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DELINEATION INVESTIGATION REPORT

Newkumet Federal #1 Site Release
Lea County, New Mexico

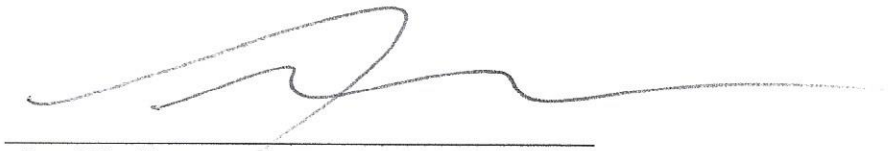
December 15, 2016

Prepared for:

Siana Operating LLC
12012 Wickchester Lane, Ste 410
Houston, Texas 77079

Prepared by:

Charger Services, Inc.
3300 N. A Street, Bldg 7
Midland, Texas 79705



Coty Woolf
Environmental Professional

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1.0 EXECUTIVE SUMMARY

This report is submitted to Siana Operating LLC (Siana), by Charger Services, Inc., (Charger), to present the delineation investigation of a crude oil and produced water spill at the Newkumet Federal #1 Site, located in Lea County, New Mexico. The spill occurred before March 24, 2016, because of equipment failure. An unknown quantity of oil and produced water were lost at the Site and covering approximately 9,200 sq. ft. of the facility. Zero bbl of oil and water were recovered with unknown total lost.

On March 24, 2016, Charger personnel arrived at the Newkumet Fed #1 Site to initiate an investigation into the release. While at the site, Charger personnel collected photo documentation of the incident and established a work plan with Siana field personnel.

On October 11, 2016, Charger personnel delineated the Site. The samples were analyzed for BTEX, TPH, and Chlorides. The laboratory ran samples consecutively until below NMOCD action limits for each sample point.

Remediation recommendations will be submitted in a separate proposal.

2.0 INTRODUCTON

This report is submitted to Siana Operating LLC (Siana), by Charger Services, Inc., (Charger), to present the delineation investigation of a crude oil and produced water spill at the Newkumet Federal #1 Site, located in Lea County, New Mexico. The spill occurred before March 24, 2016, because of equipment failure. An unknown quantity of oil and produced water were lost at the Site and covering approximately 9,200 sq. ft. of the facility. Zero bbl of oil and water were recovered with unknown total lost. The geodetic position for the spill is 32°19'12.47"N, 103°27'6.26"W. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

2.1 Setting

The setting is as follows:

- The Site is located approximately 19 miles southwest of Eunice, in Lea County, New Mexico;
- The elevation is approximately 3,375 feet above mean sea level (MSL);
- The topography is slightly undulating and slopes to the east;
- The nearest water well is located about 0.7 miles northeast and is undocumented;
- The closet surface water feature is a playa lake (seasonal) located about 3.0 miles east of the Site;
- Runoff is to the north and east.

3.0 SPILL INVESTIGATION

On March 24, 2016, Charger personnel arrived at the Site to initiate an investigation into the crude oil and produced water release. While at the Site, Charger personnel collected photo documentation of the releases and established a work plan.

On October 11, 2016, Charger personnel used an air rotary drill to collect soil samples at two (2) boring locations. The samples were collected at 2 ft, 5ft, 10 ft, etc. to 100 foot below ground surface (bgs) and analyzed by Permian Basin Environmental Lab, LP, (PBELAB) for total petroleum hydrocarbons (TPH) by method 8015M, BTEX by method 8021B, and Chlorides by method E-300.

The laboratory reported chlorides concentrations above the NMOCD action level of 250 milligrams per kilogram (mg/kg) in samples down to 20 ft bgs In sample SB-1 and down to 5 ft bgs in sample SB-2. Table 1 presents a summary of the laboratory analysis. Appendix B presents the laboratory reports.

4.0 RECOMMENDATION

Remediation recommendations will be submitted in a separate proposal.

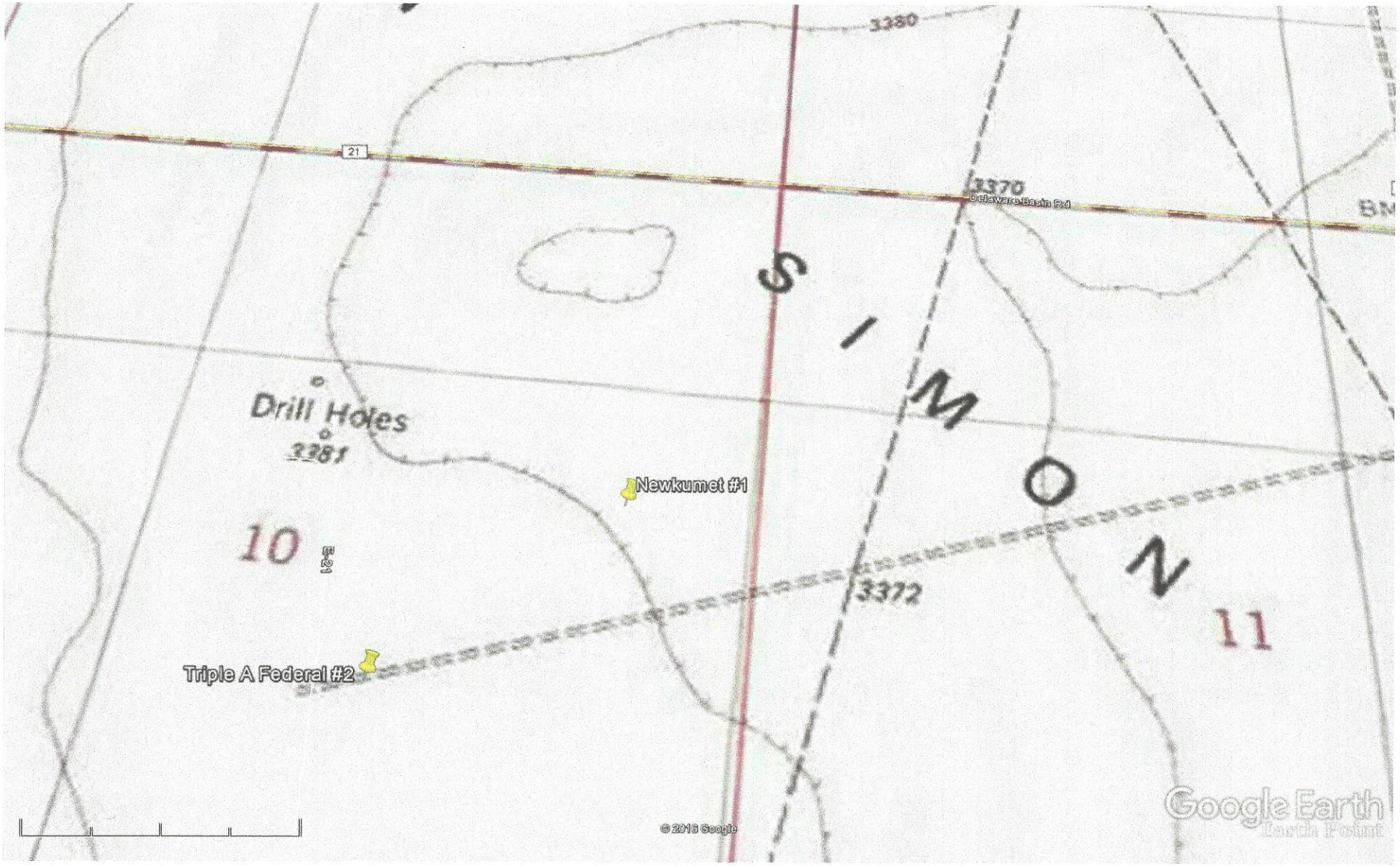
TABLES

Table 1
Soil Samples Analytical Summary
Siana Oil and Gas, New Kumet Federal #1
Lea County, New Mexico

Boring	Depth Feet BGS	Date	Chloride mg/Kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylene mg/kg	GRO mg/Kg	DRO mg/Kg	Oil mg/Kg	Total TPH mg/Kg
RRAL:											5,000
SB-1	2 - 3	10/11/2016	68.1	<0.00112	<0.00225	<0.00112	<0.00225	1,455	2,646	422	4,522
	5 - 6	10/11/2016	273	--	--	--	--	<26.596	31.0	<26.596	31.0
	10 - 11	10/11/2016	2,530	--	--	--	--	--	--	--	0
	15 - 16	10/11/2016	253	--	--	--	--	--	--	--	0
	20 - 21	10/11/2016	333	--	--	--	--	--	--	--	0
	25 - 26	10/11/2016	249	--	--	--	--	--	--	--	0
	30 - 31	10/11/2016	150	--	--	--	--	--	--	--	0
SB-2	2 - 3	10/11/2016	29.6	<0.00109	<0.00217	<0.00109	<0.00217	101	1,241	78.5	1,421
	5 - 6	10/11/2016	276	--	--	--	--	--	--	--	0
	10 - 11	10/11/2016	55.2	--	--	--	--	--	--	--	0
	15 - 16	10/11/2016	87.8	--	--	--	--	--	--	--	0

Notes: Analysis performed by Prmian Basin Environmental Lab, Midland, Texas
Samples analyzed via EPA method SW-8015M (TPH) and SW-300 (chloride).
Depth measurements are in feet below ground surface (bgs).
All concentrations are in milligrams per kilogram (mg/Kg) equivalent to parts per million (ppm).

FIGURES



Google Earth

feet 4000

km 1

Google Earth

feet 200

meters 80

Appendix A

Site Name:	Siana Newkumet Fed #1	**Location:**	Lea County, NM
Job Number:	16-0401	**Boring ID:**	SB-1
Driller:	Scarborough Drilling	**Date:**	10/11/2016
Drill Method:	Air Rotary	**Geologist:**	A. Pachlhofer
Latitude:	32°19'12.47"N	**Longitude:**	103°27'6.26"W

Depth	Time	PID (ppm)	USCS	Munsell Color	Description
Surface					
2	13:00	0.0	CH	Medium brown/slight red	Organic silt & clays/top soil with angular cobbles of caliche
5	13:05	0.0	SM	Pinkish brown	Sand with fines/silts & clays/fine ground caliche
10	13:10	0.0	SM	Light orange	Medium sized sand/25% - 40% fines/silts & clays
15	13:15	0.0	SM	Light orange to tan	Medium sized sand/25% - 40% fines/silts & clays
20	13:20	0.0	SM	Light orange to tan	Medium sized sand/25% - 40% fines/silts & clays
25	13:25	0.0	SP	Orange to light orange	Medium to fine sand/little to no silts or clays
30	13:30	0.0	SP	Orange to light orange	Medium to fine sand/little to no silts or clays

Site Name:	Siana Newkumet Fed #1	**Location:**	Lea County, NM
Job Number:	16-0401	**Boring ID:**	SB-2
Driller:	Scarborough Drilling	**Date:**	10/11/2016
Drill Method:	Air Rotary	**Geologist:**	A. Pachlhofer
Latitude:	32°19'12.47"N	**Longitude:**	103°27'6.26"W

Depth	Time	PID (ppm)	USCS	Munsell Color	Description
Surface					
2	14:45	0.0	CH	Medium brown/slight red	Organic silt & clays/top soil with angular cobbles of caliche
5	14:50	0.0	SM	Pinkish brown	Sand with fines/silts & clays/fine ground caliche
10	14:55	0.0	SM	Light orange	Medium sized sand/25% - 40% fines/silts & clays
15	15:00	0.0	SM	Light orange to tan	Medium sized sand/25% - 40% fines/silts & clays

Appendix B

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Coty Woolf

Charger Services

P.O. Box 53070

Midland, TX 79710

Project: New Kumet

Project Number: [none]

Location:

Lab Order Number: 6J17005

NELAP/TCEQ # T104704156-16-6

Report Date: 11/02/16

Charger Services
P.O. Box 53070
Midland TX, 79710

Project: New Kumet
Project Number: [none]
Project Manager: Coty Woolf

Fax: (432) 695-6247

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1 (2)	6J17005-01	Soil	10/11/16 13:00	10-14-2016 16:25
SB-1 (5)	6J17005-02	Soil	10/11/16 13:05	10-14-2016 16:25
SB-1 (10)	6J17005-03	Soil	10/11/16 13:10	10-14-2016 16:25
SB-1 (15)	6J17005-04	Soil	10/11/16 13:15	10-14-2016 16:25
SB-1 (20)	6J17005-05	Soil	10/11/16 13:20	10-14-2016 16:25
SB-1 (25)	6J17005-06	Soil	10/11/16 13:25	10-14-2016 16:25
SB-1 (30)	6J17005-07	Soil	10/11/16 13:30	10-14-2016 16:25
SB-2 (2)	6J17005-22	Soil	10/11/16 14:45	10-14-2016 16:25
SB-2 (5)	6J17005-23	Soil	10/11/16 14:50	10-14-2016 16:25
SB-2 (10)	6J17005-24	Soil	10/11/16 14:55	10-14-2016 16:25
SB-2 (15)	6J17005-25	Soil	10/11/16 15:00	10-14-2016 16:25

Charger Services
P.O. Box 53070
Midland TX, 79710

Project: New Kumet
Project Number: [none]
Project Manager: Coty Woolf

Fax: (432) 695-6247

SB-1 (2)

6J17005-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00112	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Toluene	ND	0.00225	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*85.4 %*	*75-125*		*P6J1907*	*10/19/16*	*10/19/16*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*77.1 %*	*75-125*		*P6J1907*	*10/19/16*	*10/19/16*	*EPA 8021B*	
C6-C12	**1454.8**	140.45	mg/kg dry	5	P6J1808	10/15/16	10/18/16	TX 1005	
>C12-C28	**2645.5**	140.45	mg/kg dry	5	P6J1808	10/15/16	10/18/16	TX 1005	
>C28-C35	**421.97**	140.45	mg/kg dry	5	P6J1808	10/15/16	10/18/16	TX 1005	
Surrogate: 1-Chlorooctane		*93.7 %*	*70-130*		*P6J1808*	*10/15/16*	*10/18/16*	*TX 1005*	
Surrogate: o-Terphenyl		*95.7 %*	*70-130*		*P6J1808*	*10/15/16*	*10/18/16*	*TX 1005*	
Total Hydrocarbon nC6-nC35	**4522.3**	140.45	mg/kg dry	5	[CALC]	10/15/16	10/18/16	[CALC]	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**68.1**	1.12	mg/kg dry	1	P6J1702	10/17/16	10/18/16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P6J1804	10/18/16	10/18/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-1 (5)

6J17005-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
C6-C12	ND	26.596	mg/kg dry	1	P6J1808	10/15/16	10/18/16	TX 1005	
>C12-C28	**31.032**	26.596	mg/kg dry	1	P6J1808	10/15/16	10/18/16	TX 1005	
>C28-C35	ND	26.596	mg/kg dry	1	P6J1808	10/15/16	10/18/16	TX 1005	
Surrogate: 1-Chlorooctane		*100 %*	*70-130*		*P6J1808*	*10/15/16*	*10/18/16*	*TX 1005*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P6J1808*	*10/15/16*	*10/18/16*	*TX 1005*	
Total Hydrocarbon nC6-nC35	**31.032**	26.596	mg/kg dry	1	[CALC]	10/15/16	10/18/16	[CALC]	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**273**	1.06	mg/kg dry	1	P6J1702	10/17/16	10/18/16	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P6J1804	10/18/16	10/18/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-1 (10)

6J17005-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2530**	11.2	mg/kg dry	10	P6J1702	10/17/16	10/18/16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P6J1804	10/18/16	10/18/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-1 (15)

6J17005-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**253**	1.27	mg/kg dry	1	P6J1702	10/17/16	10/18/16	EPA 300.0	
% Moisture	**21.0**	0.1	%	1	P6J1804	10/18/16	10/18/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-1 (20)

6J17005-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**333**	1.11	mg/kg dry	1	P6K0105	11/01/16	11/02/16	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P6K0104	11/01/16	11/01/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-1 (25)

6J17005-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**249**	1.10	mg/kg dry	1	P6K0105	11/01/16	11/02/16	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P6K0104	11/01/16	11/01/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-1 (30)

6J17005-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**150**	1.05	mg/kg dry	1	P6K0110	11/01/16	11/02/16	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P6K0104	11/01/16	11/01/16	% calculation	

Charger Services
P.O. Box 53070
Midland TX, 79710

Project: New Kumet
Project Number: [none]
Project Manager: Coty Woolf

Fax: (432) 695-6247

SB-2 (2)

6J17005-22 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P6J1907	10/19/16	10/19/16	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*92.3 %*	*75-125*		*P6J1907*	*10/19/16*	*10/19/16*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*78.0 %*	*75-125*		*P6J1907*	*10/19/16*	*10/19/16*	*EPA 8021B*	
C6-C12	**101.04**	27.174	mg/kg dry	1	P6J1808	10/15/16	10/18/16	TX 1005	
>C12-C28	**1241.4**	27.174	mg/kg dry	1	P6J1808	10/15/16	10/18/16	TX 1005	
>C28-C35	**78.511**	27.174	mg/kg dry	1	P6J1808	10/15/16	10/18/16	TX 1005	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P6J1808*	*10/15/16*	*10/18/16*	*TX 1005*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P6J1808*	*10/15/16*	*10/18/16*	*TX 1005*	
Total Hydrocarbon nC6-nC35	**1420.9**	27.174	mg/kg dry	1	[CALC]	10/15/16	10/18/16	[CALC]	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**29.6**	1.09	mg/kg dry	1	P6J1702	10/17/16	10/18/16	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P6J1804	10/18/16	10/18/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-2 (5)

6J17005-23 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**276**	1.12	mg/kg dry	1	P6J1702	10/17/16	10/18/16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P6J1804	10/18/16	10/18/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-2 (10)

6J17005-24 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**55.2**	1.09	mg/kg dry	1	P6J1702	10/17/16	10/18/16	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P6J1804	10/18/16	10/18/16	% calculation	

Charger Services	Project: New Kumet	Fax: (432) 695-6247
P.O. Box 53070	Project Number: [none]	
Midland TX, 79710	Project Manager: Coty Woolf	

SB-2 (15)

6J17005-25 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**87.8**	1.14	mg/kg dry	1	P6J1702	10/17/16	10/18/16	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P6J1804	10/18/16	10/18/16	% calculation	

Charger Services
P.O. Box 53070
Midland TX, 79710

Project: New Kumet
Project Number: [none]
Project Manager: Coty Woolf

Fax: (432) 695-6247

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6J1808 - General Preparation (GC)										
Blank (P6J1808-BLK1)				Prepared: 10/15/16 Analyzed: 10/18/16						
C6-C12	ND	25.000	mg/kg wet							
>C12-C28	ND	25.000	"							
>C28-C35	ND	25.000	"							
Surrogate: 1-Chlorooctane	*101*		*"*	*100*		*101*	*70-130*			
Surrogate: o-Terphenyl	*53.7*		*"*	*50.0*		*107*	*70-130*			
LCS (P6J1808-BS1)				Prepared: 10/15/16 Analyzed: 10/18/16						
C6-C12	998	25.000	mg/kg wet	1000		99.8	75-125			
>C12-C28	928	25.000	"	1000		92.8	75-125			
Surrogate: 1-Chlorooctane	*118*		*"*	*100*		*118*	*70-130*			
Surrogate: o-Terphenyl	*51.1*		*"*	*50.0*		*102*	*70-130*			
LCS Dup (P6J1808-BSD1)				Prepared: 10/15/16 Analyzed: 10/18/16						
C6-C12	957	25.000	mg/kg wet	1000		95.7	75-125	4.14	20	
>C12-C28	867	25.000	"	1000		86.7	75-125	6.84	20	
Surrogate: 1-Chlorooctane	*113*		*"*	*100*		*113*	*70-130*			
Surrogate: o-Terphenyl	*49.6*		*"*	*50.0*		*99.3*	*70-130*			
Batch P6J1907 - General Preparation (GC)										
Blank (P6J1907-BLK1)				Prepared & Analyzed: 10/19/16						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0638*		*"*	*0.0800*		*79.7*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0766*		*"*	*0.0800*		*95.7*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6J1907 - General Preparation (GC)										
LCS (P6J1907-BS1)				Prepared & Analyzed: 10/19/16						
Benzene	0.0903	0.00100	mg/kg wet	0.100		90.3	70-130			
Toluene	0.0887	0.00200	"	0.100		88.7	70-130			
Ethylbenzene	0.119	0.00100	"	0.100		119	70-130			
Xylene (p/m)	0.223	0.00200	"	0.200		112	70-130			
Xylene (o)	0.107	0.00100	"	0.100		107	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0726*		*"*	*0.0800*		*90.7*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0693*		*"*	*0.0800*		*86.6*	*75-125*			
LCS Dup (P6J1907-BSD1)				Prepared & Analyzed: 10/19/16						
Benzene	0.0936	0.00100	mg/kg wet	0.100		93.6	70-130	3.64	20	
Toluene	0.0944	0.00200	"	0.100		94.4	70-130	6.21	20	
Ethylbenzene	0.104	0.00100	"	0.100		104	70-130	13.1	20	
Xylene (p/m)	0.212	0.00200	"	0.200		106	70-130	5.16	20	
Xylene (o)	0.116	0.00100	"	0.100		116	70-130	8.18	20	
Surrogate: 4-Bromofluorobenzene	*0.0777*		*"*	*0.0800*		*97.1*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0688*		*"*	*0.0800*		*86.0*	*75-125*			
Matrix Spike (P6J1907-MS1)	**Source: 6J17004-01**			Prepared & Analyzed: 10/19/16						
Benzene	0.0715	0.00111	mg/kg dry	0.111	ND	64.4	80-120			QM-07
Toluene	0.0720	0.00222	"	0.111	ND	64.8	80-120			QM-07
Ethylbenzene	0.105	0.00111	"	0.111	ND	94.4	80-120			
Xylene (p/m)	0.187	0.00222	"	0.222	ND	84.1	80-120			
Xylene (o)	0.0923	0.00111	"	0.111	ND	83.1	80-120			
Surrogate: 4-Bromofluorobenzene	*0.0879*		*"*	*0.0889*		*98.8*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0707*		*"*	*0.0889*		*79.5*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6J1702 - * DEFAULT PREP *** **										
Blank (P6J1702-BLK1)				Prepared: 10/17/16 Analyzed: 10/18/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6J1702-BS1)				Prepared: 10/17/16 Analyzed: 10/18/16						
Chloride	400	1.00	mg/kg wet	400		99.9	80-120			
LCS Dup (P6J1702-BSD1)				Prepared: 10/17/16 Analyzed: 10/18/16						
Chloride	398	1.00	mg/kg wet	400		99.6	80-120	0.313	20	
Duplicate (P6J1702-DUP1)		**Source: 6J17002-01**		Prepared: 10/17/16 Analyzed: 10/18/16						
Chloride	935	11.1	mg/kg dry		940			0.569	20	
Duplicate (P6J1702-DUP2)		**Source: 6J17004-25**		Prepared: 10/17/16 Analyzed: 10/18/16						
Chloride	141	1.15	mg/kg dry		141			0.0163	20	
Matrix Spike (P6J1702-MS1)		**Source: 6J17002-01**		Prepared: 10/17/16 Analyzed: 10/18/16						
Chloride	1540	11.1	mg/kg dry	556	940	108	80-120			
Batch P6J1804 - * DEFAULT PREP *** **										
Blank (P6J1804-BLK1)				Prepared & Analyzed: 10/18/16						
% Moisture	ND	0.1	%							
Duplicate (P6J1804-DUP1)		**Source: 6J17004-25**		Prepared & Analyzed: 10/18/16						
% Moisture	13.0	0.1	%		13.0			0.00	20	
Duplicate (P6J1804-DUP2)		**Source: 6J17009-05**		Prepared & Analyzed: 10/18/16						
% Moisture	ND	0.1	%		ND				20	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6J1804 - * DEFAULT PREP *** **										
Duplicate (P6J1804-DUP3)		**Source: 6J17013-04**		Prepared & Analyzed: 10/18/16						
% Moisture	ND	0.1	%		8.0			200	20	
Batch P6K0104 - * DEFAULT PREP *** **										
Blank (P6K0104-BLK1)				Prepared & Analyzed: 11/01/16						
% Moisture	ND	0.1	%							
Duplicate (P6K0104-DUP1)		**Source: 6J31008-02**		Prepared & Analyzed: 11/01/16						
% Moisture	2.0	0.1	%		3.0			40.0	20	
Duplicate (P6K0104-DUP2)		**Source: 6J20003-13**		Prepared & Analyzed: 11/01/16						
% Moisture	2.0	0.1	%		1.0			66.7	20	
Batch P6K0105 - * DEFAULT PREP *** **										
Blank (P6K0105-BLK1)				Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6K0105-BS1)				Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	404	1.00	mg/kg wet	400		101	80-120			
Duplicate (P6K0105-DUP1)		**Source: 6K01001-01**		Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	5.61	1.01	mg/kg dry		5.39			3.86	20	
Duplicate (P6K0105-DUP2)		**Source: 6J17004-14**		Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	17100	54.9	mg/kg dry		17100			0.0483	20	

Charger Services
P.O. Box 53070
Midland TX, 79710

Project: New Kumet
Project Number: [none]
Project Manager: Coty Woolf

Fax: (432) 695-6247

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P6K0105 - * DEFAULT PREP *** **										
Matrix Spike (P6K0105-MS1)	**Source: 6K01001-01**			Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	843	1.01	mg/kg dry	1010	5.39	82.9	80-120			
Batch P6K0110 - * DEFAULT PREP *** **										
Blank (P6K0110-BLK1)				Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	ND	1.00	mg/kg wet							
LCS (P6K0110-BS1)				Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	417	1.00	mg/kg wet	400		104	80-120			
LCS Dup (P6K0110-BSD1)				Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	426	1.00	mg/kg wet	400		107	80-120	2.09	20	
Duplicate (P6K0110-DUP1)	**Source: 6J17005-07**			Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	150	1.05	mg/kg dry		150			0.0979	20	
Duplicate (P6K0110-DUP2)	**Source: 6J17005-17**			Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	32.9	1.04	mg/kg dry		32.8			0.349	20	
Matrix Spike (P6K0110-MS1)	**Source: 6J17005-07**			Prepared: 11/01/16 Analyzed: 11/02/16						
Chloride	1090	1.05	mg/kg dry	1050	150	89.2	80-120			

Charger Services
P.O. Box 53070
Midland TX, 79710

Project: New Kumet
Project Number: [none]
Project Manager: Coty Woolf

Fax: (432) 695-6247

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:  Date: 11/2/2016

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin Hwy
Midland, Texas 79701

Phone: 432-686-7235

Project Manager: Coty Woolf
Company Name: Charger Services
Company Address:
City/State/Zip:
Telephone No: 325-669-5735
Sampler Signature:

Project Name: NewKumet #1 (Siana)
Project #:
Project Loc:
PO #:
Fax No:
e-mail: coty.woolf@chargerservices.com

Report Format: X Standard ☐ TRRP ☐ NPDES

(lab use only) ORDER #: 617005

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth (ft)	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3 250 ml Poly	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None 1L Poly	NaOH/ZnAc	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH by TX 1005 (8015) 8015M	Chlorides	BTEX by 8021B	Rush 24 48 72 (Please call)	Standard
1	SB-1		2	10/11/16	1:00		1	X								S	X	X	X		
2			5		1:05																
3			10		1:10																
4			15		1:15																
5			20		1:20																
6			25		1:25																
7			30		1:30																
8			~~35~~		1:35																
9			40		1:40																
10			45		1:45																

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	10/14/16	425			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	10/14/16	1625

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: 2.0 °C Factor NCF U

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin Hwy
Midland, Texas 79701
Phone: 432-686-7235

Project Manager: Coty Woolf
Company Name: Charger Services
Company Address:
City/State/Zip:
Telephone No: 325-669-5735
Sampler Signature:

Project Name: Sirna NewKumet #1
Project #:
Project Loc:
PO #:
Fax No:
Report Format: X Standard ☐ TRRP ☐ NPDES
e-mail: Coty.woolf@chargerservices.com

(lab use only) ORDER #: 605170005

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth (ft)	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3 250ml Poly	HCl	H2SO4	NaOH	Na2S2O3	None 1L Poly	NaOH/ZnAc	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH by TX 1005 (8015) 8015M	Chloride (8021B)	BTEX by 8021B	Rush 24 48 72 (Please call)	Standard
11	SB-1		50	10/11/16	1:50		1	X								S	X	X	X		
12			55		1:55		1	X									X	X	X		
13			60		2:00																
14			65		2:05																
15			70		2:10																
16			75		2:15																
17			80		2:20																
18			85		2:25																
19			90		2:30																
20			95		2:35		✓	✓								✓	✓	✓	✓		

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	10/14/16	4:26			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
				10/14/16	1626

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: 2.0 °C
Adjusted: 2.0 °C Factor NCF 1.1

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin Hwy
Midland, Texas 79701

Phone: 432-686-7235

Project Manager: Coty Woolf
Company Name: Charger Services
Company Address:
City/State/Zip:
Telephone No: 325-669-5735
Sampler Signature:

Project Name: Ziana New Kornet #1
Project #:
Project Loc:
PO #:
Fax No:
e-mail: coty.woolf@chargerservices.com

Report Format: X Standard ☐ TRRP ☐ NPDES

(lab use only) ORDER #: 6531705

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3 250ml Poly	HCl	H2SO4	NaOH	Na2S2O3	None 1L Poly	NaOH/ZnAc	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TPH by TX 1005 8015B 8015M	Chloride	BTEX by 8021B	Rush 24 48 72 (Please call)	Standard
1	SB-1		100		2:40		1	X									S		X	X	X		

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	10/14/16	426			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
				10/14/16	1690

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received 2.0 °C
Adjusted 2.0 °C Factor NCF 1

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin Hwy
Midland, Texas 79701
Phone: 432-686-7235

Project Manager: Coty Woolf
Company Name: Charger Services
Company Address:
City/State/Zip:
Telephone No: 325-669-5735
Sampler Signature:

Project Name: Sierra Newkumet #1
Project #:
Project Loc:
PO #:
Fax No:
e-mail: Coty.Woolf@chargerservices.com

Report Format: X Standard ☐ TRRP ☐ NPDES

(lab use only) ORDER #: 16J17005

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth (ft)	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3 250ml Poly	HCl	H2SO4	NaOH	Na2S2O3	None 1L Poly	NaOH/ZnAc	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH by TX 1005 (8015B) 8015M	Chloride	BTEX by 8021B	Rush 24 48 72 (Please call)	Standard
22	SB-2		2'	10/11/16	2:45		1	X								S	X	X	X		
23			5		2:50																
24			10		2:55																
25			15		3:00																
26			20		3:05																
27			25		3:10																
28			30		3:15																
29			35		3:20																
30			40		3:25																
31			45		3:30																

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	10/14/16	427			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	10/14/16	1628

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: 2.0 °C
Adjusted: °C Factor

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin Hwy
Midland, Texas 79701

Phone: 432-686-7235

Project Manager: Coty Woolf
Company Name: Charger Services
Company Address:
City/State/Zip:
Telephone No: 325-669-5735
Sampler Signature:

Project Name: Sierra Newkumet #1
Project #:
Project Loc:
PO #:
Fax No:
e-mail: Coty.Woolf@ChargerServices.com

Report Format: X Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 651005

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3 250ml Poly	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None 1L Poly	NaOH/ZnAc	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TPH by TX 1005	8015B, 8015M Chloride	BTEX by 8021B	Rush 24 48 72 (Please call)	Standard
52	SB-2		50	10/11/16	3:35		1	X									5		X	X	X		

Special Instructions:

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N

by Sampler/Client Rep. ?
by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: 2.0 °C
Adjusted: °C Factor

	Date	Time		Date	Time
Relinquished by:	10/14/16	428			
Relinquished by:			Received by:		
Relinquished by:			Received by:	10/14/16	1628