May 31, 2017

Ms. Olivia Yu
Environmental Specialist
NMOCD, District 1
1625 N. French Drive
Hobbs, New Mexico 88240

INFORMATION ONLY

Re: Angell #1 Tank Battery (IRP #1849) - Release Characterization Report

Ms. Yu,

Pike Energy Services, LLC (Pike) conducted release characterization (delineation) sampling activities at the Angell #1 Tank Battery on April 26 and 27, 2017.

Background

A reported 20 barrels of oil was released as the result of a tank battery overflow that occurred on April 22, 2008. The release was reported to the New Mexico Oil Conservation Division (OCD) using *Form C-141* for *Release Notification and Corrective Action*, by BC Operating (BC) on April 23, 2008. According to the C-141, the release was contained inside the fire wall of the tank battery and 18 of the 20 barrels released were recovered with a vacuum truck. Vertical delineation of TPH and Chloride was requested by NMCOD with the final C-141. A copy of the initial report Form C-141 is provided in **Attachment A.**

A site visit was conducted by personnel from BC, OCD and Pike on March 22, 2017 to observe the current site conditions. Observations made during that visit include: historical staining inside the fire wall, an area of fresh caliche covering stained soil around the circulation pump but inside the firewall, and an area of stressed vegetation off the northwest corner of the well pad from a presumed spray from the oil water separator.

The OCD requested that BC characterize the release according to the *Conditions of Approval (COA)* issued by the Environmental Bureau Chief, Jim Griswold in January 2017. A Work Plan for Release Characterization was submitted to and approved by the OCD on April 13, 2017.

Release Characterization

1. ***Pasture Surface Samples –*** In addition to horizontal and vertical delineation, 3 surface samples (PS-1, PS-2 and PS-3) were collected in the pasture northwest of the well pad where OCD personnel observed possible stressed vegetation. It was determined in during the site visit on March 22, 2017 that field screening would be sufficient for these samples. A site map with sample locations is provided in **Figure 1**.

   Samples collected in the pasture were field screened for volatile organic compounds (VOCs) using a photo-ionization detector (PID) and soil samples were collected for laboratory analysis of chloride. None of the samples reported contaminants of concern (COCs) above remedial action levels (RALs). A summary of field screening and laboratory results is provided in **Table 1** with a copy of the full laboratory reports in **Attachment B**.

2. ***Tank Battery Delineation Sampling*** – Samples were collected at the surface and advanced to refusal using hand tools inside and outside of the tank battery in all locations due to the unknown location of buried utilities. Where accessible, sample locations were advanced with a direct push drilling rig from 3 feet to refusal, typically encountered at 4.5 to 5 feet below grade in all locations. Sampling to depth in the pasture on the west side of the tank battery was limited to hand tools due to access. It is important to note that the grade of the pasture is 3 to 4 feet lower than the tank battery floor in this area (WN-2 and WS-2).

    a. *Horizontal Delineation* – Soil boring locations were determined in the field using the proposed locations in the Work Plan and given proximity to equipment, buried utilities and stained soil. Each soil boring location inside the tank battery was given a corresponding soil boring location outside of the tank battery to give a representation of the lateral extents of contamination. Samples were collected at the surface (0-4 inches) and in 1 foot intervals to the termination of the boring for field screening headspace readings and for laboratory analysis. Samples were collected for analysis typically at the surface where staining was most prominent and at the bottom of the investigated depth.

    b. *Vertical Delineation* – A single soil boring (V1) was advanced inside the firewall north of the production tanks in the approximate center of the tank batter utilizing a Hollow Stem Auger (HSA) drilling rig. Samples were collected at the surface and 1 foot intervals to 3 feet by hand, then using a stainless-steel split spoon to the bottom of assumed contamination (4-5 feet below grade according to field screening data). Returns in the 3 – 5-foot split spoon sample were poor due to the short run of 2 feet. As a result, V1-4 was assumed to be the 5-foot (4-5 feet) interval at the clay/rock interface and presumed to be below contamination. The boring was then advanced in five foot intervals with samples collected at 10, 15 and 20 feet below grade. Returns in these intervals were also poor 1.5 – 2.5 feet and consisted of caliche or limestone rock.

    c. *Lithology* – Lithologic descriptions from top of grade in the tank battery and on the well pad are similar. This description is from soil boring V1, the vertical soil boring : 0 to 6 inches of white gravel or light tan caliche rock/gravel; 6 to 10 inches reddish brown silty sand with small gravel; 10 inches to 4 feet dark gray (staining from 10 inches to 3 feet) to dark brown sandy clay with gravel; 4-5’ dark brown clay with fine sand and root structures, 5-15 light pink caliche or limestone rock; 16-20’ white caliche or limestone rock.

    Lithologic description in the pasture is as follows: 0-6” reddish brown silty sand; 6”-1.5’ dark brown silty clay with fine sand; refusal at 1.5’ with hand tools, rock cobbles encountered (close to the 5’ mark on the well pad).

3. ***Sampling and Analysis*** - Generally accepted soil sampling procedures and decontamination of reusable sampling equipment were employed during the sampling at this site. Soil samples were collected and homogenized in stainless steel bowls. Soil was then collection in clean laboratory supplied glass jars and bagged in Ziploc bags for headspace readings. Each sample was given a unique name, time and date, packed on ice and submitted under chain of custody via FedEx to ESC Lab Sciences in Mount Juliet, TN for analysis of: Total Petroleum Hydrocarbons (TPH (DRO/MRO)) by EPA method 8015, Benzene, Toluene, Ethylbenzene and Xylene (BTEX) and (TPH (GRO) by EPA method 8021, and Chloride by EPA method 9056.

A summary of the analytical results is presented in **Table 1.** Copies of laboratory analytical data packages are provided in **Attachment B**. Additionally, a photograph log and copy of the field logbook are provided in **Attachment C**.

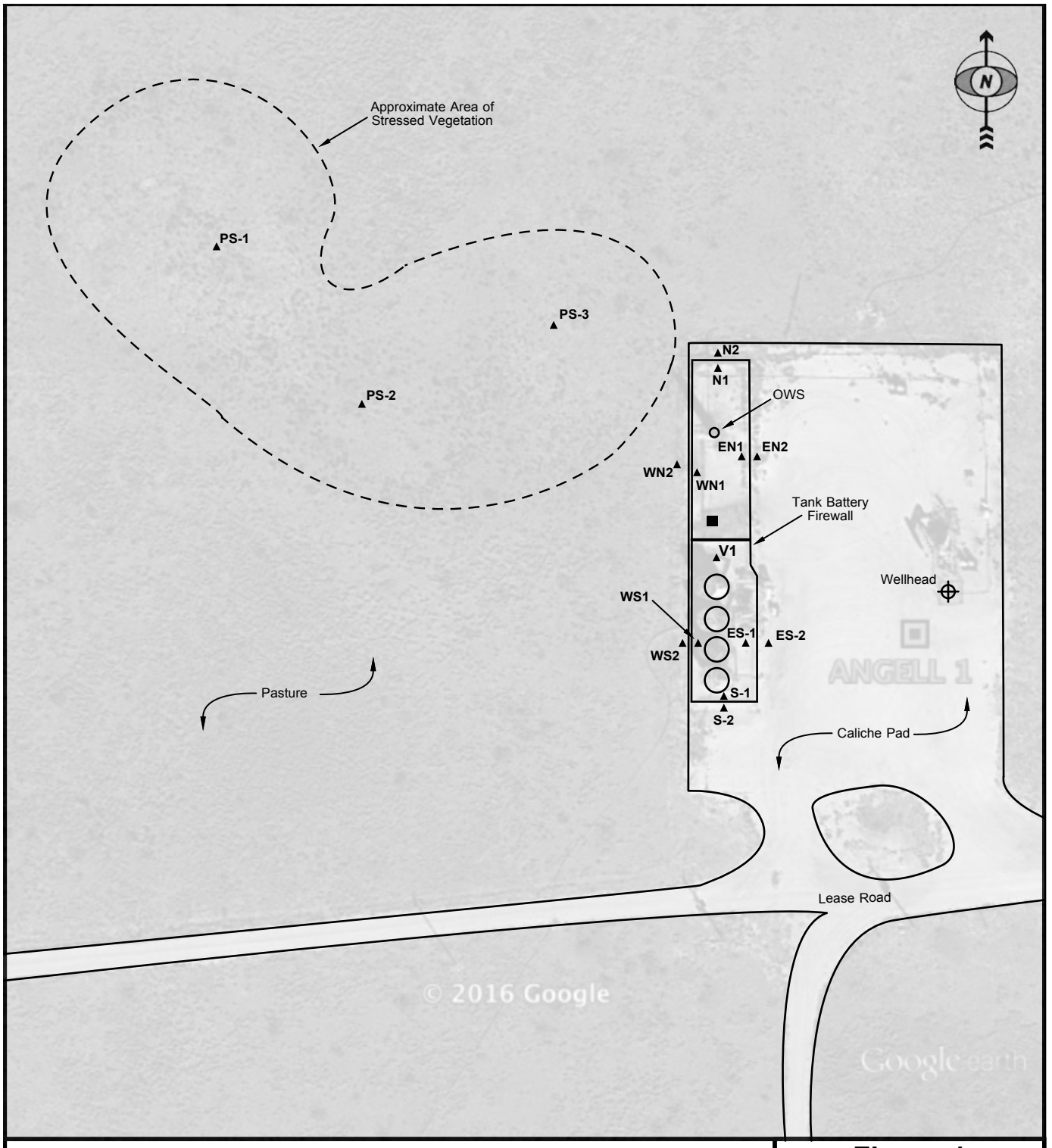
4. ***Conclusions and Recommendations*** – The presumed sprayed area off the northwest corner of the pad did not have impacts above field screening or laboratory analysis RALs. The tank battery berm wall has contained the majority of spills over time with impacts of BTEX, TPH and Chloride above the RALs along the north, northwest, southwest, south and southeast areas located inside the berm wall. TPH and chloride impacted soil in these areas are estimated to average 2 to 5 in depth although the vertical boring indicates chloride impacts above the RAL at 15 feet below surface. Impacts outside of the tank battery berm wall are limited to chloride above the RAL on the south and southeast sides and are estimated to be 4 to 5 in depth. *Additional sampling for chloride lateral of soil borings S2 and ES2 outside of the berm wall is recommend at this time.*

We appreciated your review of this report and would like to discuss BC Operating's options for closure of the site. Please call me if you have any questions, comments, or concerns at (210) 363-2431.

Respectfully Yours,

Frank Engallina

Attachments:
Figure 1
Table 1
Attachment A – C-141
Attachment B – Laboratory Reports
Attachment C - Photograph Log and Field Logbook



LEGEND

▲ Sample Locations

SCALE

0 50 100

FEET

Aerial Photo by Google Earth Pro 2/1/2017

Figure 1

Angell #1H

Sample Location Map

April 27, 2017

PIKE ENERGY SERVICES

TABLE 1
SUMMARY OF FIELD SCREENING AND LABORATORY ANALYTICAL RESULTS

BC Operating - Angell #1
Lea County, New Mexico

Sample ID[1]	Depth	Date Collected	PID (ppm)	TPH (mg/kg)	BTEX (mg/kg)	Chloride (mg/kg)
PS1	0-4 in.	4/26/17	0.0	NA	NA	0
PS2	0-4 in.	4/26/17	0.0	NA	NA	0
PS3	0-4 in.	4/26/17	0.0	NA	NA	0
N1-0	0-4 in.	4/27/17	3.4	**30,900**	<1	41
N1-1	1 ft.	4/27/17	2.7	NA	NA	NA
N1-2	2 ft.	4/27/17	**143.0**	NA	NA	NA
N1-3	3 ft.	4/27/17	94.3	NA	NA	NA
N1-4	4 ft.	4/27/17	10.0	NA	NA	NA
N1-5	5 ft.	4/27/17	43.0	**3,938**	<1	74
N2-0	0-4 in.	4/26/17	5.4	60.67	<1	44
N2-1	1 ft.	4/26/17	0.0	NA	NA	NA
N2-2	2 ft.	4/26/17	0.0	13.36	<1	112
N2-3	3 ft.	4/27/17	0.1	17.97	ND	280
WN1-0	0-4 in.	4/27/17	**157.3**	**73,130**	968.4	516
WN1-1	1 ft.	4/27/17	**197.8**	NA	NA	NA
WN1-2	2 ft.	4/27/17	**150.1**	NA	NA	NA
WN1-3	3 ft.	4/27/17	43.5	NA	NA	NA
WN1-4	4 ft.	4/27/17	29.4	NA	NA	NA
WN1-5	5 ft.	4/27/17	4.9	16.5	<1	235
WN2-0	0-4 in.	4/26/17	0.5	250.1	<1	73
WN2-1	1 ft.	4/26/17	0.1	NA	NA	NA
WN2-1.5	1.5 ft.	4/26/17	0.0	23.3	<1	58
EN1-0	0-4 in.	4/27/17	0.0	914.05	<1	86
EN1-1	1 ft.	4/27/17	0.0	NA	NA	NA
EN1-2	2 ft.	4/27/17	0.0	NA	NA	NA
EN1-3	3 ft.	4/27/17	0.0	NA	NA	NA
EN1-4	4 ft.	4/27/17	0.3	NA	NA	NA
EN1-5	5 ft.	4/27/17	0.1	114.15	<1	52
EN2-0	0-4 in.	4/27/17	0.1	26.76	<1	55
EN2-1	1	4/27/17	0.1	NA	NA	NA
EN2-2	2 ft.	4/27/17	0.1	NA	NA	NA
EN2-3	3 ft.	4/27/17	0.1	NA	NA	NA
EN2-4	4 ft.	4/27/17	0.1	NA	NA	NA

Sample ID[1]	Depth	Date Collected	PID (ppm)	TPH (mg/kg)	BTEX (mg/kg)	Chloride (mg/kg)
EN2-5	5 ft.	4/27/17	0.1	90.77	<1	78
WS1-0	0-4 in.	4/27/17	149.7	**31,060**	274.59	**2,720**
WS1-1	1 ft.	4/27/17	268.0	NA	NA	NA
WS1-2	2 ft.	4/27/17	88.9	NA	NA	NA
WS1-3	3 ft.	4/27/17	18.2	**6,064**	<1	**4,440**
WS2-0	0-4 in.	4/26/17	0.0	217.2	<1	652
WS2-1	1 ft.	4/26/17	0.1	25.35	<1	705
ES1-0	0-4 in.	4/27/17	0.6	**3,470**	<1	**1,050**
ES1-1	1 ft.	4/27/17	0.7	NA	NA	NA
ES1-2	2 ft.	4/27/17	0.7	NA	NA	NA
ES1-3	3 ft.	4/27/17	0.9	NA	NA	NA
ES1-4	4 ft.	4/27/17	0.6	156.5	ND	**5,610**
ES2-0	0-4 in.	4/27/17	0.7	**6,850**	<1	**11,600**
ES2-1	1 ft.	4/27/17	0.2	NA	NA	NA
ES2-2	2 ft.	4/27/17	0.3	NA	NA	NA
ES2-3	3 ft.	4/27/17	0.1	NA	NA	NA
ES2-4	4 ft.	4/27/17	0.1	NA	NA	NA
ES2-5	5 ft.	4/27/17	0.2	13.45	<1	778
S1-0	0-4 in.	4/27/17	45.0	**63,020**	487.13	489
S1-1	1 ft.	4/27/17	22.8	NA	NA	NA
S1-2	2 ft.	4/27/17	42.7	NA	NA	NA
S1-3	3 ft.	4/27/17	13.5	**4,595**	1.25	**3,430**
S2-0	0-4 in.	4/27/17	0.4	319.4	<1	**11,100**
S2-1	1 ft.	4/27/17	0.2	NA	NA	NA
S2-3	3 ft.	4/27/17	0.2	NA	NA	NA
S2-4	4 ft.	4/27/17	0.2	NA	NA	NA
S2-5	5 ft.	4/27/17	0.3	10.13	<1	**2,790**
V1-0	0-4 in.	4/27/17	**252.4**	**85,500**	**1,708.00**	994
V1-1	1 ft.	4/27/17	86.7	NA	NA	NA
V1-2	2 ft.	4/27/17	57.6	NA	NA	NA
V1-3	3 ft.	4/27/17	47.7	NA	NA	NA
V1-4	4 ft.	4/27/17	5.8	15.01	<1	**4,720**
V1-10	10 ft.	4/27/17	0.6	45.92	<1	**7,520**
V1-15	15 ft.	4/27/17	1.0	2.64	<1	**5,300**
V1-20	20 ft.	4/27/17	0.5	0.03	<1	54
		Action Level[3]	100 ppm	1,000 mg/kg	1,000 mg/kg	1,000 mg/kg

Bold Print Indicates Sample Results Above the RAL

Attachment A
C-141

XDistrict I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

X Initial Report ☐ Final Report

Name of Company BC Operating, Inc	Contact Gary Stevens
Address P O Box 50820 Midland, TX 79710	Telephone No. 432-894-7113
Facility Name Angell #1	Facility Type tank battery

Surface Owner Darr Angell	Mineral Owner	Lease No. 30-025-37902

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	11	17S	36E	660	North	660	East	Lea

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release oil	Volume of Release 20 bbls	Volume Recovered 18 bbls
Source of Release tank overflow at battery	Date and Hour of Occurrence 4/22/08	Date and Hour of Discovery 4/22/08
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? Mark Whitaker	
By Whom? Pam Botkin	Date and Hour 4/23/08 9:30 am	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
APR 28 2008
HOBBS OCD

Describe Cause of Problem and Remedial Action Taken.*

Tank overflow, recovered with vacuum truck

Describe Area Affected and Cleanup Action Taken.*

Spill was contained inside the fire wall at battery. Recovered oil, scooped up dirt, hauled off.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Pam Botkin

Printed Name: Pam Botkin

Title: Engineering Tech

E-mail Address: pbotkin@usaonline.net

Date: 04/23/08 Phone: 432-684-9696 x 216

OIL CONSERVATION DIVISION

Approved by District Supervisor: ENVIRONMENTAL

Approval Date: 4.30.08 Expiration Date: 6.30.08

Conditions of Approval:

SUBMIT FINAL C-141 W/ VERTICAL DELINEATION REPORT BY (TPH & CHLORIDE) IRP# 1849

Attached ☐

* Attach Additional Sheets If Necessary

fCOH0812731351

Attachment B
Laboratory Reports

ANALYTICAL REPORT

May 10, 2017

Pike Energy Services - San Antonio, TX

Sample Delivery Group:	L906212
Samples Received:	05/02/2017
Project Number:	BC-004
Description:	Angell #1 Delineation
Site:	ANGELL #1
Report To:	Frank Engallina 321 Pike Rd. San Antonio, TX 78209

Entire Report Reviewed By:

Chris McCord
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

PS-1 L906212-01 Solid

Collected by: Frank Engallina
Collected date/time: 04/26/17 12:00
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976198	1	05/04/17 10:43	05/04/17 10:50	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 09:50	KCF

PS-2 L906212-02 Solid

Collected by: Frank Engallina
Collected date/time: 04/26/17 12:20
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976198	1	05/04/17 10:43	05/04/17 10:50	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 09:59	KCF

PS-3 L906212-03 Solid

Collected by: Frank Engallina
Collected date/time: 04/26/17 12:35
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976198	1	05/04/17 10:43	05/04/17 10:50	KDW
Wet Chemistry by Method 9056A	WG976630	1	05/06/17 10:34	05/07/17 00:46	KCF

WS2-0 L906212-04 Solid

Collected by: Frank Engallina
Collected date/time: 04/26/17 14:30
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976198	1	05/04/17 10:43	05/04/17 10:50	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 10:26	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 00:41	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	20	05/06/17 08:48	05/06/17 21:41	ACM

WS2-1 L906212-05 Solid

Collected by: Frank Engallina
Collected date/time: 04/26/17 14:40
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976198	1	05/04/17 10:43	05/04/17 10:50	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 10:35	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 01:03	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	1	05/06/17 08:48	05/06/17 16:01	ACM

WN2-0 L906212-06 Solid

Collected by: Frank Engallina
Collected date/time: 04/26/17 15:25
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 10:44	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 01:25	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	20	05/06/17 08:48	05/06/17 21:25	ACM

WN2-1.5 L906212-07 Solid

Collected by: Frank Engallina | Collected date/time: 04/26/17 15:45 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 11:11	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 01:47	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	1	05/06/17 08:48	05/06/17 16:18	ACM

N2-0 L906212-08 Solid

Collected by: Frank Engallina | Collected date/time: 04/26/17 16:10 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 11:20	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 02:09	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	10	05/06/17 08:48	05/09/17 01:16	ACM

N2-2 L906212-09 Solid

Collected by: Frank Engallina | Collected date/time: 04/26/17 16:45 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 11:29	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 02:32	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	2	05/06/17 08:48	05/06/17 16:52	ACM

EN2-0 L906212-10 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 09:35 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 11:38	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 02:54	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	2	05/06/17 08:48	05/06/17 17:10	ACM

EN2-5 L906212-11 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 10:05 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 11:47	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 03:16	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	2	05/06/17 08:48	05/06/17 18:02	ACM

EN1-0 L906212-12 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 10:10 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 11:56	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 03:39	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	20	05/06/17 08:48	05/06/17 21:57	ACM

EN1-5 L906212-13 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 10:35
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 12:14	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 04:01	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	2	05/06/17 08:48	05/06/17 18:37	ACM

N1-0 L906212-14 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 10:45
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 12:23	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 04:23	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	200	05/06/17 08:48	05/06/17 22:30	ACM

N1-5 L906212-15 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 11:10
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976205	1	05/03/17 15:33	05/03/17 15:42	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 12:50	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 04:45	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	20	05/06/17 08:48	05/06/17 20:52	ACM

WN1-0 L906212-16 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 11:30
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976206	1	05/03/17 15:21	05/03/17 15:31	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 12:59	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1000	05/05/17 15:10	05/10/17 00:03	ACG
Volatile Organic Compounds (GC) by Method 8021	WG977118	5000	05/05/17 15:10	05/10/17 14:38	JAH
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	200	05/06/17 08:48	05/06/17 22:13	ACM

WN1-5 L906212-17 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 11:55
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976206	1	05/03/17 15:21	05/03/17 15:31	KDW
Wet Chemistry by Method 9056A	WG975920	1	05/04/17 09:51	05/05/17 13:17	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977118	1	05/05/17 15:10	05/07/17 05:30	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977049	1	05/06/17 08:48	05/06/17 17:27	ACM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.3		1	05/04/2017 10:50	WG976198

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	47.5		0.966	10.0	12.1	1	05/05/2017 09:50	WG975920

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.2		1	05/04/2017 10:50	WG976198

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	48.7		0.980	10.0	12.3	1	05/05/2017 09:59	WG975920

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.8		1	05/04/2017 10:50	WG976198

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	38.0	J3	0.822	10.0	10.3	1	05/07/2017 00:46	WG976630

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.0		1	05/04/2017 10:50	WG976198

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	652		0.819	10.0	10.3	1	05/05/2017 10:26	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000124	0.000500	0.000515	1	05/07/2017 00:41	WG977118
Toluene	0.00103	B J	0.000155	0.00500	0.00515	1	05/07/2017 00:41	WG977118
Ethylbenzene	0.000420	B J	0.000113	0.000500	0.000515	1	05/07/2017 00:41	WG977118
Total Xylene	0.00461	B	0.000474	0.00150	0.00155	1	05/07/2017 00:41	WG977118
TPH (GC/FID) Low Fraction	0.151		0.0224	0.100	0.103	1	05/07/2017 00:41	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*91.0*				*77.0-120*		*05/07/2017 00:41*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*99.5*				*75.0-128*		*05/07/2017 00:41*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		46.2	4.00	82.4	20	05/06/2017 21:41	WG977049
C20-C36 Hydrocarbons	217		14.0	4.00	82.4	20	05/06/2017 21:41	WG977049
(S) o-Terphenyl	*3.04*	J7			*18.0-148*		*05/06/2017 21:41*	WG977049

Sample Narrative:

8015M L906212-04 WG977049: Dilution due to matrix

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.0		1	05/04/2017 10:50	WG976198

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	705		0.935	10.0	11.8	1	05/05/2017 10:35	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000141	0.000500	0.000588	1	05/07/2017 01:03	WG977118
Toluene	0.000902	B J	0.000176	0.00500	0.00588	1	05/07/2017 01:03	WG977118
Ethylbenzene	0.000524	B J	0.000129	0.000500	0.000588	1	05/07/2017 01:03	WG977118
Total Xylene	0.00359	B	0.000541	0.00150	0.00176	1	05/07/2017 01:03	WG977118
TPH (GC/FID) Low Fraction	0.0916	J	0.0255	0.100	0.118	1	05/07/2017 01:03	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*90.5*				*77.0-120*		*05/07/2017 01:03*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*98.8*				*75.0-128*		*05/07/2017 01:03*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	6.24		2.63	4.00	4.70	1	05/06/2017 16:01	WG977049
C20-C36 Hydrocarbons	19.1		0.801	4.00	4.70	1	05/06/2017 16:01	WG977049
(S) o-Terphenyl	*44.8*				*18.0-148*		*05/06/2017 16:01*	WG977049

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.8		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	72.7		0.830	10.0	10.4	1	05/05/2017 10:44	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000125	0.000500	0.000522	1	05/07/2017 01:25	WG977118
Toluene	0.000642	B J	0.000157	0.00500	0.00522	1	05/07/2017 01:25	WG977118
Ethylbenzene	0.000379	B J	0.000115	0.000500	0.000522	1	05/07/2017 01:25	WG977118
Total Xylene	0.00272	B	0.000480	0.00150	0.00157	1	05/07/2017 01:25	WG977118
TPH (GC/FID) Low Fraction	0.0749	J	0.0227	0.100	0.104	1	05/07/2017 01:25	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*91.7*				*77.0-120*		*05/07/2017 01:25*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*101*				*75.0-128*		*05/07/2017 01:25*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		46.8	4.00	83.5	20	05/06/2017 21:25	WG977049
C20-C36 Hydrocarbons	250		14.2	4.00	83.5	20	05/06/2017 21:25	WG977049
(S) o-Terphenyl	*3.01*	J7			*18.0-148*		*05/06/2017 21:25*	WG977049

Sample Narrative:

8015M L906212-06 WG977049: Dilution due to matrix

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.2		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	58.2		0.892	10.0	11.2	1	05/05/2017 11:11	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000141	J	0.000135	0.000500	0.000561	1	05/07/2017 01:47	WG977118
Toluene	0.000803	B J	0.000168	0.00500	0.00561	1	05/07/2017 01:47	WG977118
Ethylbenzene	0.000308	B J	0.000123	0.000500	0.000561	1	05/07/2017 01:47	WG977118
Total Xylene	0.00222	B	0.000516	0.00150	0.00168	1	05/07/2017 01:47	WG977118
TPH (GC/FID) Low Fraction	0.0734	J	0.0243	0.100	0.112	1	05/07/2017 01:47	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*90.1*				*77.0-120*		*05/07/2017 01:47*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*98.4*				*75.0-128*		*05/07/2017 01:47*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	3.53	J	2.51	4.00	4.49	1	05/06/2017 16:18	WG977049
C20-C36 Hydrocarbons	19.7		0.764	4.00	4.49	1	05/06/2017 16:18	WG977049
(S) o-Terphenyl	*47.3*				*18.0-148*		*05/06/2017 16:18*	WG977049

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.6		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	43.7		0.918	10.0	11.5	1	05/05/2017 11:20	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000139	0.000500	0.000577	1	05/07/2017 02:09	WG977118
Toluene	0.000569	B J	0.000173	0.00500	0.00577	1	05/07/2017 02:09	WG977118
Ethylbenzene	0.000557	B J	0.000127	0.000500	0.000577	1	05/07/2017 02:09	WG977118
Total Xylene	0.00175	B	0.000531	0.00150	0.00173	1	05/07/2017 02:09	WG977118
TPH (GC/FID) Low Fraction	0.0699	J	0.0251	0.100	0.115	1	05/07/2017 02:09	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*91.7*				*77.0-120*		*05/07/2017 02:09*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*100*				*75.0-128*		*05/07/2017 02:09*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		25.9	4.00	46.2	10	05/09/2017 01:16	WG977049
C20-C36 Hydrocarbons	60.6		7.86	4.00	46.2	10	05/09/2017 01:16	WG977049
(S) o-Terphenyl	*90.9*				*18.0-148*		*05/09/2017 01:16*	WG977049

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.8		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	112		0.866	10.0	10.9	1	05/05/2017 11:29	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000131	0.000500	0.000545	1	05/07/2017 02:32	WG977118
Toluene	0.000267	B J	0.000163	0.00500	0.00545	1	05/07/2017 02:32	WG977118
Ethylbenzene	0.000158	B J	0.000120	0.000500	0.000545	1	05/07/2017 02:32	WG977118
Total Xylene	0.00182	B	0.000501	0.00150	0.00163	1	05/07/2017 02:32	WG977118
TPH (GC/FID) Low Fraction	0.0620	J	0.0236	0.100	0.109	1	05/07/2017 02:32	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*90.2*				*77.0-120*		*05/07/2017 02:32*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*98.8*				*75.0-128*		*05/07/2017 02:32*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		4.88	4.00	8.71	2	05/06/2017 16:52	WG977049
C20-C36 Hydrocarbons	13.3		1.48	4.00	8.71	2	05/06/2017 16:52	WG977049
(S) o-Terphenyl	*70.6*				*18.0-148*		*05/06/2017 16:52*	WG977049

Sample Narrative:

8015M L906212-09 WG977049: Dilution due to matrix

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.3		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	54.6		0.900	10.0	11.3	1	05/05/2017 11:38	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000136	0.000500	0.000566	1	05/07/2017 02:54	WG977118
Toluene	0.000219	B J	0.000170	0.00500	0.00566	1	05/07/2017 02:54	WG977118
Ethylbenzene	0.000171	B J	0.000125	0.000500	0.000566	1	05/07/2017 02:54	WG977118
Total Xylene	0.000797	B J	0.000521	0.00150	0.00170	1	05/07/2017 02:54	WG977118
TPH (GC/FID) Low Fraction	0.0596	J	0.0246	0.100	0.113	1	05/07/2017 02:54	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*91.5*				*77.0-120*		*05/07/2017 02:54*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*99.6*				*75.0-128*		*05/07/2017 02:54*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		5.07	4.00	9.06	2	05/06/2017 17:10	WG977049
C20-C36 Hydrocarbons	26.7		1.54	4.00	9.06	2	05/06/2017 17:10	WG977049
(S) o-Terphenyl	*66.8*				*18.0-148*		*05/06/2017 17:10*	WG977049

Sample Narrative:

8015M L906212-10 WG977049: Dilution due to matrix

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.3		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	77.9		0.922	10.0	11.6	1	05/05/2017 11:47	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000139	0.000500	0.000580	1	05/07/2017 03:16	WG977118
Toluene	0.000285	B J	0.000174	0.00500	0.00580	1	05/07/2017 03:16	WG977118
Ethylbenzene	0.000204	B J	0.000128	0.000500	0.000580	1	05/07/2017 03:16	WG977118
Total Xylene	0.000809	B J	0.000533	0.00150	0.00174	1	05/07/2017 03:16	WG977118
TPH (GC/FID) Low Fraction	0.0674	J	0.0252	0.100	0.116	1	05/07/2017 03:16	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*91.4*				*77.0-120*		*05/07/2017 03:16*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*99.4*				*75.0-128*		*05/07/2017 03:16*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		5.19	4.00	9.27	2	05/06/2017 18:02	WG977049
C20-C36 Hydrocarbons	90.7		1.58	4.00	9.27	2	05/06/2017 18:02	WG977049
(S) o-Terphenyl	*55.8*				*18.0-148*		*05/06/2017 18:02*	WG977049

Sample Narrative:

8015M L906212-11 WG977049: Dilution due to matrix

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.8		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	86.0		0.886	10.0	11.1	1	05/05/2017 11:56	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000134	0.000500	0.000557	1	05/07/2017 03:39	WG977118
Toluene	0.000221	B J	0.000167	0.00500	0.00557	1	05/07/2017 03:39	WG977118
Ethylbenzene	0.000133	B J	0.000123	0.000500	0.000557	1	05/07/2017 03:39	WG977118
Total Xylene	0.000747	B J	0.000512	0.00150	0.00167	1	05/07/2017 03:39	WG977118
TPH (GC/FID) Low Fraction	0.0510	J	0.0242	0.100	0.111	1	05/07/2017 03:39	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*91.4*				*77.0-120*		*05/07/2017 03:39*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*99.6*				*75.0-128*		*05/07/2017 03:39*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	234		49.9	4.00	89.1	20	05/06/2017 21:57	WG977049
C20-C36 Hydrocarbons	680		15.2	4.00	89.1	20	05/06/2017 21:57	WG977049
(S) o-Terphenyl	*7.64*	J7			*18.0-148*		*05/06/2017 21:57*	WG977049

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.0		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	52.2		0.903	10.0	11.4	1	05/05/2017 12:14	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000136	0.000500	0.000568	1	05/07/2017 04:01	WG977118
Toluene	0.000328	B J	0.000170	0.00500	0.00568	1	05/07/2017 04:01	WG977118
Ethylbenzene	0.000364	B J	0.000125	0.000500	0.000568	1	05/07/2017 04:01	WG977118
Total Xylene	0.000916	B J	0.000523	0.00150	0.00170	1	05/07/2017 04:01	WG977118
TPH (GC/FID) Low Fraction	0.0505	J	0.0247	0.100	0.114	1	05/07/2017 04:01	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*90.7*				*77.0-120*		*05/07/2017 04:01*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*99.0*				*75.0-128*		*05/07/2017 04:01*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	23.0		5.09	4.00	9.09	2	05/06/2017 18:37	WG977049
C20-C36 Hydrocarbons	91.1		1.55	4.00	9.09	2	05/06/2017 18:37	WG977049
(S) o-Terphenyl	*58.4*				*18.0-148*		*05/06/2017 18:37*	WG977049

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.8		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	40.9		0.830	10.0	10.4	1	05/05/2017 12:23	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000248	J	0.000125	0.000500	0.000522	1	05/07/2017 04:23	WG977118
Toluene	0.00147	B J	0.000157	0.00500	0.00522	1	05/07/2017 04:23	WG977118
Ethylbenzene	0.00231		0.000115	0.000500	0.000522	1	05/07/2017 04:23	WG977118
Total Xylene	0.00945	B	0.000480	0.00150	0.00157	1	05/07/2017 04:23	WG977118
TPH (GC/FID) Low Fraction	0.296		0.0227	0.100	0.104	1	05/07/2017 04:23	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*91.6*				*77.0-120*		*05/07/2017 04:23*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*98.9*				*75.0-128*		*05/07/2017 04:23*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	14000		468	4.00	835	200	05/06/2017 22:30	WG977049
C20-C36 Hydrocarbons	16900		142	4.00	835	200	05/06/2017 22:30	WG977049
(S) o-Terphenyl	*27.9*	J7			*18.0-148*		*05/06/2017 22:30*	WG977049

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.2		1	05/03/2017 15:42	WG976205

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	73.7		0.901	10.0	11.3	1	05/05/2017 12:50	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000136	0.000500	0.000567	1	05/07/2017 04:45	WG977118
Toluene	U		0.000170	0.00500	0.00567	1	05/07/2017 04:45	WG977118
Ethylbenzene	0.0155		0.000125	0.000500	0.000567	1	05/07/2017 04:45	WG977118
Total Xylene	0.212		0.000521	0.00150	0.00170	1	05/07/2017 04:45	WG977118
TPH (GC/FID) Low Fraction	8.16		0.0246	0.100	0.113	1	05/07/2017 04:45	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*90.2*				*77.0-120*		*05/07/2017 04:45*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*98.6*				*75.0-128*		*05/07/2017 04:45*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	2140		50.8	4.00	90.7	20	05/06/2017 20:52	WG977049
C20-C36 Hydrocarbons	1790		15.4	4.00	90.7	20	05/06/2017 20:52	WG977049
(S) o-Terphenyl	*35.2*	J7			*18.0-148*		*05/06/2017 20:52*	WG977049

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.3		1	05/03/2017 15:31	WG976206

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	516		0.890	10.0	11.2	1	05/05/2017 12:59	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	22.4		0.134	0.000500	0.560	1000	05/10/2017 00:03	WG977118
Toluene	189		0.168	0.00500	5.60	1000	05/10/2017 00:03	WG977118
Ethylbenzene	462		0.616	0.000500	2.80	5000	05/10/2017 14:38	WG977118
Total Xylene	295		0.515	0.00150	1.68	1000	05/10/2017 00:03	WG977118
TPH (GC/FID) Low Fraction	6730		24.3	0.100	112	1000	05/10/2017 00:03	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*93.2*				*77.0-120*		*05/10/2017 00:03*	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*96.9*				*77.0-120*		*05/10/2017 14:38*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*92.1*				*75.0-128*		*05/10/2017 00:03*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*101*				*75.0-128*		*05/10/2017 14:38*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	38000		502	4.00	896	200	05/06/2017 22:13	WG977049
C20-C36 Hydrocarbons	28400		152	4.00	896	200	05/06/2017 22:13	WG977049
(S) o-Terphenyl	*53.3*	J7			*18.0-148*		*05/06/2017 22:13*	WG977049

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	05/03/2017 15:31	WG976206

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	235		0.867	10.0	10.9	1	05/05/2017 13:17	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.00566		0.000131	0.000500	0.000545	1	05/07/2017 05:30	WG977118
Toluene	0.0413		0.000164	0.00500	0.00545	1	05/07/2017 05:30	WG977118
Ethylbenzene	0.0871		0.000120	0.000500	0.000545	1	05/07/2017 05:30	WG977118
Total Xylene	0.0722		0.000502	0.00150	0.00164	1	05/07/2017 05:30	WG977118
TPH (GC/FID) Low Fraction	2.19		0.0237	0.100	0.109	1	05/07/2017 05:30	WG977118
(S) a,a,a-Trifluorotoluene(FID)	*89.9*				*77.0-120*		*05/07/2017 05:30*	WG977118
(S) a,a,a-Trifluorotoluene(PID)	*99.3*				*75.0-128*		*05/07/2017 05:30*	WG977118

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	3.01	J	2.44	4.00	4.36	1	05/06/2017 17:27	WG977049
C20-C36 Hydrocarbons	11.3		0.743	4.00	4.36	1	05/06/2017 17:27	WG977049
(S) o-Terphenyl	*69.2*				*18.0-148*		*05/06/2017 17:27*	WG977049

Method Blank (MB)

(MB) R3215759-1 05/04/17 10:50

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000400			

L906199-03 Original Sample (OS) • Duplicate (DUP)

(OS) L906199-03 05/04/17 10:50 • (DUP) R3215759-3 05/04/17 10:50

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.9	87.1	1	0.192		5

Laboratory Control Sample (LCS)

(LCS) R3215759-2 05/04/17 10:50

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3215450-1 05/03/17 15:42

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L906212-08 Original Sample (OS) • Duplicate (DUP)

(OS) L906212-08 05/03/17 15:42 • (DUP) R3215450-3 05/03/17 15:42

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.6	86.2	1	0.483		5

Laboratory Control Sample (LCS)

(LCS) R3215450-2 05/03/17 15:42

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3215449-1 05/03/17 15:31

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000600			

L906219-03 Original Sample (OS) • Duplicate (DUP)

(OS) L906219-03 05/03/17 15:31 • (DUP) R3215449-3 05/03/17 15:31

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	77.4	77.5	1	0.132		5

Laboratory Control Sample (LCS)

(LCS) R3215449-2 05/03/17 15:31

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3215942-2 05/05/17 09:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L906212-12 Original Sample (OS) • Duplicate (DUP)

(OS) L906212-12 05/05/17 11:56 • (DUP) R3215942-6 05/05/17 12:05

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	86.0	86.2	1	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3215942-3 05/05/17 09:14 • (LCSD) R3215942-4 05/05/17 09:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	187	188	93	94	80-120			0	15

L906212-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L906212-06 05/05/17 10:44 • (MS) R3215942-7 05/05/17 13:53 • (MSD) R3215942-8 05/05/17 14:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	522	72.7	606	621	102	105	1	80-120			2	15

Method Blank (MB)

(MB) R3216179-1 05/06/17 12:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L906122-01 Original Sample (OS) • Duplicate (DUP)

(OS) L906122-01 05/06/17 15:14 • (DUP) R3216179-4 05/06/17 15:35

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1280	2540	1	66	J3	15

L906212-03 Original Sample (OS) • Duplicate (DUP)

(OS) L906212-03 05/07/17 00:46 • (DUP) R3216179-7 05/07/17 01:08

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	38.0	53.1	1	33	J3	15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216179-2 05/06/17 12:46 • (LCSD) R3216179-3 05/06/17 13:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	186	186	93	93	80-120			0	15

L906520-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L906520-02 05/06/17 17:00 • (MS) R3216179-5 05/06/17 17:21 • (MSD) R3216179-6 05/06/17 17:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	40.4	559	550	104	102	1	80-120			2	15

Method Blank (MB)

(MB) R3216322-5 05/06/17 19:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000504	J	0.000150	0.00500
Ethylbenzene	0.000173	J	0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*92.3*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*101*			*75.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216322-1 05/06/17 17:10 • (LCSD) R3216322-2 05/06/17 17:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0426	0.0486	85.2	97.1	71.0-121			13.1	20
Toluene	0.0500	0.0433	0.0474	86.6	94.8	72.0-120			9.02	20
Ethylbenzene	0.0500	0.0430	0.0486	86.1	97.2	76.0-121			12.1	20
Total Xylene	0.150	0.128	0.143	85.3	95.2	75.0-124			11.0	20
(S) a,a,a-Trifluorotoluene(FID)				*96.5*	*94.3*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*104*	*101*	*75.0-128*				

Laboratory Control Sample (LCS)

(LCS) R3216322-3 05/06/17 18:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.32	96.6	70.0-136	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*108*	*75.0-128*	

Laboratory Control Sample (LCS)

(LCS) R3216322-4 05/06/17 19:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.67	103	70.0-136	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*77.0-120*	
(S) a,a,a-Trifluorotoluene(PID)			*110*	*75.0-128*	

Method Blank (MB)

(MB) R3216279-1 05/06/17 15:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10 - C20 Hydrocarbons	U		2.24	4.00
C20-C36 Hydrocarbons	U		0.681	4.00
(S) o-Terphenyl	*83.4*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216279-2 05/06/17 15:27 • (LCSD) R3216279-3 05/06/17 15:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10 - C20 Hydrocarbons	30.0	29.8	30.2	99.4	101	50.0-150			1.26	20
C20-C36 Hydrocarbons	30.0	25.9	24.7	86.2	82.4	50.0-150			4.53	20
(S) o-Terphenyl				*59.3*	*60.0*	*18.0-148*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Sample Detection Limit.
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1.] Drinking Water [2.] Underground Storage Tanks [3.] Aquatic Toxicity [4.] Chemical/Microbiological [5.] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**

Pike Energy Services
321 Pike Rd.
San Antonio, TX 78209

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC L-A-B S-C-I-E-N-C-E-S

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Frank Engallina**

Email To: **services@gmail.com**

Project Description: **Angell #1 Delineation**

City/State Collected: LOVINGTON, NM

Phone: **(210) 363-2431**
Fax:

Client Project # BC-004

Lab Project #

L# L906212

B029

Collected by (print): FRANK ENGALLINA

Site/Facility ID # ANGELL #1

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE 9056	DRO/MRO 8015	BTEX/GRO 8021	Remarks	Sample # (lab only)
PS-1	GRAB	SS	0-4IN.	4/26/2017	1200	1	X				-01
PS-2			0-4IN		1220	1	X				-02
PS-3			0-4IN		1235	1	X				-03
WS2-0			0-4IN		1430	2	X	X	X		-04
WS2-1			1FT		1440	2	X	X	X		-05
WN2-0			0-4IN.		1525	2	X	X	X		-06
WN2-1.5			1.5FT		1545	2	X	X	X		-07
N2-0			0-4IN.		1610	2	X	X	X		-08
N2-2	↓	↓	2FT.	↓	1645	2	X	X	X		-09

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 7136 2671 0083

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N

Relinquished by : (Signature)	Date: 5/1/2017	Time: 1800	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.1° °C Bottles Received: 3:402
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Brianna Malone	Date: 5-2-17 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pike Energy Services
321 Pike Rd.
San Antonio, TX 78209

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Frank Engallina**

Email To: **services@gmail.com**

Project Description: **Angell #1 Delineation**

City/State Collected: LOVINGTON, NM

Phone: **(210) 363-2431**
Fax:

Client Project # BC-004

Lab Project #

Collected by (print): FRANK ENGALLINA

Site/Facility ID # ANGELL #1

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

L #

Table #

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE 9056	Deg/Nes 8015	BTEX/GRO 8021	Remarks	Sample # (lab only)
EN2-0	GRAB	SS	0-4"	4/27/2017	0935	2	X	X	X		-10
EN2-5			5FT		1005	2	X	X	X		-11
EN1-0			0-4"		1010	2	X	X	X		-12
EN1-5			5FT		1035	2	X	X	X		-13
N1-0			0-4"		1045	2	X	X	X		-14
N1-5			5FT		1110	2	X	X	X		-15
WN1-0			0-4"		1130	2	X	X	X		-16
WN1-5			5FT		1155	2	X	X	X		-17

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
___ UPS ___ FedEx ___ Courier ___ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/1/2017	1800	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Mauna Mabe

Trip Blank Received: Yes / (No)
HCL / MeoH
TBR

Temp: 2° °C Bottles Received: 31 48

Date: 5-2-17 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

May 10, 2017

Pike Energy Services - San Antonio, TX

Sample Delivery Group:	L906255
Samples Received:	05/02/2017
Project Number:	BC-004
Description:	Angell #1 Delineation
Site:	ANGELL #1
Report To:	Frank Engallina 321 Pike Rd. San Antonio, TX 78209

Entire Report Reviewed By:

Chris McCord
Technical Service Representative

S2-0 L906255-01 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 12:20 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976209	1	05/03/17 15:03	05/03/17 15:17	KDW
Wet Chemistry by Method 9056A	WG975920	50	05/04/17 09:51	05/05/17 13:26	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.99	05/05/17 23:42	05/06/17 22:04	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	10	05/09/17 07:26	05/09/17 16:16	ACM

S2-5 L906255-02 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 12:40 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976209	1	05/03/17 15:03	05/03/17 15:17	KDW
Wet Chemistry by Method 9056A	WG975920	10	05/04/17 09:51	05/05/17 13:35	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.99	05/05/17 23:42	05/06/17 22:27	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	1	05/09/17 07:26	05/09/17 15:14	ACM

ES2-0 L906255-03 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 13:20 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976209	1	05/03/17 15:03	05/03/17 15:17	KDW
Wet Chemistry by Method 9056A	WG975920	50	05/04/17 09:51	05/05/17 13:44	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.99	05/05/17 23:42	05/06/17 22:49	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	100	05/09/17 07:26	05/09/17 18:34	ACM

ES2-5 L906255-04 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 13:45 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976209	1	05/03/17 15:03	05/03/17 15:17	KDW
Wet Chemistry by Method 9056A	WG975921	1	05/05/17 14:34	05/06/17 01:10	SAM
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.97	05/05/17 23:42	05/06/17 23:11	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	1	05/09/17 07:26	05/09/17 15:30	ACM

V1-0 L906255-05 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 14:35 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG975921	1	05/05/17 14:34	05/06/17 01:31	SAM
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	980	05/05/17 23:42	05/06/17 23:33	LRL
Volatile Organic Compounds (GC) by Method 8021	WG977228	4900	05/05/17 23:42	05/10/17 14:17	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	200	05/09/17 07:26	05/09/17 19:33	ACM
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	400	05/09/17 07:26	05/10/17 02:11	ACM

V1-4 L906255-06 Solid

Collected by: Frank Engallina | Collected date/time: 04/27/17 15:10 | Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG975921	5	05/05/17 14:34	05/06/17 01:52	SAM
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	1	05/05/17 23:42	05/06/17 23:56	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	1	05/09/17 07:26	05/09/17 15:45	ACM

V1-10 L906255-07 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 15:40
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG977004	10	05/06/17 10:34	05/06/17 14:13	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.99	05/05/17 23:42	05/07/17 00:18	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	1	05/09/17 07:26	05/09/17 14:28	ACM

V1-15 L906255-08 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 15:55
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG977004	5	05/06/17 10:34	05/06/17 14:56	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.98	05/05/17 23:42	05/07/17 00:40	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	1	05/09/17 07:26	05/09/17 14:43	ACM

V1-20 L906255-09 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 16:10
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG977004	1	05/06/17 10:34	05/06/17 16:00	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.98	05/05/17 23:42	05/07/17 01:02	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	1	05/09/17 07:26	05/09/17 14:59	ACM

WS1-0 L906255-10 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 16:35
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG977004	5	05/06/17 10:34	05/06/17 17:05	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	485	05/05/17 23:42	05/06/17 21:42	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	200	05/09/17 07:26	05/09/17 19:19	ACM

WS1-3 L906255-11 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 17:05
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG977004	5	05/06/17 10:34	05/06/17 17:26	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.98	05/05/17 23:42	05/07/17 01:24	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	100	05/09/17 07:26	05/09/17 18:49	ACM

S1-0 L906255-12 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 17:25
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG977004	1	05/06/17 10:34	05/06/17 17:48	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	480	05/05/17 23:42	05/07/17 01:47	LRL
Volatile Organic Compounds (GC) by Method 8021	WG977228	2400	05/05/17 23:42	05/10/17 14:39	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	200	05/09/17 07:26	05/09/17 19:03	ACM

S1-3 L906255-13 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 17:40
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976211	1	05/03/17 14:28	05/03/17 14:36	KDW
Wet Chemistry by Method 9056A	WG977004	5	05/06/17 10:34	05/06/17 18:09	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	495	05/05/17 23:42	05/07/17 02:09	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	10	05/09/17 07:26	05/09/17 17:47	ACM
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	100	05/09/17 07:26	05/10/17 15:09	ACM

ES1-0 L906255-14 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 17:55
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976215	1	05/04/17 10:14	05/04/17 10:21	KDW
Wet Chemistry by Method 9056A	WG977004	1	05/06/17 10:34	05/06/17 18:30	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977228	.98	05/05/17 23:42	05/07/17 02:31	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	10	05/09/17 07:26	05/09/17 18:03	ACM

ES1-4 L906255-15 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 18:15
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976215	1	05/04/17 10:14	05/04/17 10:21	KDW
Wet Chemistry by Method 9056A	WG977004	5	05/06/17 10:34	05/06/17 18:52	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977539	.99	05/05/17 23:42	05/08/17 17:24	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	1	05/09/17 07:26	05/09/17 16:01	ACM

N2-3 L906255-16 Solid

Collected by: Frank Engallina
Collected date/time: 04/27/17 19:15
Received date/time: 05/02/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG976215	1	05/04/17 10:14	05/04/17 10:21	KDW
Wet Chemistry by Method 9056A	WG977004	1	05/06/17 10:34	05/06/17 19:13	KCF
Volatile Organic Compounds (GC) by Method 8015/8021	WG977539	1	05/05/17 23:42	05/08/17 17:45	ACG
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG977313	1	05/09/17 07:26	05/10/17 14:26	ACM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.4		1	05/03/2017 15:17	WG976209

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	11100		43.5	10.0	547	50	05/05/2017 13:26	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000130	0.000500	0.000542	.99	05/06/2017 22:04	WG977228
Toluene	0.000391	B J	0.000162	0.00500	0.00542	.99	05/06/2017 22:04	WG977228
Ethylbenzene	0.000419	J	0.000119	0.000500	0.000542	.99	05/06/2017 22:04	WG977228
Total Xylene	0.000691	B J	0.000498	0.00150	0.00162	.99	05/06/2017 22:04	WG977228
TPH (GC/FID) Low Fraction	0.0386	B J	0.0235	0.100	0.108	.99	05/06/2017 22:04	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*94.7*				*77.0-120*		*05/06/2017 22:04*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*100*				*75.0-128*		*05/06/2017 22:04*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	69.0		24.5	4.00	43.8	10	05/09/2017 16:16	WG977313
C20-C36 Hydrocarbons	250		7.45	4.00	43.8	10	05/09/2017 16:16	WG977313
(S) o-Terphenyl	*41.4*				*18.0-148*		*05/09/2017 16:16*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.0		1	05/03/2017 15:17	WG976209

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	2790		8.74	10.0	110	10	05/05/2017 13:35	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000131	0.000500	0.000544	.99	05/06/2017 22:27	WG977228
Toluene	0.000187	B J	0.000163	0.00500	0.00544	.99	05/06/2017 22:27	WG977228
Ethylbenzene	0.000313	J	0.000120	0.000500	0.000544	.99	05/06/2017 22:27	WG977228
Total Xylene	U	B	0.000500	0.00150	0.00163	.99	05/06/2017 22:27	WG977228
TPH (GC/FID) Low Fraction	0.0262	B J	0.0236	0.100	0.109	.99	05/06/2017 22:27	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*95.0*				*77.0-120*		*05/06/2017 22:27*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*101*				*75.0-128*		*05/06/2017 22:27*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		2.46	4.00	4.40	1	05/09/2017 15:14	WG977313
C20-C36 Hydrocarbons	10.1		0.748	4.00	4.40	1	05/09/2017 15:14	WG977313
(S) o-Terphenyl	*73.3*				*18.0-148*		*05/09/2017 15:14*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.0		1	05/03/2017 15:17	WG976209

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	11600		42.8	10.0	538	50	05/05/2017 13:44	WG975920

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.00334		0.000128	0.000500	0.000532	.99	05/06/2017 22:49	WG977228
Toluene	0.00557		0.000160	0.00500	0.00532	.99	05/06/2017 22:49	WG977228
Ethylbenzene	0.00373		0.000117	0.000500	0.000532	.99	05/06/2017 22:49	WG977228
Total Xylene	0.00312	B	0.000490	0.00150	0.00160	.99	05/06/2017 22:49	WG977228
TPH (GC/FID) Low Fraction	0.173	B	0.0231	0.100	0.106	.99	05/06/2017 22:49	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*93.6*				*77.0-120*		*05/06/2017 22:49*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*100*				*75.0-128*		*05/06/2017 22:49*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	2580		241	4.00	430	100	05/09/2017 18:34	WG977313
C20-C36 Hydrocarbons	4270		73.3	4.00	430	100	05/09/2017 18:34	WG977313
(S) o-Terphenyl	*18.5*	J7			*18.0-148*		*05/09/2017 18:34*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	05/03/2017 15:17	WG976209

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	778		0.862	10.0	10.8	1	05/06/2017 01:10	WG975921

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000191	J	0.000126	0.000500	0.000526	.97	05/06/2017 23:11	WG977228
Toluene	0.000469	B J	0.000158	0.00500	0.00526	.97	05/06/2017 23:11	WG977228
Ethylbenzene	0.000325	J	0.000116	0.000500	0.000526	.97	05/06/2017 23:11	WG977228
Total Xylene	U		0.000483	0.00150	0.00158	.97	05/06/2017 23:11	WG977228
TPH (GC/FID) Low Fraction	U		0.0228	0.100	0.105	.97	05/06/2017 23:11	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*95.0*				*77.0-120*		*05/06/2017 23:11*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*101*				*75.0-128*		*05/06/2017 23:11*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	2.45	J	2.43	4.00	4.33	1	05/09/2017 15:30	WG977313
C20-C36 Hydrocarbons	11.0		0.738	4.00	4.33	1	05/09/2017 15:30	WG977313
(S) o-Terphenyl	*75.9*				*18.0-148*		*05/09/2017 15:30*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.4		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	994		0.879	10.0	11.1	1	05/06/2017 01:31	WG975921

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	114		0.130	0.000500	0.542	980	05/06/2017 23:33	WG977228
Toluene	485		0.813	0.00500	27.1	4900	05/10/2017 14:17	WG977228
Ethylbenzene	623		0.596	0.000500	2.71	4900	05/10/2017 14:17	WG977228
Total Xylene	486		0.499	0.00150	1.63	980	05/06/2017 23:33	WG977228
TPH (GC/FID) Low Fraction	11100		23.5	0.100	108	980	05/06/2017 23:33	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*94.6*				*77.0-120*		*05/10/2017 14:17*	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*91.0*				*77.0-120*		*05/06/2017 23:33*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*91.3*				*75.0-128*		*05/10/2017 14:17*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*98.0*				*75.0-128*		*05/06/2017 23:33*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	44000		991	4.00	1770	400	05/10/2017 02:11	WG977313
C20-C36 Hydrocarbons	30400		151	4.00	885	200	05/09/2017 19:33	WG977313
(S) o-Terphenyl	*87.6*	J7			*18.0-148*		*05/09/2017 19:33*	WG977313
(S) o-Terphenyl	*0.000*	J7			*18.0-148*		*05/10/2017 02:11*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.3		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	4720		4.89	10.0	61.5	5	05/06/2017 01:52	WG975921

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.00666		0.000148	0.000500	0.000615	1	05/06/2017 23:56	WG977228
Toluene	0.00128	B J	0.000185	0.00500	0.00615	1	05/06/2017 23:56	WG977228
Ethylbenzene	0.0117		0.000135	0.000500	0.000615	1	05/06/2017 23:56	WG977228
Total Xylene	0.00494	B	0.000566	0.00150	0.00185	1	05/06/2017 23:56	WG977228
TPH (GC/FID) Low Fraction	0.134	B	0.0267	0.100	0.123	1	05/06/2017 23:56	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*94.4*				*77.0-120*		*05/06/2017 23:56*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*100*				*75.0-128*		*05/06/2017 23:56*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	5.58		2.76	4.00	4.92	1	05/09/2017 15:45	WG977313
C20-C36 Hydrocarbons	9.30		0.838	4.00	4.92	1	05/09/2017 15:45	WG977313
(S) o-Terphenyl	*65.1*				*18.0-148*		*05/09/2017 15:45*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	7520		8.60	10.0	108	10	05/06/2017 14:13	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000129	0.000500	0.000536	.99	05/07/2017 00:18	WG977228
Toluene	0.000221	B J	0.000161	0.00500	0.00536	.99	05/07/2017 00:18	WG977228
Ethylbenzene	0.000178	J	0.000118	0.000500	0.000536	.99	05/07/2017 00:18	WG977228
Total Xylene	U		0.000493	0.00150	0.00161	.99	05/07/2017 00:18	WG977228
TPH (GC/FID) Low Fraction	0.0239	B J	0.0232	0.100	0.107	.99	05/07/2017 00:18	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*94.4*				*77.0-120*		*05/07/2017 00:18*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*101*				*75.0-128*		*05/07/2017 00:18*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	21.2		2.42	4.00	4.33	1	05/09/2017 14:28	WG977313
C20-C36 Hydrocarbons	24.7		0.737	4.00	4.33	1	05/09/2017 14:28	WG977313
(S) o-Terphenyl	*67.3*				*18.0-148*		*05/09/2017 14:28*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.8		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	5300	V	4.38	10.0	55.1	5	05/06/2017 14:56	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000129	0.000500	0.000540	.98	05/07/2017 00:40	WG977228
Toluene	0.000224	B J	0.000162	0.00500	0.00540	.98	05/07/2017 00:40	WG977228
Ethylbenzene	0.000134	J	0.000119	0.000500	0.000540	.98	05/07/2017 00:40	WG977228
Total Xylene	0.00113	B J	0.000496	0.00150	0.00162	.98	05/07/2017 00:40	WG977228
TPH (GC/FID) Low Fraction	0.0574	B J	0.0234	0.100	0.108	.98	05/07/2017 00:40	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*95.5*				*77.0-120*		*05/07/2017 00:40*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*102*				*75.0-128*		*05/07/2017 00:40*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		2.47	4.00	4.40	1	05/09/2017 14:43	WG977313
C20-C36 Hydrocarbons	2.58	J	0.750	4.00	4.40	1	05/09/2017 14:43	WG977313
(S) o-Terphenyl	*74.9*				*18.0-148*		*05/09/2017 14:43*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	54.4		0.851	10.0	10.7	1	05/06/2017 16:00	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000126	0.000500	0.000525	.98	05/07/2017 01:02	WG977228
Toluene	0.000204	B J	0.000157	0.00500	0.00525	.98	05/07/2017 01:02	WG977228
Ethylbenzene	0.000149	J	0.000115	0.000500	0.000525	.98	05/07/2017 01:02	WG977228
Total Xylene	0.000538	B J	0.000483	0.00150	0.00157	.98	05/07/2017 01:02	WG977228
TPH (GC/FID) Low Fraction	0.0251	B J	0.0228	0.100	0.105	.98	05/07/2017 01:02	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*95.1*				*77.0-120*		*05/07/2017 01:02*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*101*				*75.0-128*		*05/07/2017 01:02*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	U		2.40	4.00	4.28	1	05/09/2017 14:59	WG977313
C20-C36 Hydrocarbons	U		0.729	4.00	4.28	1	05/09/2017 14:59	WG977313
(S) o-Terphenyl	*65.1*				*18.0-148*		*05/09/2017 14:59*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.9		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	2720		4.15	10.0	52.1	5	05/06/2017 17:05	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	4.99		0.0607	0.000500	0.253	485	05/06/2017 21:42	WG977228
Toluene	54.5		0.0759	0.00500	2.53	485	05/06/2017 21:42	WG977228
Ethylbenzene	120	V	0.0556	0.000500	0.253	485	05/06/2017 21:42	WG977228
Total Xylene	95.1		0.233	0.00150	0.759	485	05/06/2017 21:42	WG977228
TPH (GC/FID) Low Fraction	1660		11.0	0.100	50.6	485	05/06/2017 21:42	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*87.5*				*77.0-120*		*05/06/2017 21:42*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*102*				*75.0-128*		*05/06/2017 21:42*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	17500		467	4.00	834	200	05/09/2017 19:19	WG977313
C20-C36 Hydrocarbons	11900		142	4.00	834	200	05/09/2017 19:19	WG977313
(S) o-Terphenyl	*42.9*	J7			*18.0-148*		*05/09/2017 19:19*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.9		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	4440		4.68	10.0	58.9	5	05/06/2017 17:26	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.00319		0.000139	0.000500	0.000577	.98	05/07/2017 01:24	WG977228
Toluene	U		0.000173	0.00500	0.00577	.98	05/07/2017 01:24	WG977228
Ethylbenzene	0.198		0.000127	0.000500	0.000577	.98	05/07/2017 01:24	WG977228
Total Xylene	0.126		0.000531	0.00150	0.00173	.98	05/07/2017 01:24	WG977228
TPH (GC/FID) Low Fraction	4.35		0.0250	0.100	0.115	.98	05/07/2017 01:24	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*89.4*				*77.0-120*		*05/07/2017 01:24*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*99.9*				*75.0-128*		*05/07/2017 01:24*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	2530		264	4.00	471	100	05/09/2017 18:49	WG977313
C20-C36 Hydrocarbons	3530		80.2	4.00	471	100	05/09/2017 18:49	WG977313
(S) o-Terphenyl	*5.66*	J7			*18.0-148*		*05/09/2017 18:49*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.5		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	489		0.851	10.0	10.7	1	05/06/2017 17:48	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	1.93		0.0616	0.000500	0.257	480	05/07/2017 01:47	WG977228
Toluene	65.2		0.0770	0.00500	2.57	480	05/07/2017 01:47	WG977228
Ethylbenzene	209		0.282	0.000500	1.28	2400	05/10/2017 14:39	WG977228
Total Xylene	211		0.236	0.00150	0.770	480	05/07/2017 01:47	WG977228
TPH (GC/FID) Low Fraction	3520		11.1	0.100	51.3	480	05/07/2017 01:47	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*98.5*				*77.0-120*		*05/10/2017 14:39*	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*92.2*				*77.0-120*		*05/07/2017 01:47*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*90.6*				*75.0-128*		*05/10/2017 14:39*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*102*				*75.0-128*		*05/07/2017 01:47*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	32900		479	4.00	856	200	05/09/2017 19:03	WG977313
C20-C36 Hydrocarbons	26600		146	4.00	856	200	05/09/2017 19:03	WG977313
(S) o-Terphenyl	*74.9*	J7			*18.0-148*		*05/09/2017 19:03*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.7		1	05/03/2017 14:36	WG976211

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	3430		4.59	10.0	57.7	5	05/06/2017 18:09	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.0685	0.000500	0.286	495	05/07/2017 02:09	WG977228
Toluene	0.186	B J	0.0857	0.00500	2.86	495	05/07/2017 02:09	WG977228
Ethylbenzene	0.526		0.0628	0.000500	0.286	495	05/07/2017 02:09	WG977228
Total Xylene	0.538	B J	0.263	0.00150	0.857	495	05/07/2017 02:09	WG977228
TPH (GC/FID) Low Fraction	145	B	12.4	0.100	57.1	495	05/07/2017 02:09	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*97.0*				*77.0-120*		*05/07/2017 02:09*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*103*				*75.0-128*		*05/07/2017 02:09*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	2480		258	4.00	462	100	05/10/2017 15:09	WG977313
C20-C36 Hydrocarbons	1970		7.86	4.00	46.2	10	05/09/2017 17:47	WG977313
(S) o-Terphenyl	*978*	J1			*18.0-148*		*05/09/2017 17:47*	WG977313
(S) o-Terphenyl	*7.74*	J7			*18.0-148*		*05/10/2017 15:09*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.5		1	05/04/2017 10:21	WG976215

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	1050		0.851	10.0	10.7	1	05/06/2017 18:30	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000129	J	0.000126	0.000500	0.000524	.98	05/07/2017 02:31	WG977228
Toluene	0.000234	B J	0.000157	0.00500	0.00524	.98	05/07/2017 02:31	WG977228
Ethylbenzene	0.000186	J	0.000115	0.000500	0.000524	.98	05/07/2017 02:31	WG977228
Total Xylene	U		0.000482	0.00150	0.00157	.98	05/07/2017 02:31	WG977228
TPH (GC/FID) Low Fraction	0.0377	B J	0.0228	0.100	0.105	.98	05/07/2017 02:31	WG977228
(S) a,a,a-Trifluorotoluene(FID)	*95.1*				*77.0-120*		*05/07/2017 02:31*	WG977228
(S) a,a,a-Trifluorotoluene(PID)	*101*				*75.0-128*		*05/07/2017 02:31*	WG977228

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	1510		24.0	4.00	42.8	10	05/09/2017 18:03	WG977313
C20-C36 Hydrocarbons	1960		7.29	4.00	42.8	10	05/09/2017 18:03	WG977313
(S) o-Terphenyl	*428*	J1			*18.0-148*		*05/09/2017 18:03*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.4		1	05/04/2017 10:21	WG976215

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	5610		4.65	10.0	58.5	5	05/06/2017 18:52	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000139	0.000500	0.000579	.99	05/08/2017 17:24	WG977539
Toluene	U		0.000174	0.00500	0.00579	.99	05/08/2017 17:24	WG977539
Ethylbenzene	U		0.000127	0.000500	0.000579	.99	05/08/2017 17:24	WG977539
Total Xylene	U		0.000533	0.00150	0.00174	.99	05/08/2017 17:24	WG977539
TPH (GC/FID) Low Fraction	U		0.0251	0.100	0.116	.99	05/08/2017 17:24	WG977539
(S) a,a,a-Trifluorotoluene(FID)	*101*				*77.0-120*		*05/08/2017 17:24*	WG977539
(S) a,a,a-Trifluorotoluene(PID)	*105*				*75.0-128*		*05/08/2017 17:24*	WG977539

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	58.3		2.62	4.00	4.68	1	05/09/2017 16:01	WG977313
C20-C36 Hydrocarbons	98.2		0.797	4.00	4.68	1	05/09/2017 16:01	WG977313
(S) o-Terphenyl	*55.1*				*18.0-148*		*05/09/2017 16:01*	WG977313

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.7		1	05/04/2017 10:21	WG976215

Wet Chemistry by Method 9056A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Chloride	280		0.858	10.0	10.8	1	05/06/2017 19:13	WG977004

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000129	0.000500	0.000539	1	05/08/2017 17:45	WG977539
Toluene	U		0.000162	0.00500	0.00539	1	05/08/2017 17:45	WG977539
Ethylbenzene	U		0.000119	0.000500	0.000539	1	05/08/2017 17:45	WG977539
Total Xylene	U		0.000496	0.00150	0.00162	1	05/08/2017 17:45	WG977539
TPH (GC/FID) Low Fraction	U		0.0234	0.100	0.108	1	05/08/2017 17:45	WG977539
(S) a,a,a-Trifluorotoluene(FID)	*102*				*77.0-120*		*05/08/2017 17:45*	WG977539
(S) a,a,a-Trifluorotoluene(PID)	*106*				*75.0-128*		*05/08/2017 17:45*	WG977539

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
C10 - C20 Hydrocarbons	2.47	J	2.42	4.00	4.32	1	05/10/2017 14:26	WG977313
C20-C36 Hydrocarbons	15.5		0.735	4.00	4.32	1	05/10/2017 14:26	WG977313
(S) o-Terphenyl	*65.1*				*18.0-148*		*05/10/2017 14:26*	WG977313

Method Blank (MB)

(MB) R3215447-1 05/03/17 15:17

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000100			

L906228-02 Original Sample (OS) • Duplicate (DUP)

(OS) L906228-02 05/03/17 15:17 • (DUP) R3215447-3 05/03/17 15:17

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.9	86.5	1	0.468		5

Laboratory Control Sample (LCS)

(LCS) R3215447-2 05/03/17 15:17

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3215438-1 05/03/17 14:36

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000200			

L906255-13 Original Sample (OS) • Duplicate (DUP)

(OS) L906255-13 05/03/17 14:36 • (DUP) R3215438-3 05/03/17 14:36

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	86.7	85.7	1	1.11		5

Laboratory Control Sample (LCS)

(LCS) R3215438-2 05/03/17 14:36

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3215752-1 05/04/17 10:21

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000200			

L906255-15 Original Sample (OS) • Duplicate (DUP)

(OS) L906255-15 05/04/17 10:21 • (DUP) R3215752-3 05/04/17 10:21

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	85.4	85.6	1	0.231		5

Laboratory Control Sample (LCS)

(LCS) R3215752-2 05/04/17 10:21

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3215942-2 05/05/17 09:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L906212-12 Original Sample (OS) • Duplicate (DUP)

(OS) L906212-12 05/05/17 11:56 • (DUP) R3215942-6 05/05/17 12:05

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	86.0	86.2	1	0		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3215942-3 05/05/17 09:14 • (LCSD) R3215942-4 05/05/17 09:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	187	188	93	94	80-120			0	15

L906212-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L906212-06 05/05/17 10:44 • (MS) R3215942-7 05/05/17 13:53 • (MSD) R3215942-8 05/05/17 14:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	522	72.7	606	621	102	105	1	80-120			2	15

Method Blank (MB)

(MB) R3216060-1 05/05/17 15:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		0.795	10.0

L905983-03 Original Sample (OS) • Duplicate (DUP)

(OS) L905983-03 05/05/17 17:45 • (DUP) R3216060-4 05/05/17 18:06

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	602	658	1	9		15

L906257-01 Original Sample (OS) • Duplicate (DUP)

(OS) L906257-01 05/06/17 10:05 • (DUP) R3216060-8 05/06/17 10:26

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	3380	3390	5	1		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216060-2 05/05/17 16:20 • (LCSD) R3216060-3 05/05/17 16:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	196	186	98	93	80-120			6	15

L905983-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L905983-04 05/05/17 18:27 • (MS) R3216060-5 05/05/17 18:48 • (MSD) R3216060-6 05/05/17 19:09

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	662	872	1320	1430	68	85	1	80-120	J6	E	8	15

Method Blank (MB)

(MB) R3216165-1 05/06/17 12:26

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		0.795	10.0

L906255-07 Original Sample (OS) • Duplicate (DUP)

(OS) L906255-07 05/06/17 14:13 • (DUP) R3216165-4 05/06/17 14:35

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	7520	6820	10	10		15

L907150-08 Original Sample (OS) • Duplicate (DUP)

(OS) L907150-08 05/06/17 23:30 • (DUP) R3216165-7 05/06/17 23:52

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	93.8	91.2	1	3		15

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216165-2 05/06/17 12:48 • (LCSD) R3216165-3 05/06/17 13:09

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Chloride	200	196	196	98	98	80-120			0	15

L906255-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L906255-08 05/06/17 14:56 • (MS) R3216165-5 05/06/17 15:18 • (MSD) R3216165-6 05/06/17 15:39

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	110	5300	5440	5270	26	0	5	80-120	V	V	3	15

Method Blank (MB)

(MB) R3216802-5 05/06/17 18:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000265	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	0.0262	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.4*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*103*			*75.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216802-1 05/06/17 16:53 • (LCSD) R3216802-2 05/06/17 17:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0487	0.0483	97.5	96.5	71.0-121			1.01	20
Toluene	0.0500	0.0501	0.0490	100	98.0	72.0-120			2.25	20
Ethylbenzene	0.0500	0.0512	0.0504	102	101	76.0-121			1.64	20
Total Xylene	0.150	0.156	0.153	104	102	75.0-124			1.88	20
(S) a,a,a-Trifluorotoluene(FID)				*95.8*	*96.1*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*100*	*100*	*75.0-128*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216802-3 05/06/17 17:42 • (LCSD) R3216802-4 05/06/17 18:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.46	5.44	99.3	99.0	70.0-136			0.340	20
(S) a,a,a-Trifluorotoluene(FID)				*98.8*	*98.8*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*109*	*109*	*75.0-128*				

L906255-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L906255-10 05/06/17 21:42 • (MS) R3216802-6 05/06/17 19:51 • (MSD) R3216802-7 05/06/17 20:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0521	4.99	15.6	15.7	42.0	42.3	485	10.0-146			0.490	29
Toluene	0.0521	54.5	83.5	86.9	115	128	485	10.0-143			4.00	30
Ethylbenzene	0.0521	120	174	182	215	244	485	10.0-147	E V	E V	4.17	31
Total Xylene	0.156	95.1	179	183	111	116	485	10.0-149			2.30	30

L906255-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L906255-10 05/06/17 21:42 • (MS) R3216802-6 05/06/17 19:51 • (MSD) R3216802-7 05/06/17 20:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) a,a,a-Trifluorotoluene(FID)					*84.3*	*86.6*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*101*	*100*		*75.0-128*				

L906255-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L906255-10 05/06/17 21:42 • (MS) R3216802-8 05/06/17 20:35 • (MSD) R3216802-9 05/06/17 20:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.74	1660	3060	2950	50.5	46.3	485	10.0-147			3.81	30
(S) a,a,a-Trifluorotoluene(FID)					*86.5*	*86.9*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*101*	*101*		*75.0-128*				

Method Blank (MB)

(MB) R3216496-5 05/08/17 13:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	U		0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*103*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*105*			*75.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216496-1 05/08/17 11:55 • (LCSD) R3216496-2 05/08/17 12:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0489	0.0479	97.8	95.8	71.0-121			2.02	20
Toluene	0.0500	0.0543	0.0530	109	106	72.0-120			2.45	20
Ethylbenzene	0.0500	0.0547	0.0536	109	107	76.0-121			2.10	20
Total Xylene	0.150	0.178	0.174	119	116	75.0-124			2.27	20
(S) a,a,a-Trifluorotoluene(FID)				*100*	*99.5*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*105*	*105*	*75.0-128*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216496-3 05/08/17 12:36 • (LCSD) R3216496-4 05/08/17 12:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.29	5.46	96.2	99.2	70.0-136			3.05	20
(S) a,a,a-Trifluorotoluene(FID)				*105*	*105*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*110*	*110*	*75.0-128*				

L907201-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907201-01 05/08/17 18:06 • (MS) R3216496-6 05/08/17 22:20 • (MSD) R3216496-7 05/08/17 22:41

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0637	3.87	9.21	9.50	87.3	92.1	96	10.0-146			3.11	29
Toluene	0.0637	27.5	29.7	30.3	37.1	45.5	96	10.0-143			1.73	30
Ethylbenzene	0.0637	7.65	13.4	13.7	94.6	99.3	96	10.0-147			2.14	31
Total Xylene	0.191	48.6	59.7	60.6	60.4	65.3	96	10.0-149	J6	J6	1.48	30

L907201-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907201-01 05/08/17 18:06 • (MS) R3216496-6 05/08/17 22:20 • (MSD) R3216496-7 05/08/17 22:41

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) a,a,a-Trifluorotoluene(FID)					*97.0*	*96.7*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*103*	*103*		*75.0-128*				

L907201-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907201-01 05/08/17 18:06 • (MS) R3216496-8 05/08/17 23:02 • (MSD) R3216496-9 05/08/17 23:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	7.00	424	1040	1080	91.5	97.6	96	10.0-147			3.88	30
(S) a,a,a-Trifluorotoluene(FID)					*99.5*	*101*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*107*	*107*		*75.0-128*				

Method Blank (MB)

(MB) R3216615-1 05/09/17 10:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10 - C20 Hydrocarbons	U		2.24	4.00
C20-C36 Hydrocarbons	U		0.681	4.00
(S) o-Terphenyl	*73.7*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3216615-2 05/09/17 10:54 • (LCSD) R3216615-3 05/09/17 11:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10 - C20 Hydrocarbons	30.0	23.6	25.9	78.6	86.3	50.0-150			9.43	20
C20-C36 Hydrocarbons	30.0	23.2	24.8	77.2	82.8	50.0-150			7.00	20
(S) o-Terphenyl				*76.9*	*82.2*	*18.0-148*				

L907047-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L907047-04 05/10/17 00:56 • (MS) R3216615-4 05/10/17 01:12 • (MSD) R3216615-5 05/10/17 01:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10 - C20 Hydrocarbons	30.0	ND	23.0	25.7	76.6	85.6	1	50.0-150			11.1	20
C20-C36 Hydrocarbons	30.0	ND	21.3	23.8	68.2	76.5	1	50.0-150			11.0	20
(S) o-Terphenyl					*71.3*	*77.1*		*18.0-148*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Sample Detection Limit.
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1.] Drinking Water [2.] Underground Storage Tanks [3.] Aquatic Toxicity [4.] Chemical/Microbiological [5.] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**

Pike Energy Services
321 Pike Rd.
San Antonio, TX 78209

Billing Information:

Pres Chk

Report to: **Frank Engallina**

Email To: **services@gmail.com**

Project Description: **Angell #1 Delineation**

City/State Collected: LOVINGTON, NM

Phone: **(210) 363-2431**
Fax:

Client Project # BC-004

Lab Project #

Collected by (print): FRANK ENGALLINA

Site/Facility ID # ANGELL #1

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 906255

D236

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Chloride 9056	BTEX/GRO 8021	Remarks	Sample # (lab only)
S2-0	GRAB	SS	0-4"	4/27/2017	1220	2	X	X		01
S2-5			5'		1240		X	X		02
ES2-0			0-4"		1320		X	X		03
ES2-5			5'		1345		X	X		04
V1-0			0-4"		1435		X	X		05
V1-4			~~4'~~ 4.5'		1510		X	X		06
V1-10			10'		1540		X	X		07
V1-15			15'		1555		X	X		08
V1-20			20'		1610		X	X		09

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 7136 2671 0094

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/1/2017	1800	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.1 °C Bottles Received: 32

Date: 5-2-17 Time: 0845

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Pike Energy Services
321 Pike Rd.
San Antonio, TX 78209

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABORATORY SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Frank Engallina**

Email To: **services@gmail.com**

Project Description: **Angell #1 Delineation**

City/State Collected: LOVINGTON NM

Phone: **(210) 363-2431**
Fax:

Client Project # BC-004

Lab Project #

Collected by (print): FRANK ENGALLINA

Site/Facility ID # ANGELL #1

P.O. #

Collected by (signature):

Immediately Packed on Ice N___ Y_X_

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE 9056	DRO/MRO 8015	BTEX/GRO 8021	Remarks	Sample # (lab only)
WS1-0	GRAB	SS	0-4"	4/27/2017	1635		X	X	X		10
WS1-3			3'		1705		X	X	X		11
S1-0			0-4"		1725		X	X	X		12
~~SR1-3~~ S1-3			3'		1740		X	X	X		13
ES1-0			0-4"		1755		X	X	X		14
ES1-4			4'		1815		X	X	X		15
NS2-3			3'		1915		X	X	X		16

L# 906255

Table #

Acctnum:

Template:

Prelogin:

TSR:

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
___UPS ___FedEx ___Courier ___ _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N

Relinquished by : (Signature)	Date: 5/1/2017	Time: 1800	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.1 °C Bottles Received: 32
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5-2-17 Time: 0845

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Attachment C
Photograph Log and Field Logbook

Photo 1: Hollow Stem Auger Rig set up on V1 (vertical delineation location) inside Tank Battery

Photo 2: Interface of Dark Brown Clay and Caliche or Limestone rock encountered at 5 ft. bgs in V1.

Photo 3: Light pink limestone in the 10-15 foot interval of V1.

Photo 4: White limestone observed in the 15-20 foot interval of V1.

Photo 5: Open soil boring location S1

Photo 6: Open soil boring location WN2.

Photo 7: Closed soil boring location ES2.

Photo 8: Tank battery and sampling equipment including sampling liners from direct push rig.

2 4/26/2017

ANGELL #1 - DELINEATION SAMPLING

NM

1000 55° + WINDY, CLEAR SKIES
FRANK ENGALLINA (PIKE ENERGY SERVICES) ON SITE. WALK SITE TO DETERMINE IF PROPOSED SAMPLE LOCATIONS ARE ACCESSIBLE.

1125 OLIVIA YU (NMOCD) ON SITE, DISCUSSED FIELD SAMPLING PLAN + VEGETATION IN PASTURE.

1140 PREP TO SAMPLE 3 LOCATIONS IN PASTURE FOR FIELD SCREENING W/ MULTIRAE PID + COLLECT FOR CHLORIDE. PASTURE SAMPLE (PS)

TIME	SAMPLE	PID VOCs ppm	
(1200)	PS-1	0.0	SAMPLES IMMEDIATELY
(1220)	PS-2	0.0	PACKED ON ICE
(1235)	PS-3	0.0	

1230 NMOCD OFF SITE
FILL OUT LABELS FOR SITE + PREP TO SAMPLE BY HAND IN PASTURE WEST SIDE OF TANK BATTERY

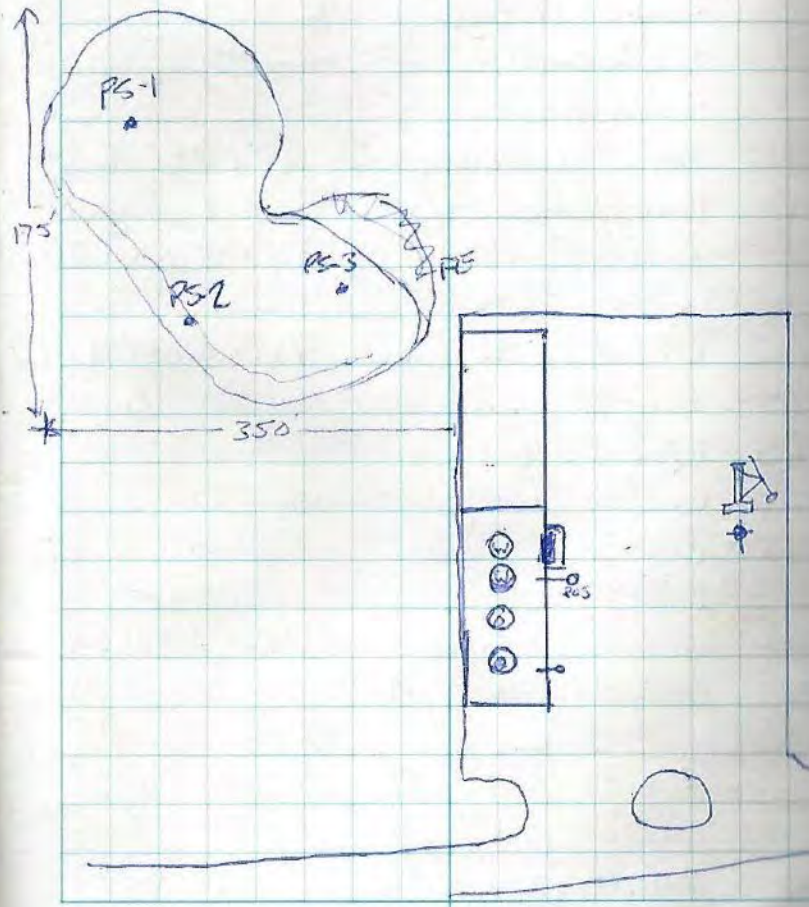
(1430) WS2-0 SAMPLE TAKEN PID = 0.0 ppm
(1440) WS2-1 SAMPLE TAKEN PID = 0.1 ppm moist
WS2 REFUSAL AT 15" ROCK.

NOTE: PASTURE IS 2-3' LOWER THAN TB FLOOR

(1525) WN2-0 PID = 0.5 moist SAMPLE TAKEN
WN2-1 PID = 0.1
(1545) WN2-1.5 PID = 0.0 SAMPLE TAKEN
REFUSAL AT 1.5' bgs HARD.

4/26/2017

(1610) N2-0 PID = 5.4 SAMPLE TAKEN
1625 N2-1 PID = 0.0
(1645) N2-2 PID = 0.0 SAMPLE TAKEN
1720 FE OFF SITE
MULTI RAE PGM6208



Rite in the Rain

4/27/2017

0800 50° CLEAR SKIES, FE ONSITE
0818 TALON LPG ON SITE. W/GEOPROBE + AIR ROTARY
REVIEW WORK + HEALTH + SAFETY + PPE
WORK IN TB W/ CUFFED LINES SLIPS, TRIP, FALL,
PINCH POINTS, SUN/WIND, STOP WORK AUTH. SIMOPS
RONNIE RODRIGUEZ
TADS ANDERSON
FRANK ENGELLING
0845 BEGIN UNLOADING EQUIPMENT + PREP TO DRILL
0930 HAND DIGGING FIRST 3' ON ALL LOCATIONS
BILLY MOORE ON SITE REVIEW LOCATIONS
+ MOVE TO AVOID ELECTRICAL
BEGIN PUSH EN2. 76° WIND W 5-10

(0935)	EN2-0	0.1 ppm	MOISTURE SAMPLE TAKEN
0945	EN2-1	0.1 ppm	
0950	EN2-2	0.1 ppm	
0955	EN2-3	0.1 ppm	
1000	EN2-4	0.1 ppm	DP
(1005)	EN2-5	0.1 ppm	SAMPLE TAKEN HARD
1010	BEGIN PUSH EN1		
~~1010~~ (1010)	EN1-0	0.0 ppm	SAMPLE TAKEN
1015	EN1-1	0.0 ppm	
1020	EN1-2	0.0 ppm	
1025	EN1-3	0.0 ppm	
1030	EN2-4	0.3 ppm	BEGIN DP
(1035)	EN1-5	0.1 ppm	SAMPLE TAKEN HARD

1045 BEGIN N1

(1045)	N1-0	3.4 ppm	SAMPLE TAKEN
1050	N1-1	2.7 ppm	
1055	N1-2	143 ppm	STRONG ODOR
1100	N1-3	94.3 ppm	
1105	N1-4	10 ppm	
(1110)	N1-5	43 ppm	CALICHE REF SAMPLE TAKEN

1125 SET UP ON WN1

(1130)	WN1-0	157.3	SAMPLE TAKEN
1135	WN1-1	197.8	
1140	WN1-2	43.5	5 FE SNAPPED
1145	WN1-3	150.1	2 ZIPLOCS REQUIRED WHEN BAGGING + CHILLING
1150	WN1-4	29.4	
(1155)	WN1-5	4.9	SAMPLE TAKEN HARD REFUS CALICHE

FE

1210 DISCUSS FINDINGS OF FIRST FEW SAMPLES
DETERMINE GEOPROBE WILL NOT PASS THE
HARD CALICHE LAYER AT ~5' + WILL
NEED ~~AIR ROTARY~~ HOLLOW STEM AUGER RIG FOR DEPT.
DEL IN TB.
1215 SETTING UP ON S2

(1220)	S2-0	0.4 ppm	SAMPLE TAKEN
1225	S2-1	0.2 ppm	
1230	S2-3	0.3 ppm	
1235	S2-4	0.2	
(1240)	S2-5	0.3	SAMPLE TAKEN Rite in the Rain

CALICHE @ 5' REFUSAL W/ GEOPROBE

4/27/2017

1250 BREAK FOR LUNCH
1320 ES2-0 0.7 ppm SAMPLE TAKEN
1325 ES2-1 0.2 ppm
1330 ES2-2 0.3 ppm
1335 ES2-3 0.1 ppm
1340 ES2-4 0.1 ppm
1345 ES2-5 0.2 ppm SAMPLE TAKEN
1400 RIGGING UP TO LEVEL BERMS + MOVE AIR ROTARY RIG INTO TB FOR VERT. DRLG
1435 SETTING UP ON V1 HAND DIG TO 3' bgs
1435 V1-0 252.4 ppm } SAMPLE TAKEN 0-3 COLLECTED BY HAND
1445 V1-1 86.7 ppm
1450 V1-2 57.6 ppm
1455 V1-3 47.7 ppm } POOR RETURN ON 4-5' INT.
1510 V1-4 5.8 ppm SAMPLE TAKEN
1540 V1-5 EOH 10 0.6 ppm SAMPLE TAKEN CALICHE
SPLIT SPOON 1555 V1-15 1.0 ppm SAMPLE TAKEN CALICHE
1610 V1-20 0.5 ppm SAMPLES TAKEN
BACKFILL HOLE W/6 BAGS OF CHIPS "HOLE PLUG"
1635 BEGIN WS1 BY HAND
1635 WS1-0 149.7 ppm SAMPLE TAKEN
1645 WS1-1 268 ppm
1650 WS1-2 88.9 ppm
1705 WS1-3 18.2 ppm SAMPLE TAKEN REFUSAL BY HAND @ 3' bgs
1715 DECON + MOVE TO S1

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LITHOLOGY
V1 — 4-6" WHITE GRAVEL WELL SORTED
6"-10" REDDISH-BROWN SILTY SAND W/ GRAVEL
SAND 10"-4' DARK GRAY TO BROWN SANDY CLAY W/ GRAVEL
4-5' DARK BROWN CLAY W/ FINE SAND + ROOT STRUCT
5'-16' LIGHT PINK CALICHE "ROCK"
16-20 WHITE CALICHE KACK

1720 BEGIN S1 SOUTHSIDE TANKS INSIDE BERM
1725 S1-0 45.0 ppm SAMPLE TAKEN
1730 S1-1 22.8 ppm
1735 S1-2 42.7 ppm
1740 S1-3 13.5 ppm REFUSAL SAMPLE TAKEN
MOVE TO NEXT LOC
1755 ES1-0 0.6 ppm SAMPLE TAKEN
1800 ES1-1 0.7 ppm
1805 ES1-2 0.7 ppm
1810 ES1-3 0.9 ppm
1815 ES1-4 0.6 ppm SAMPLE TAKEN
RECONSTRUCT BERMS W/ SKIDSTEER
1840 MOB TO N2 TO ADVANCE FIRST 2' bgs
1915 N2-3 0.1 ppm SAMPLE TAKEN
1930 CLOSING UP SITE.
1940 ALL OFF SITE

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Rite in the Rain