*	*0*	*100*	*80 - 119*				
Surr: Toluene-d8	*2488*	*0*	*2500*	*0*	*99.5*	*81 - 118*				

LCS Sample ID: **VLCSW-181120** Units: **ug/L** Analysis Date: **21-Nov-2018 01:59**
Client ID: Run ID: **VOA6_327881** SeqNo: **4832174** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	41.39	10	40	0	103	77 - 122				
o-Xylene	20.16	5.0	20	0	101	75 - 119				
Xylenes, Total	61.55	5.0	60	0	103	75 - 122				
Surr: 1,2-Dichloroethane-d4	*51.34*	*0*	*50*	*0*	*103*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*48.86*	*0*	*50*	*0*	*97.7*	*82 - 115*				
Surr: Dibromofluoromethane	*51.65*	*0*	*50*	*0*	*103*	*73 - 126*				
Surr: Toluene-d8	*50.05*	*0*	*50*	*0*	*100*	*81 - 120*				

MS Sample ID: **HS18110888-01MS** Units: **ug/L** Analysis Date: **21-Nov-2018 05:36**
Client ID: Run ID: **VOA6_327881** SeqNo: **4832176** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
m,p-Xylene	42.33	10	40	0	106	70 - 130				
o-Xylene	20.97	5.0	20	0	105	70 - 124				
Xylenes, Total	63.31	5.0	60	0	106	70 - 130				
Surr: 1,2-Dichloroethane-d4	*52.78*	*0*	*50*	*0*	*106*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*51.09*	*0*	*50*	*0*	*102*	*82 - 124*				
Surr: Dibromofluoromethane	*51.86*	*0*	*50*	*0*	*104*	*77 - 123*				
Surr: Toluene-d8	*52*	*0*	*50*	*0*	*104*	*82 - 127*				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: R327881 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS18110888-01MSD** Units: **ug/L** Analysis Date: **21-Nov-2018 06:00**
Client ID: Run ID: **VOA6_327881** SeqNo: **4832177** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
m,p-Xylene	42.27	10	40	0	106	70 - 130	42.33	0.154	20	
o-Xylene	21.78	5.0	20	0	109	70 - 124	20.97	3.78	20	
Xylenes, Total	64.05	5.0	60	0	107	70 - 130	63.31	1.17	20	
Surr: 1,2-Dichloroethane-d4	*52.79*	*0*	*50*	*0*	*106*	*70 - 126*	*52.78*	*0.0314*	*20*	
Surr: 4-Bromofluorobenzene	*54.84*	*0*	*50*	*0*	*110*	*82 - 124*	*51.09*	*7.08*	*20*	
Surr: Dibromofluoromethane	*50.97*	*0*	*50*	*0*	*102*	*77 - 123*	*51.86*	*1.73*	*20*	
Surr: Toluene-d8	*50.38*	*0*	*50*	*0*	*101*	*82 - 127*	*52*	*3.16*	*20*	

The following samples were analyzed in this batch: HS18110952-23

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: 134777 **Instrument: ICS2100** **Method: E300**

MBLK Sample ID: **MBLK-134777** Units: **mg/Kg** Analysis Date: **20-Nov-2018 12:29**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4830772** PrepDate: **19-Nov-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-134777** Units: **mg/Kg** Analysis Date: **20-Nov-2018 12:44**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4830773** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	208.8	5.00	200	0	104	90 - 110				

LCSD Sample ID: **LCSD-134777** Units: **mg/Kg** Analysis Date: **20-Nov-2018 12:58**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4830774** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	199.2	5.00	200	0	99.6	90 - 110	208.8	4.71	20	

MS Sample ID: **HS18110952-12MS** Units: **mg/Kg** Analysis Date: **20-Nov-2018 18:33**
Client ID: **S-1 2'** Run ID: **ICS2100_327828** SeqNo: **4832796** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	134.7	4.95	99.04	25.12	111	75 - 125				

MS Sample ID: **HS18110952-02MS** Units: **mg/Kg** Analysis Date: **20-Nov-2018 13:42**
Client ID: **SW-2** Run ID: **ICS2100_327828** SeqNo: **4830777** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	118.6	4.94	98.72	17.79	102	75 - 125				

MSD Sample ID: **HS18110952-12MSD** Units: **mg/Kg** Analysis Date: **20-Nov-2018 18:47**
Client ID: **S-1 2'** Run ID: **ICS2100_327828** SeqNo: **4832797** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	136.4	4.95	98.92	25.12	113	75 - 125	134.7	1.29	20	

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: 134777 **Instrument: ICS2100** **Method: E300**

MSD Sample ID: **HS18110952-02MSD** Units: **mg/Kg** Analysis Date: **20-Nov-2018 13:56**
Client ID: **SW-2** Run ID: **ICS2100_327828** SeqNo: **4830778** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	119.7	4.91	98.14	17.79	104	75 - 125	118.6	0.936	20	

The following samples were analyzed in this batch:

HS18110952-01	HS18110952-02	HS18110952-03	HS18110952-04
HS18110952-05	HS18110952-06	HS18110952-07	HS18110952-08
HS18110952-09	HS18110952-10	HS18110952-11	HS18110952-12
HS18110952-13	HS18110952-14	HS18110952-15	HS18110952-16
HS18110952-17			

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: 134803 **Instrument: ICS2100** **Method: E300**

MBLK Sample ID: **MBLK-134803** Units: **mg/Kg** Analysis Date: **20-Nov-2018 21:13**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4832807** PrepDate: **19-Nov-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-134803** Units: **mg/Kg** Analysis Date: **20-Nov-2018 21:27**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4832808** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	208.7	5.00	200	0	104	90 - 110				

LCSD Sample ID: **LCSD-134803** Units: **mg/Kg** Analysis Date: **20-Nov-2018 21:42**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4832809** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	205.3	5.00	200	0	103	90 - 110	208.7	1.65	20	

MS Sample ID: **HS18110959-06MS** Units: **mg/Kg** Analysis Date: **24-Nov-2018 19:59**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4835715** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	303.9	4.97	99.4	242.4	61.9	75 - 125				S

MS Sample ID: **HS18110959-05MS** Units: **mg/Kg** Analysis Date: **21-Nov-2018 01:20**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4832825** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	387.1	4.98	99.55	293.9	93.5	75 - 125				

MSD Sample ID: **HS18110959-06MSD** Units: **mg/Kg** Analysis Date: **24-Nov-2018 20:14**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4835716** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	303.5	4.99	99.87	242.4	61.3	75 - 125	303.9	0.123	20	S

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: HS18110952

QC BATCH REPORT

Batch ID: 134803 **Instrument: ICS2100** **Method: E300**

MSD Sample ID: **HS18110959-05MSD** Units: **mg/Kg** Analysis Date: **21-Nov-2018 01:35**
Client ID: Run ID: **ICS2100_327828** SeqNo: **4832826** PrepDate: **19-Nov-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	383.8	4.99	99.88	293.9	90.0	75 - 75	387.1	0.836	20	

The following samples were analyzed in this batch: HS18110952-18 HS18110952-19 HS18110952-20 HS18110952-21
HS18110952-22 HS18110952-23 HS18110952-24

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
WorkOrder: **HS18110952**

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

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
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	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: West Lovington 20 # 1
Work Order: HS18110952

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS18110952-01	SW-1	Login	11/19/2018 11:19:59 AM	DQ	VOA193
HS18110952-02	SW-2	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-03	SW-3	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-04	SW-4	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-05	SW-5	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-06	SW-6	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-07	SW-7	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-08	SW-8	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-09	SW-9	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-10	SW-10	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-11	S-1 1'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-12	S-1 2'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-13	S-2 1'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-14	S-2 2'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-15	S-3 1'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-16	S-3 2'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-17	S-4 1'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-18	S-4 2'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-19	S-5 1'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-20	S-5 2'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-21	S-6 1'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-22	S-6 2'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-23	S-7 1'	Login	11/19/2018 11:33:06 AM	DQ	VOA193
HS18110952-24	S-7 2'	Login	11/19/2018 11:33:06 AM	DQ	VOA193

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Sample Receipt Checklist

Client Name: WSP Dallas
Work Order: HS18110952
Date/Time Received: **19-Nov-2018 09:10**
Received by: **JRM**

Checklist completed by: *Jared R. Makan* eSignature 19-Nov-2018 Date
Reviewed by: *Bernadette A. Fini* eSignature 19-Nov-2018 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 ☑
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/2.5c UC/C	IR11	
Cooler(s)/Kit(s):	Red		
Date/Time sample(s) sent to storage:	11/19/2018 11:35		
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: Samples for 8260 BTEX analysis received in bulk analysis.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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Chain of Custody Form

Page 1 of 3

COC ID: 142327

HS18110952

WSP Environment & Energy
West Lovington 20 # 1

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	West Lovington 20 #1	A	TPH GRO
Work Order		Project Number		B	TPH DRO / MRO
Company Name	WSP	Bill To Company		C	BTEX
Send Report To	Matthew Boyle	Invoice Attn		D	Chlorides
Address	2777 N. Dallas Pkwy Suite 1600	Address	Same	E	
				F	
City/State/Zip	Dallas, TX	City/State/Zip		G	
Phone	817 713 0262	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	11-16-18	8:10	Soil	Ice	1	✓	✓	✓	✓							
2	SW-2		8:20														
3	SW-3		8:30														
4	SW-4		8:45														
5	SW-5		8:55														
6	SW-6		9:00														
7	SW-7		9:05														
8	SW-8		9:10														
9	SW-9		9:15														
10	SW-10		9:20														

Sampler(s) Please Print & Sign: Matthew 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: 11-21-18

Relinquished by: Matthew Boyle	Date: 11-17-18	Time: 7:00	Received by:	
Relinquished by:	Date: 11/19/18	Time: 09:10	Received by (Laboratory): J. Hamm	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes:

Cooler ID	Cooler Temp
	uc
Red	2.1
	1x11
	cf 0.4

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.

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Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Form

COC ID: 142328

HS18110952

WSP Environment & Energy
West Lovington 20 # 1

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	West Lovington 20 #1
Work Order		Project Number	
Company Name	WSP	Bill To Company	
Send Report To	Matthew Boyle	Invoice Attn	
Address	2777 N Dallas Pkwy Suite 1400	Address	Same
City/State/Zip	Dallas TX	City/State/Zip	
Phone	817 7130262	Phone	
Fax		Fax	
e-Mail Address	Matthew.Boyle@wsp.com	e-Mail Address	

A	TPH GRO
B	TPH DRO/MRO
C	BTEX
D	Chlorides
E	
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-1 1'	11-16-18	8:00	Soil	Ice	1	✓	✓	✓	✓							
2	S-1 2'		8:05														
3	S-2 1'		8:15														
4	S-2 2'		8:~~20~~														
5	S-3 1'		8:25														
6	S-3 2'		8:33														
7	S-4 1'		8:40														
8	S-4 2'		8:45														
9	S-5 1'		8:50														
10	S-5 2'		8:53														

Sampler(s) Please Print & Sign: Matt Byl 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: 11-21-18

Relinquished by: Matt Byl	Date: 11-17-18	Time: 7:00	Received by:
Relinquished by:	Date: 11/19/18	Time: 09:10	Received by (Laboratory): S. Mason
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp
	uc
Red	2.1
	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.

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Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Form

Page 3 of 3

COC ID: 142329

HS18110952

WSP Environment & Energy
West Lovington 20 # 1

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	West Lovington 20#1	A	TPH 6RO
Work Order		Project Number		B	TPH DRO/MRO
Company Name	WSP	Bill To Company		C	BTEX
Send Report To	Matthew Boyle	Invoice Attn		D	Chlorides
Address	2777 N Dallas Pkwy Suite 1600	Address	Same	E	
City/State/Zip	Dallas TX	City/State/Zip		F	
Phone	8177130262	Phone		G	
Fax		Fax		H	
e-Mail Address	Matthew.Boyle@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	S-6 1'	11-16-18	9:00	Soil	Ice	1	✓	✓	✓	✓							
2	S-6 2'		9:04			1	✓	✓	✓	✓							
3	S-7 1'		9:25			1	✓	✓	✓	✓							
4	S-7 2'		9:30			1	✓	✓	✓	✓							
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Matthew 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: 11-21-18

Relinquished by: Matthew Boyle	Date: 11-17-18	Time: 7:00	Received by:	Notes:
Relinquished by:	Date: 11/19/18	Time: 09:10	Received by (Laboratory): J.Hamilton	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp
	oc
Red	2.1
	IRCI
	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.

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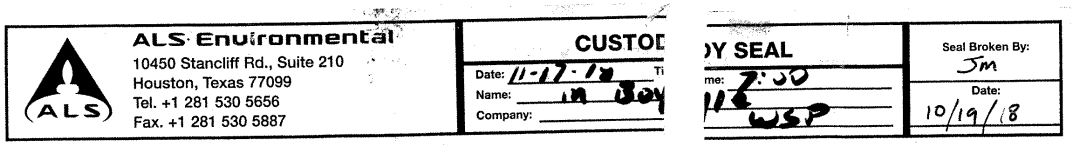

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ALS Environmental Analytical Report - Second Remediation

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

December 11, 2018

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

Work Order: **HS18120430**

Laboratory Results for: **W Lovington**

Dear Matthew,

ALS Environmental received 14 sample(s) on Dec 08, 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 Environment & Energy
Project: W Lovington
Work Order: HS18120430

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18120430-01	SW-1R	Soil		06-Dec-2018 11:45	08-Dec-2018 11:00	☐
HS18120430-02	SW-2R	Soil		06-Dec-2018 11:50	08-Dec-2018 11:00	☐
HS18120430-03	SW-3R	Soil		06-Dec-2018 11:55	08-Dec-2018 11:00	☐
HS18120430-04	SW-4R	Soil		06-Dec-2018 12:00	08-Dec-2018 11:00	☐
HS18120430-05	SW-5R	Soil		06-Dec-2018 12:05	08-Dec-2018 11:00	☐
HS18120430-06	SW-8R	Soil		06-Dec-2018 12:10	08-Dec-2018 11:00	☐
HS18120430-07	SW-7R	Soil		06-Dec-2018 12:15	08-Dec-2018 11:00	☐
HS18120430-08	SW-9R	Soil		06-Dec-2018 12:20	08-Dec-2018 11:00	☐
HS18120430-09	S-1R 3'	Soil		06-Dec-2018 12:40	08-Dec-2018 11:00	☐
HS18120430-10	S-2R 3'	Soil		06-Dec-2018 12:45	08-Dec-2018 11:00	☐
HS18120430-11	S-3R 3'	Soil		06-Dec-2018 13:50	08-Dec-2018 11:00	☐
HS18120430-12	S-7R 3'	Soil		06-Dec-2018 13:55	08-Dec-2018 11:00	☐
HS18120430-13	SW-11	Soil		06-Dec-2018 14:00	08-Dec-2018 11:00	☐
HS18120430-14	SW-12	Soil		06-Dec-2018 14:05	08-Dec-2018 11:00	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy **CASE NARRATIVE**
Project: W Lovington
Work Order: HS18120430

GC Semivolatiles by Method SW8015M

Batch ID: 135375

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

GC Volatile Organics by Method SW8015

Batch ID: R328859

Sample ID: SW-12 (HS18120430-14MSD)

- The RPD between the MS and MSD was outside of the control limit.

GC Volatiles by Method SW8021B

Batch ID: R328873

Sample ID: CCV

- Ending CCV %D was above the control limits. The associated sample results are non detect.

Sample ID: S-3R 3' (HS18120430-11)

- 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-7R 3' (HS18120430-12)

- 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-11 (HS18120430-13)

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

Sample ID: SW-12 (HS18120430-14)

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

Sample ID: SW-12 (HS18120430-14MS)

- 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-12 (HS18120430-14MSD)

- 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: R328859

Sample ID: SW-12 (HS18120430-14MS)

- 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: SW-12 (HS18120430-14MSD)

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy **CASE NARRATIVE**
Project: W Lovington
Work Order: HS18120430

GC Volatiles by Method SW8015

Batch ID: R328859

- 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.

WetChemistry by Method E300

Batch ID: 135410

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-1R
Collection Date: 06-Dec-2018 11:45

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-01
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 16:27
Surr: 4-Bromofluorobenzene	*95.0*		*70-123*	*%REC*	*1*	*08-Dec-2018 16:27*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0049	mg/Kg	1	08-Dec-2018 00:17
m,p-Xylene	ND		0.0098	mg/Kg	1	08-Dec-2018 00:17
o-Xylene	ND		0.0049	mg/Kg	1	08-Dec-2018 00:17
Toluene	ND		0.0049	mg/Kg	1	08-Dec-2018 00:17
Ethylbenzene	ND		0.0049	mg/Kg	1	08-Dec-2018 00:17
Xylenes, Total	ND		0.015	mg/Kg	1	08-Dec-2018 00:17
Surr: 4-Bromofluorobenzene	*106*		*73-130*	*%REC*	*1*	*08-Dec-2018 00:17*
Surr: Trifluorotoluene	*126*		*70-130*	*%REC*	*1*	*08-Dec-2018 00:17*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	ND		1.7	mg/Kg	1	10-Dec-2018 14:19
TPH (Motor Oil Range)	ND	n	3.4	mg/Kg	1	10-Dec-2018 14:19
Surr: 2-Fluorobiphenyl	*80.8*		*60-129*	*%REC*	*1*	*10-Dec-2018 14:19*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	ND		4.99	mg/Kg	1	11-Dec-2018 01:33

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-2R
Collection Date: 06-Dec-2018 11:50

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-02
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 16:43
Surr: 4-Bromofluorobenzene	*100*		*70-123*	*%REC*	*1*	*08-Dec-2018 16:43*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0046	mg/Kg	1	08-Dec-2018 00:43
m,p-Xylene	ND		0.0091	mg/Kg	1	08-Dec-2018 00:43
o-Xylene	ND		0.0046	mg/Kg	1	08-Dec-2018 00:43
Toluene	ND		0.0046	mg/Kg	1	08-Dec-2018 00:43
Ethylbenzene	ND		0.0046	mg/Kg	1	08-Dec-2018 00:43
Xylenes, Total	ND		0.014	mg/Kg	1	08-Dec-2018 00:43
Surr: 4-Bromofluorobenzene	*116*		*73-130*	*%REC*	*1*	*08-Dec-2018 00:43*
Surr: Trifluorotoluene	*128*		*70-130*	*%REC*	*1*	*08-Dec-2018 00:43*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**5.8**		**1.7**	**mg/Kg**	1	10-Dec-2018 15:31
TPH (Motor Oil Range)	**12**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 15:31
Surr: 2-Fluorobiphenyl	*76.0*		*60-129*	*%REC*	*1*	*10-Dec-2018 15:31*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**5.93**		**4.97**	**mg/Kg**	1	11-Dec-2018 02:16

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-3R
Collection Date: 06-Dec-2018 11:55

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-03
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 16:59
Surr: 4-Bromofluorobenzene	*99.2*		*70-123*	*%REC*	*1*	*08-Dec-2018 16:59*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0046	mg/Kg	1	09-Dec-2018 01:08
m,p-Xylene	ND		0.0093	mg/Kg	1	09-Dec-2018 01:08
o-Xylene	ND		0.0046	mg/Kg	1	09-Dec-2018 01:08
Toluene	ND		0.0046	mg/Kg	1	09-Dec-2018 01:08
Ethylbenzene	ND		0.0046	mg/Kg	1	09-Dec-2018 01:08
Xylenes, Total	ND		0.014	mg/Kg	1	09-Dec-2018 01:08
Surr: 4-Bromofluorobenzene	*107*		*73-130*	*%REC*	*1*	*09-Dec-2018 01:08*
Surr: Trifluorotoluene	*124*		*70-130*	*%REC*	*1*	*09-Dec-2018 01:08*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**3.8**		**1.7**	**mg/Kg**	1	10-Dec-2018 15:55
TPH (Motor Oil Range)	**4.6**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 15:55
Surr: 2-Fluorobiphenyl	*85.5*		*60-129*	*%REC*	*1*	*10-Dec-2018 15:55*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**568**		**4.99**	**mg/Kg**	1	11-Dec-2018 02:31

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-4R
Collection Date: 06-Dec-2018 12:00

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-04
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**0.059**		**0.050**	**mg/Kg**	1	08-Dec-2018 17:16
Surr: 4-Bromofluorobenzene	*97.4*		*70-123*	*%REC*	*1*	*08-Dec-2018 17:16*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0047	mg/Kg	1	09-Dec-2018 01:34
m,p-Xylene	ND		0.0093	mg/Kg	1	09-Dec-2018 01:34
o-Xylene	ND		0.0047	mg/Kg	1	09-Dec-2018 01:34
Toluene	ND		0.0047	mg/Kg	1	09-Dec-2018 01:34
Ethylbenzene	ND		0.0047	mg/Kg	1	09-Dec-2018 01:34
Xylenes, Total	ND		0.014	mg/Kg	1	09-Dec-2018 01:34
Surr: 4-Bromofluorobenzene	*74.5*		*73-130*	*%REC*	*1*	*09-Dec-2018 01:34*
Surr: Trifluorotoluene	*94.6*		*70-130*	*%REC*	*1*	*09-Dec-2018 01:34*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**35**		**1.7**	**mg/Kg**	1	10-Dec-2018 16:19
TPH (Motor Oil Range)	**35**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 16:19
Surr: 2-Fluorobiphenyl	*82.2*		*60-129*	*%REC*	*1*	*10-Dec-2018 16:19*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**484**		**4.96**	**mg/Kg**	1	11-Dec-2018 02:45

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

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Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-5R
Collection Date: 06-Dec-2018 12:05

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-05
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**0.12**		**0.049**	**mg/Kg**	1	08-Dec-2018 17:32
Surr: 4-Bromofluorobenzene	*104*		*70-123*	*%REC*	*1*	*08-Dec-2018 17:32*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0048	mg/Kg	1	09-Dec-2018 02:00
m,p-Xylene	ND		0.0095	mg/Kg	1	09-Dec-2018 02:00
o-Xylene	ND		0.0048	mg/Kg	1	09-Dec-2018 02:00
Toluene	ND		0.0048	mg/Kg	1	09-Dec-2018 02:00
Ethylbenzene	ND		0.0048	mg/Kg	1	09-Dec-2018 02:00
Xylenes, Total	ND		0.014	mg/Kg	1	09-Dec-2018 02:00
Surr: 4-Bromofluorobenzene	*82.0*		*73-130*	*%REC*	*1*	*09-Dec-2018 02:00*
Surr: Trifluorotoluene	*97.7*		*70-130*	*%REC*	*1*	*09-Dec-2018 02:00*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**52**		**1.7**	**mg/Kg**	1	10-Dec-2018 16:43
TPH (Motor Oil Range)	**64**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 16:43
Surr: 2-Fluorobiphenyl	*81.4*		*60-129*	*%REC*	*1*	*10-Dec-2018 16:43*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**25.1**		**4.97**	**mg/Kg**	1	11-Dec-2018 03:00

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

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Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-8R
Collection Date: 06-Dec-2018 12:10

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-06
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 17:48
Surr: 4-Bromofluorobenzene	*101*		*70-123*	*%REC*	*1*	*08-Dec-2018 17:48*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0046	mg/Kg	1	09-Dec-2018 02:25
m,p-Xylene	ND		0.0091	mg/Kg	1	09-Dec-2018 02:25
o-Xylene	ND		0.0046	mg/Kg	1	09-Dec-2018 02:25
Toluene	ND		0.0046	mg/Kg	1	09-Dec-2018 02:25
Ethylbenzene	ND		0.0046	mg/Kg	1	09-Dec-2018 02:25
Xylenes, Total	ND		0.014	mg/Kg	1	09-Dec-2018 02:25
Surr: 4-Bromofluorobenzene	*101*		*73-130*	*%REC*	*1*	*09-Dec-2018 02:25*
Surr: Trifluorotoluene	*116*		*70-130*	*%REC*	*1*	*09-Dec-2018 02:25*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**2.0**		**1.7**	**mg/Kg**	1	10-Dec-2018 13:31
TPH (Motor Oil Range)	ND	n	3.4	mg/Kg	1	10-Dec-2018 13:31
Surr: 2-Fluorobiphenyl	*60.4*		*60-129*	*%REC*	*1*	*10-Dec-2018 13:31*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**144**		**4.97**	**mg/Kg**	1	11-Dec-2018 00:05

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-7R
Collection Date: 06-Dec-2018 12:15

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-07
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.049	mg/Kg	1	08-Dec-2018 18:53
Surr: 4-Bromofluorobenzene	*102*		*70-123*	*%REC*	*1*	*08-Dec-2018 18:53*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0048	mg/Kg	1	09-Dec-2018 02:51
m,p-Xylene	ND		0.0096	mg/Kg	1	09-Dec-2018 02:51
o-Xylene	ND		0.0048	mg/Kg	1	09-Dec-2018 02:51
Toluene	ND		0.0048	mg/Kg	1	09-Dec-2018 02:51
Ethylbenzene	ND		0.0048	mg/Kg	1	09-Dec-2018 02:51
Xylenes, Total	ND		0.014	mg/Kg	1	09-Dec-2018 02:51
Surr: 4-Bromofluorobenzene	*97.8*		*73-130*	*%REC*	*1*	*09-Dec-2018 02:51*
Surr: Trifluorotoluene	*105*		*70-130*	*%REC*	*1*	*09-Dec-2018 02:51*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**21**		**1.7**	**mg/Kg**	1	10-Dec-2018 13:55
TPH (Motor Oil Range)	**22**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 13:55
Surr: 2-Fluorobiphenyl	*64.5*		*60-129*	*%REC*	*1*	*10-Dec-2018 13:55*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**52.5**		**4.96**	**mg/Kg**	1	11-Dec-2018 03:43

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-9R
Collection Date: 06-Dec-2018 12:20

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-08
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 19:09
Surr: 4-Bromofluorobenzene	*99.1*		*70-123*	*%REC*	*1*	*08-Dec-2018 19:09*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0049	mg/Kg	1	09-Dec-2018 04:08
m,p-Xylene	ND		0.0098	mg/Kg	1	09-Dec-2018 04:08
o-Xylene	ND		0.0049	mg/Kg	1	09-Dec-2018 04:08
Toluene	ND		0.0049	mg/Kg	1	09-Dec-2018 04:08
Ethylbenzene	ND		0.0049	mg/Kg	1	09-Dec-2018 04:08
Xylenes, Total	ND		0.015	mg/Kg	1	09-Dec-2018 04:08
Surr: 4-Bromofluorobenzene	*92.4*		*73-130*	*%REC*	*1*	*09-Dec-2018 04:08*
Surr: Trifluorotoluene	*110*		*70-130*	*%REC*	*1*	*09-Dec-2018 04:08*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**20**		**1.7**	**mg/Kg**	1	10-Dec-2018 14:19
TPH (Motor Oil Range)	**53**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 14:19
Surr: 2-Fluorobiphenyl	*64.7*		*60-129*	*%REC*	*1*	*10-Dec-2018 14:19*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**52.5**		**4.93**	**mg/Kg**	1	11-Dec-2018 03:58

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: S-1R 3'
Collection Date: 06-Dec-2018 12:40

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-09
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 19:25
Surr: 4-Bromofluorobenzene	*101*		*70-123*	*%REC*	*1*	*08-Dec-2018 19:25*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0050	mg/Kg	1	09-Dec-2018 04:33
m,p-Xylene	ND		0.0099	mg/Kg	1	09-Dec-2018 04:33
o-Xylene	ND		0.0050	mg/Kg	1	09-Dec-2018 04:33
Toluene	ND		0.0050	mg/Kg	1	09-Dec-2018 04:33
Ethylbenzene	ND		0.0050	mg/Kg	1	09-Dec-2018 04:33
Xylenes, Total	ND		0.015	mg/Kg	1	09-Dec-2018 04:33
Surr: 4-Bromofluorobenzene	*105*		*73-130*	*%REC*	*1*	*09-Dec-2018 04:33*
Surr: Trifluorotoluene	*117*		*70-130*	*%REC*	*1*	*09-Dec-2018 04:33*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**21**		**1.7**	**mg/Kg**	1	10-Dec-2018 14:43
TPH (Motor Oil Range)	**34**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 14:43
Surr: 2-Fluorobiphenyl	*60.7*		*60-129*	*%REC*	*1*	*10-Dec-2018 14:43*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**8.52**		**4.98**	**mg/Kg**	1	11-Dec-2018 04:13

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: S-2R 3'
Collection Date: 06-Dec-2018 12:45

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-10
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 19:42
Surr: 4-Bromofluorobenzene	*98.5*		*70-123*	*%REC*	*1*	*08-Dec-2018 19:42*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0047	mg/Kg	1	09-Dec-2018 04:59
m,p-Xylene	ND		0.0094	mg/Kg	1	09-Dec-2018 04:59
o-Xylene	ND		0.0047	mg/Kg	1	09-Dec-2018 04:59
Toluene	ND		0.0047	mg/Kg	1	09-Dec-2018 04:59
Ethylbenzene	ND		0.0047	mg/Kg	1	09-Dec-2018 04:59
Xylenes, Total	ND		0.014	mg/Kg	1	09-Dec-2018 04:59
Surr: 4-Bromofluorobenzene	*108*		*73-130*	*%REC*	*1*	*09-Dec-2018 04:59*
Surr: Trifluorotoluene	*117*		*70-130*	*%REC*	*1*	*09-Dec-2018 04:59*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**7.7**		**1.7**	**mg/Kg**	1	10-Dec-2018 15:07
TPH (Motor Oil Range)	**23**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 15:07
Surr: 2-Fluorobiphenyl	*60.4*		*60-129*	*%REC*	*1*	*10-Dec-2018 15:07*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**193**		**4.94**	**mg/Kg**	1	11-Dec-2018 04:27

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: S-3R 3'
Collection Date: 06-Dec-2018 13:50

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-11
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.049	mg/Kg	1	08-Dec-2018 19:58
Surr: 4-Bromofluorobenzene	*102*		*70-123*	*%REC*	*1*	*08-Dec-2018 19:58*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0050	mg/Kg	1	09-Dec-2018 05:24
m,p-Xylene	ND		0.0099	mg/Kg	1	09-Dec-2018 05:24
o-Xylene	ND		0.0050	mg/Kg	1	09-Dec-2018 05:24
Toluene	ND		0.0050	mg/Kg	1	09-Dec-2018 05:24
Ethylbenzene	ND		0.0050	mg/Kg	1	09-Dec-2018 05:24
Xylenes, Total	ND		0.015	mg/Kg	1	09-Dec-2018 05:24
Surr: 4-Bromofluorobenzene	*173*	*S*	*73-130*	*%REC*	*1*	*09-Dec-2018 05:24*
Surr: Trifluorotoluene	*189*	*S*	*70-130*	*%REC*	*1*	*09-Dec-2018 05:24*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**6.6**		**1.7**	**mg/Kg**	1	10-Dec-2018 17:07
TPH (Motor Oil Range)	**9.7**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 17:07
Surr: 2-Fluorobiphenyl	*72.7*		*60-129*	*%REC*	*1*	*10-Dec-2018 17:07*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**385**		**4.99**	**mg/Kg**	1	11-Dec-2018 04:42

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: S-7R 3'
Collection Date: 06-Dec-2018 13:55

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-12
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 20:14
Surr: 4-Bromofluorobenzene	*105*		*70-123*	*%REC*	*1*	*08-Dec-2018 20:14*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0047	mg/Kg	1	09-Dec-2018 05:50
m,p-Xylene	ND		0.0093	mg/Kg	1	09-Dec-2018 05:50
o-Xylene	ND		0.0047	mg/Kg	1	09-Dec-2018 05:50
Toluene	ND		0.0047	mg/Kg	1	09-Dec-2018 05:50
Ethylbenzene	ND		0.0047	mg/Kg	1	09-Dec-2018 05:50
Xylenes, Total	ND		0.014	mg/Kg	1	09-Dec-2018 05:50
Surr: 4-Bromofluorobenzene	*146*	*S*	*73-130*	*%REC*	*1*	*09-Dec-2018 05:50*
Surr: Trifluorotoluene	*173*	*S*	*70-130*	*%REC*	*1*	*09-Dec-2018 05:50*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**4.1**		**1.7**	**mg/Kg**	1	10-Dec-2018 18:22
TPH (Motor Oil Range)	**4.6**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 18:22
Surr: 2-Fluorobiphenyl	*73.2*		*60-129*	*%REC*	*1*	*10-Dec-2018 18:22*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**62.2**		**4.99**	**mg/Kg**	1	11-Dec-2018 04:56

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-11
Collection Date: 06-Dec-2018 14:00

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-13
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	ND		0.050	mg/Kg	1	08-Dec-2018 20:30
Surr: 4-Bromofluorobenzene	*97.6*		*70-123*	*%REC*	*1*	*08-Dec-2018 20:30*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0048	mg/Kg	1	09-Dec-2018 06:16
m,p-Xylene	ND		0.0097	mg/Kg	1	09-Dec-2018 06:16
o-Xylene	ND		0.0048	mg/Kg	1	09-Dec-2018 06:16
Toluene	ND		0.0048	mg/Kg	1	09-Dec-2018 06:16
Ethylbenzene	ND		0.0048	mg/Kg	1	09-Dec-2018 06:16
Xylenes, Total	ND		0.015	mg/Kg	1	09-Dec-2018 06:16
Surr: 4-Bromofluorobenzene	*138*	*S*	*73-130*	*%REC*	*1*	*09-Dec-2018 06:16*
Surr: Trifluorotoluene	*127*		*70-130*	*%REC*	*1*	*09-Dec-2018 06:16*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**15**		**1.7**	**mg/Kg**	1	10-Dec-2018 18:46
TPH (Motor Oil Range)	**27**	n	**3.4**	**mg/Kg**	1	10-Dec-2018 18:46
Surr: 2-Fluorobiphenyl	*68.1*		*60-129*	*%REC*	*1*	*10-Dec-2018 18:46*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**163**		**4.93**	**mg/Kg**	1	11-Dec-2018 05:11

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
Sample ID: SW-12
Collection Date: 06-Dec-2018 14:05

ANALYTICAL REPORT
WorkOrder:HS18120430
Lab ID:HS18120430-14
Matrix:Soil

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**				Analyst: NPI
Gasoline Range Organics	**0.47**		**0.050**	**mg/Kg**	1	08-Dec-2018 20:46
Surr: 4-Bromofluorobenzene	*118*		*70-123*	*%REC*	*1*	*08-Dec-2018 20:46*
BTEX BY SW8021B		**Method:SW8021B**				Analyst: NPI
Benzene	ND		0.0045	mg/Kg	1	09-Dec-2018 06:41
m,p-Xylene	ND		0.0089	mg/Kg	1	09-Dec-2018 06:41
o-Xylene	ND		0.0045	mg/Kg	1	09-Dec-2018 06:41
Toluene	ND		0.0045	mg/Kg	1	09-Dec-2018 06:41
Ethylbenzene	ND		0.0045	mg/Kg	1	09-Dec-2018 06:41
Xylenes, Total	ND		0.013	mg/Kg	1	09-Dec-2018 06:41
Surr: 4-Bromofluorobenzene	*122*		*73-130*	*%REC*	*1*	*09-Dec-2018 06:41*
Surr: Trifluorotoluene	*151*	*S*	*70-130*	*%REC*	*1*	*09-Dec-2018 06:41*
TPH DRO/ORO BY SW8015C		**Method:SW8015M**		Prep:SW3541 / 10-Dec-2018		Analyst: PVL
TPH (Diesel Range)	**100**		**3.4**	**mg/Kg**	2	10-Dec-2018 19:10
TPH (Motor Oil Range)	**80**	n	**6.8**	**mg/Kg**	2	10-Dec-2018 19:10
Surr: 2-Fluorobiphenyl	*111*		*60-129*	*%REC*	*2*	*10-Dec-2018 19:10*
ANIONS BY E300.0		**Method:E300**		Prep:E300 / 10-Dec-2018		Analyst: KMU
Chloride	**91.8**		**4.98**	**mg/Kg**	1	11-Dec-2018 05:25

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

RIGHT SOLUTIONS | RIGHT PARTNER

WEIGHT LOG

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

Batch ID: 2814 **Method:** GASOLINE RANGE ORGANICS BY SW8015C **Prep:**

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS18120430-01	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18120430-02	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS18120430-03	1	5.05 (g)	5 (mL)	0.99	Bulk (5030B)
HS18120430-04	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18120430-05	1	5.12 (g)	5 (mL)	0.98	Bulk (5030B)
HS18120430-06	1	5.06 (g)	5 (mL)	0.99	Bulk (5030B)
HS18120430-07	1	5.11 (g)	5 (mL)	0.98	Bulk (5030B)
HS18120430-08	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS18120430-09	1	5.04 (g)	5 (mL)	0.99	Bulk (5030B)
HS18120430-10	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18120430-11	1	5.08 (g)	5 (mL)	0.98	Bulk (5030B)
HS18120430-12	1	5.01 (g)	5 (mL)	1	Bulk (5030B)
HS18120430-13	1	5.03 (g)	5 (mL)	0.99	Bulk (5030B)
HS18120430-14	1	5.06 (g)	5 (mL)	0.99	Bulk (5030B)

Batch ID: 135375 **Method:** TPH DRO/ORO BY SW8015C **Prep:** 8015SPR_LL

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18120430-01	1	30.14	1 (mL)	0.03318
HS18120430-02	1	30.11	1 (mL)	0.03321
HS18120430-03	1	30.21	1 (mL)	0.0331
HS18120430-04	1	30.09	1 (mL)	0.03323
HS18120430-05	1	30.13	1 (mL)	0.03319
HS18120430-06	1	30.02	1 (mL)	0.03331
HS18120430-07	1	30.07	1 (mL)	0.03326
HS18120430-08	1	30.19	1 (mL)	0.03312
HS18120430-09	1	30.23	1 (mL)	0.03308
HS18120430-10	1	30.04	1 (mL)	0.03329
HS18120430-11	1	30.08	1 (mL)	0.03324
HS18120430-12	1	30.12	1 (mL)	0.0332
HS18120430-13	1	30.16	1 (mL)	0.03316
HS18120430-14	1	30.03	1 (mL)	0.0333

RIGHT SOLUTIONS | RIGHT PARTNER

WEIGHT LOG

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

Batch ID: 135410 **Method:** ANIONS BY E300.0 **Prep:** 300_S_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18120430-01	1	5.0112	50 (mL)	9.978
HS18120430-02	1	5.0304	50 (mL)	9.94
HS18120430-03	1	5.013	50 (mL)	9.974
HS18120430-04	1	5.0418	50 (mL)	9.917
HS18120430-05	1	5.0311	50 (mL)	9.938
HS18120430-06	1	5.03	50 (mL)	9.94
HS18120430-07	1	5.0441	50 (mL)	9.913
HS18120430-08	1	5.0671	50 (mL)	9.868
HS18120430-09	1	5.0204	50 (mL)	9.959
HS18120430-10	1	5.0626	50 (mL)	9.876
HS18120430-11	1	5.0091	50 (mL)	9.982
HS18120430-12	1	5.0122	50 (mL)	9.976
HS18120430-13	1	5.0757	50 (mL)	9.851
HS18120430-14	1	5.022	50 (mL)	9.956

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 135375	**Test Name :** TPH DRO/ORO BY SW8015C			**Matrix:** Soil		
HS18120430-01	SW-1R	06 Dec 2018 11:45		10 Dec 2018 07:30	10 Dec 2018 14:19	1
HS18120430-02	SW-2R	06 Dec 2018 11:50		10 Dec 2018 07:30	10 Dec 2018 15:31	1
HS18120430-03	SW-3R	06 Dec 2018 11:55		10 Dec 2018 07:30	10 Dec 2018 15:55	1
HS18120430-04	SW-4R	06 Dec 2018 12:00		10 Dec 2018 07:30	10 Dec 2018 16:19	1
HS18120430-05	SW-5R	06 Dec 2018 12:05		10 Dec 2018 07:30	10 Dec 2018 16:43	1
HS18120430-06	SW-8R	06 Dec 2018 12:10		10 Dec 2018 07:30	10 Dec 2018 13:31	1
HS18120430-07	SW-7R	06 Dec 2018 12:15		10 Dec 2018 07:30	10 Dec 2018 13:55	1
HS18120430-08	SW-9R	06 Dec 2018 12:20		10 Dec 2018 07:30	10 Dec 2018 14:19	1
HS18120430-09	S-1R 3'	06 Dec 2018 12:40		10 Dec 2018 07:30	10 Dec 2018 14:43	1
HS18120430-10	S-2R 3'	06 Dec 2018 12:45		10 Dec 2018 07:30	10 Dec 2018 15:07	1
HS18120430-11	S-3R 3'	06 Dec 2018 13:50		10 Dec 2018 07:30	10 Dec 2018 17:07	1
HS18120430-12	S-7R 3'	06 Dec 2018 13:55		10 Dec 2018 07:30	10 Dec 2018 18:22	1
HS18120430-13	SW-11	06 Dec 2018 14:00		10 Dec 2018 07:30	10 Dec 2018 18:46	1
HS18120430-14	SW-12	06 Dec 2018 14:05		10 Dec 2018 07:30	10 Dec 2018 19:10	2
Batch ID 135410	**Test Name :** ANIONS BY E300.0			**Matrix:** Soil		
HS18120430-01	SW-1R	06 Dec 2018 11:45		10 Dec 2018 15:49	11 Dec 2018 01:33	1
HS18120430-02	SW-2R	06 Dec 2018 11:50		10 Dec 2018 15:49	11 Dec 2018 02:16	1
HS18120430-03	SW-3R	06 Dec 2018 11:55		10 Dec 2018 15:49	11 Dec 2018 02:31	1
HS18120430-04	SW-4R	06 Dec 2018 12:00		10 Dec 2018 15:49	11 Dec 2018 02:45	1
HS18120430-05	SW-5R	06 Dec 2018 12:05		10 Dec 2018 15:49	11 Dec 2018 03:00	1
HS18120430-06	SW-8R	06 Dec 2018 12:10		10 Dec 2018 15:49	11 Dec 2018 00:05	1
HS18120430-07	SW-7R	06 Dec 2018 12:15		10 Dec 2018 15:49	11 Dec 2018 03:43	1
HS18120430-08	SW-9R	06 Dec 2018 12:20		10 Dec 2018 15:49	11 Dec 2018 03:58	1
HS18120430-09	S-1R 3'	06 Dec 2018 12:40		10 Dec 2018 15:49	11 Dec 2018 04:13	1
HS18120430-10	S-2R 3'	06 Dec 2018 12:45		10 Dec 2018 15:49	11 Dec 2018 04:27	1
HS18120430-11	S-3R 3'	06 Dec 2018 13:50		10 Dec 2018 15:49	11 Dec 2018 04:42	1
HS18120430-12	S-7R 3'	06 Dec 2018 13:55		10 Dec 2018 15:49	11 Dec 2018 04:56	1
HS18120430-13	SW-11	06 Dec 2018 14:00		10 Dec 2018 15:49	11 Dec 2018 05:11	1
HS18120430-14	SW-12	06 Dec 2018 14:05		10 Dec 2018 15:49	11 Dec 2018 05:25	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R328859	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C			**Matrix:** Soil		
HS18120430-01	SW-1R	06 Dec 2018 11:45			08 Dec 2018 16:27	1
HS18120430-02	SW-2R	06 Dec 2018 11:50			08 Dec 2018 16:43	1
HS18120430-03	SW-3R	06 Dec 2018 11:55			08 Dec 2018 16:59	1
HS18120430-04	SW-4R	06 Dec 2018 12:00			08 Dec 2018 17:16	1
HS18120430-05	SW-5R	06 Dec 2018 12:05			08 Dec 2018 17:32	1
HS18120430-06	SW-8R	06 Dec 2018 12:10			08 Dec 2018 17:48	1
HS18120430-07	SW-7R	06 Dec 2018 12:15			08 Dec 2018 18:53	1
HS18120430-08	SW-9R	06 Dec 2018 12:20			08 Dec 2018 19:09	1
HS18120430-09	S-1R 3'	06 Dec 2018 12:40			08 Dec 2018 19:25	1
HS18120430-10	S-2R 3'	06 Dec 2018 12:45			08 Dec 2018 19:42	1
HS18120430-11	S-3R 3'	06 Dec 2018 13:50			08 Dec 2018 19:58	1
HS18120430-12	S-7R 3'	06 Dec 2018 13:55			08 Dec 2018 20:14	1
HS18120430-13	SW-11	06 Dec 2018 14:00			08 Dec 2018 20:30	1
HS18120430-14	SW-12	06 Dec 2018 14:05			08 Dec 2018 20:46	1
Batch ID R328873	**Test Name :** BTEX BY SW8021B			**Matrix:** Soil		
HS18120430-01	SW-1R	06 Dec 2018 11:45			08 Dec 2018 00:17	1
HS18120430-02	SW-2R	06 Dec 2018 11:50			08 Dec 2018 00:43	1
HS18120430-03	SW-3R	06 Dec 2018 11:55			09 Dec 2018 01:08	1
HS18120430-04	SW-4R	06 Dec 2018 12:00			09 Dec 2018 01:34	1
HS18120430-05	SW-5R	06 Dec 2018 12:05			09 Dec 2018 02:00	1
HS18120430-06	SW-8R	06 Dec 2018 12:10			09 Dec 2018 02:25	1
HS18120430-07	SW-7R	06 Dec 2018 12:15			09 Dec 2018 02:51	1
HS18120430-08	SW-9R	06 Dec 2018 12:20			09 Dec 2018 04:08	1
HS18120430-09	S-1R 3'	06 Dec 2018 12:40			09 Dec 2018 04:33	1
HS18120430-10	S-2R 3'	06 Dec 2018 12:45			09 Dec 2018 04:59	1
HS18120430-11	S-3R 3'	06 Dec 2018 13:50			09 Dec 2018 05:24	1
HS18120430-12	S-7R 3'	06 Dec 2018 13:55			09 Dec 2018 05:50	1
HS18120430-13	SW-11	06 Dec 2018 14:00			09 Dec 2018 06:16	1
HS18120430-14	SW-12	06 Dec 2018 14:05			09 Dec 2018 06:41	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

QC BATCH REPORT

Batch ID: 135375 **Instrument: FID-7** **Method: SW8015M**

MBLK Sample ID: **MBLK-135375** Units: **mg/Kg** Analysis Date: **10-Dec-2018 13:31**
Client ID: Run ID: **FID-7_328983** SeqNo: **4858595** PrepDate: **10-Dec-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	*2.34*	*0.10*	*3.33*	*0*	*70.3*	*70 - 130*				

LCS Sample ID: **LCS-135375** Units: **mg/Kg** Analysis Date: **10-Dec-2018 13:55**
Client ID: Run ID: **FID-7_328983** SeqNo: **4858596** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	32.95	1.7	33.33	0	98.9	70 - 130				
TPH (Motor Oil Range)	35.46	3.4	33.33	0	106	70 - 130				
Surr: 2-Fluorobiphenyl	*3.045*	*0.10*	*3.33*	*0*	*91.5*	*70 - 130*				

MS Sample ID: **HS18120430-01MS** Units: **mg/Kg** Analysis Date: **10-Dec-2018 14:43**
Client ID: **SW-1R** Run ID: **FID-7_328983** SeqNo: **4858598** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	39.49	1.7	33.3	0.03893	118	70 - 130				
TPH (Motor Oil Range)	38.86	3.4	33.3	0.2049	116	70 - 130				
Surr: 2-Fluorobiphenyl	*3.424*	*0.10*	*3.327*	*0*	*103*	*60 - 129*				

MSD Sample ID: **HS18120430-01MSD** Units: **mg/Kg** Analysis Date: **10-Dec-2018 15:07**
Client ID: **SW-1R** Run ID: **FID-7_328983** SeqNo: **4858599** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	32.4	1.7	33.27	0.03893	97.2	70 - 130	39.49	19.7	30	
TPH (Motor Oil Range)	33.05	3.4	33.27	0.2049	98.7	70 - 130	38.86	16.2	30	
Surr: 2-Fluorobiphenyl	*2.596*	*0.10*	*3.324*	*0*	*78.1*	*60 - 129*	*3.424*	*27.5*	*30*	

The following samples were analyzed in this batch:

HS18120430-01	HS18120430-02	HS18120430-03	HS18120430-04
HS18120430-05	HS18120430-06	HS18120430-07	HS18120430-08
HS18120430-09	HS18120430-10	HS18120430-11	HS18120430-12
HS18120430-13	HS18120430-14		

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

QC BATCH REPORT

Batch ID: R328859 **Instrument: FID-14** **Method: SW8015**

MBLK Sample ID: **MBLK-181208** Units: **mg/Kg** Analysis Date: **08-Dec-2018 15:54**
Client ID: Run ID: **FID-14_328859** SeqNo: **4855654** 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	*0.09477*	*0.0050*	*0.1*	*0*	*94.8*	*75 - 121*				

LCS Sample ID: **GLCS-181208** Units: **mg/Kg** Analysis Date: **08-Dec-2018 15:22**
Client ID: Run ID: **FID-14_328859** SeqNo: **4855652** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8745	0.050	1	0	87.5	72 - 121				
Surr: 4-Bromofluorobenzene	*0.1029*	*0.0050*	*0.1*	*0*	*103*	*75 - 121*				

LCSD Sample ID: **GLCSD-181208** Units: **mg/Kg** Analysis Date: **08-Dec-2018 15:38**
Client ID: Run ID: **FID-14_328859** SeqNo: **4855653** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8546	0.050	1	0	85.5	70 - 121	0.8745	2.3	30	
Surr: 4-Bromofluorobenzene	*0.1012*	*0.0050*	*0.1*	*0*	*101*	*75 - 121*	*0.1029*	*1.62*	*30*	

MS Sample ID: **HS18120430-14MS** Units: **mg/Kg** Analysis Date: **08-Dec-2018 21:02**
Client ID: **SW-12** Run ID: **FID-14_328859** SeqNo: **4855671** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9025	0.050	0.99	0.4693	43.8	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.01399*	*0.0050*	*0.099*	*0*	*14.1*	*70 - 123*				S

MSD Sample ID: **HS18120430-14MSD** Units: **mg/Kg** Analysis Date: **08-Dec-2018 21:18**
Client ID: **SW-12** Run ID: **FID-14_328859** SeqNo: **4855672** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.5383	0.049	0.98	0.4693	7.05	70 - 130	0.9025	50.5	30	SR
Surr: 4-Bromofluorobenzene	*0.01833*	*0.0049*	*0.098*	*0*	*18.7*	*70 - 123*	*0.01399*	*26.8*	*30*	S

The following samples were analyzed in this batch:

HS18120430-01	HS18120430-02	HS18120430-03	HS18120430-04
HS18120430-05	HS18120430-06	HS18120430-07	HS18120430-08
HS18120430-09	HS18120430-10	HS18120430-11	HS18120430-12
HS18120430-13	HS18120430-14		

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

QC BATCH REPORT

Batch ID: R328873 **Instrument: BTEX1** **Method: SW8021B**

MBLK Sample ID: **MBLK-181208** Units: **ug/Kg** Analysis Date: **08-Dec-2018 23:52**
Client ID: Run ID: **BTEX1_328873** SeqNo: **4855959** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
m,p-Xylene	ND	2.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.0								
Surr: 4-Bromofluorobenzene	*33.01*	*0*	*30*	*0*	*110*	*75 - 130*				
Surr: Trifluorotoluene	*36.81*	*0*	*30*	*0*	*123*	*70 - 130*				

LCS Sample ID: **LCS-181208** Units: **ug/Kg** Analysis Date: **08-Dec-2018 23:00**
Client ID: Run ID: **BTEX1_328873** SeqNo: **4855957** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.81	1.0	20	0	99.0	82 - 130				
m,p-Xylene	39.77	2.0	40	0	99.4	83 - 130				
o-Xylene	19.63	1.0	20	0	98.2	83 - 130				
Toluene	19.88	1.0	20	0	99.4	85 - 130				
Ethylbenzene	19.89	1.0	20	0	99.4	81 - 130				
Xylenes, Total	59.4	1.0	60	0	99.0	83 - 130				
Surr: 4-Bromofluorobenzene	*30.2*	*0*	*30*	*0*	*101*	*75 - 130*				
Surr: Trifluorotoluene	*28.92*	*0*	*30*	*0*	*96.4*	*70 - 130*				

LCSD Sample ID: **LCSD-181208** Units: **ug/Kg** Analysis Date: **08-Dec-2018 23:26**
Client ID: Run ID: **BTEX1_328873** SeqNo: **4855958** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.74	1.0	20	0	98.7	82 - 130	19.81	0.36	30	
m,p-Xylene	40	2.0	40	0	100.0	83 - 130	39.77	0.588	30	
o-Xylene	19.85	1.0	20	0	99.3	83 - 130	19.63	1.11	30	
Toluene	19.9	1.0	20	0	99.5	85 - 130	19.88	0.119	30	
Ethylbenzene	20.08	1.0	20	0	100	81 - 130	19.89	0.966	30	
Xylenes, Total	59.85	1.0	60	0	99.8	83 - 130	59.4	0.761	30	
Surr: 4-Bromofluorobenzene	*30.53*	*0*	*30*	*0*	*102*	*75 - 130*	*30.2*	*1.09*	*30*	
Surr: Trifluorotoluene	*28.89*	*0*	*30*	*0*	*96.3*	*70 - 130*	*28.92*	*0.0723*	*30*	

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

QC BATCH REPORT

Batch ID: R328873 **Instrument: BTEX1** **Method: SW8021B**

MS Sample ID: **HS18120430-14MS** Units: **ug/Kg** Analysis Date: **09-Dec-2018 07:07**
Client ID: **SW-12** Run ID: **BTEX1_328873** SeqNo: **4855974** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	124.9	4.4	88.4	0	141	70 - 130				S
m,p-Xylene	180.4	8.8	176.8	0	102	70 - 130				
o-Xylene	95.22	4.4	88.4	0	108	70 - 130				
Toluene	116.8	4.4	88.4	0	132	70 - 130				S
Ethylbenzene	94.33	4.4	88.4	0	107	70 - 130				
Xylenes, Total	275.6	4.4	265.2	0	104	70 - 130				
Surr: 4-Bromofluorobenzene	*147.8*	*0*	*132.6*	*0*	*111*	*70 - 130*				
Surr: Trifluorotoluene	*158.6*	*0*	*132.6*	*0*	*120*	*70 - 130*				

MSD Sample ID: **HS18120430-14MSD** Units: **ug/Kg** Analysis Date: **09-Dec-2018 07:32**
Client ID: **SW-12** Run ID: **BTEX1_328873** SeqNo: **4855975** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	135.4	4.7	94.4	0	143	70 - 130	124.9	8.11	30	S
m,p-Xylene	183.1	9.4	188.8	0	97.0	70 - 130	180.4	1.46	30	
o-Xylene	98.12	4.7	94.4	0	104	70 - 130	95.22	3	30	
Toluene	124.3	4.7	94.4	0	132	70 - 130	116.8	6.18	30	S
Ethylbenzene	96.92	4.7	94.4	0	103	70 - 130	94.33	2.71	30	
Xylenes, Total	281.2	4.7	283.2	0	99.3	70 - 130	275.6	1.99	30	
Surr: 4-Bromofluorobenzene	*153.1*	*0*	*141.6*	*0*	*108*	*70 - 130*	*147.8*	*3.5*	*30*	
Surr: Trifluorotoluene	*165.5*	*0*	*141.6*	*0*	*117*	*70 - 130*	*158.6*	*4.24*	*30*	

The following samples were analyzed in this batch:

HS18120430-01	HS18120430-02	HS18120430-03	HS18120430-04
HS18120430-05	HS18120430-06	HS18120430-07	HS18120430-08
HS18120430-09	HS18120430-10	HS18120430-11	HS18120430-12
HS18120430-13	HS18120430-14		

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

QC BATCH REPORT

Batch ID: 135410 **Instrument: ICS2100** **Method: E300**

MBLK Sample ID: **MBLK-135410** Units: **mg/Kg** Analysis Date: **11-Dec-2018 00:49**
Client ID: Run ID: **ICS2100_328976** SeqNo: **4858378** PrepDate: **10-Dec-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-135410** Units: **mg/Kg** Analysis Date: **11-Dec-2018 01:03**
Client ID: Run ID: **ICS2100_328976** SeqNo: **4858379** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	204.7	5.00	200	0	102	90 - 110				

LCSD Sample ID: **LCSD-135410** Units: **mg/Kg** Analysis Date: **11-Dec-2018 01:18**
Client ID: Run ID: **ICS2100_328976** SeqNo: **4858380** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	201.4	5.00	200	0	101	90 - 110	204.7	1.61	20	

MS Sample ID: **HS18120430-14MS** Units: **mg/Kg** Analysis Date: **11-Dec-2018 05:40**
Client ID: **SW-12** Run ID: **ICS2100_328976** SeqNo: **4858398** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	184.7	4.96	99.17	91.77	93.7	75 - 125				

MS Sample ID: **HS18120430-01MS** Units: **mg/Kg** Analysis Date: **11-Dec-2018 01:47**
Client ID: **SW-1R** Run ID: **ICS2100_328976** SeqNo: **4858382** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	95.84	4.99	99.74	2.115	94.0	75 - 125				

MSD Sample ID: **HS18120430-14MSD** Units: **mg/Kg** Analysis Date: **11-Dec-2018 05:54**
Client ID: **SW-12** Run ID: **ICS2100_328976** SeqNo: **4858399** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	189.5	4.98	99.56	91.77	98.2	75 - 125	184.7	2.59	20	

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: HS18120430

QC BATCH REPORT

Batch ID: 135410 **Instrument: ICS2100** **Method: E300**

MSD Sample ID: **HS18120430-01MSD** Units: **mg/Kg** Analysis Date: **11-Dec-2018 02:02**
Client ID: **SW-1R** Run ID: **ICS2100_328976** SeqNo: **4858383** PrepDate: **10-Dec-2018** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	98.49	5.00	99.98	2.115	96.4	75 - 125	95.84	2.73	20	

The following samples were analyzed in this batch:

HS18120430-01	HS18120430-02	HS18120430-03	HS18120430-04
HS18120430-05	HS18120430-06	HS18120430-07	HS18120430-08
HS18120430-09	HS18120430-10	HS18120430-11	HS18120430-12
HS18120430-13	HS18120430-14		

RIGHT SOLUTIONS | RIGHT PARTNER

Client: WSP Environment & Energy
Project: W Lovington
WorkOrder: **HS18120430**

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

RIGHT SOLUTIONS | RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
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	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Client Name: WSP Dallas
Work Order: HS18120430
Date/Time Received: **08-Dec-2018 11:00**
Received by: **PJM**

Checklist completed by: *Raegen Giga* 10-Dec-2018
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 ☑
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):	0.6c/0.9c uc/c	IR 25	
Cooler(s)/Kit(s):	Red		
Date/Time sample(s) sent to storage:	12/08/2018 11:20		
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:

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Chain of Custody Forr

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COC ID: 142347

HS18120430

WSP Environment & Energy
W Lovington 31401117.008

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	W Lovington
Work Order		Project Number	31401117.008
Company Name	WSP	Bill To Company	
Send Report To	Matthew Boyle	Invoice Attn	
Address	2777 N Stemmons Suite 1600	Address	
City/State/Zip	Dallas TX	City/State/Zip	
Phone	817 713 0262	Phone	
Fax		Fax	
e-Mail Address	Matthew.Boyle@wsp.com	e-Mail Address	

A	TPH GRO
B	TPH DRO/ORO
C	BTEX 8021
D	Chlorides
E	
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SW-1R	12-6-18	11:45	Soil	Ice	1	/	/	/	/							
2	SW-2R		11:50			1											
3	SW-3R		11:55			1											
4	SW-4R		12:00			1											
5	SW-5R		12:05														
6	SW-8R		12:10														
7	SW-7R		12:15														
8	SW-9R		12:20														
9	S-1R 3'		12:40														
10	S-2R 3'		12:45														

Sampler(s) Please Print & Sign: Matthew 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: 12-11-18

Relinquished by: Matthew Boyle	Date: 12-6-18	Time: 8:45	Received by:	
Relinquished by:	Date:	Time:	Received by (Laboratory):	12/8/18 11:00
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes:

Cooler ID	Cooler Temp
Rn	0.6°
	-1.2°
	c/f 0.3°

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.

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Chain of Custody Form

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COC ID: 142346

HS18120430

WSP Environment & Energy
W Lovington 31401117.008

, WV

Customer Information		Project Information		ALS Project Manager:
Purchase Order		Project Name	W LOVINGTON	
Work Order		Project Number	31401117.008	
Company Name	WSP	Bill To Company		
Send Report To	Matthew Boyle	Invoice Attn		
Address	2777 N STEMMONS SUITE 1600	Address		
City/State/Zip	DALLAS TX	City/State/Zip		
Phone	8177150767	Phone		
Fax		Fax		
e-Mail Address	~~Settle~~	e-Mail Address		

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-3R 31	12-6-18	1:50	Soil	ICE	1	✓	✓	✓	✓							
2	S-2R 31		1:55			1	✓	✓	✓	✓							
3	SW-11		2:00			1	✓	✓	✓	✓							
4	SW-12		2:05			1	✓	✓	✓	✓							
5																	
6																	
7																	
8																	
9																	
10																	

A: TPH GRO
B: TPH PRO/DRO
C: BTEX 8021
D: Chlorides

Sampler(s) Please Print & Sign: Matthew 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: 12-11-18

Relinquished by:	Date:	Time:	Received by:	Notes:	
Matthew Boyle	12-6-18	8:45			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp
			P.M. 12/8/18 11:00		
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

QC Package: (Check One Box Below)
☐ Level II Std QC
☐ Level III Std QC/Raw Date
☐ 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

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