

APPROVED Conditional By OCD District 1 at 9:14 am, Aug 07, 2015

1. OCD approves removing 4 feet of soil in the affected areas.

2. Ensure confirmation sample in the same area as S4.

3. Ensure BLM approval/concurrence.

August 4, 2015

Mr. Ronald A. Conaway, Operations Manager Raging Bull Oilfield Services 2007 Algerita St, Carlsbad, NM 88220

RE: Trionyx 6 Fed 5H Produced Water Release Delineation Sec. 6 T23S S32E, Lea County, NM

Dear Mr. Conaway:

Raging Bull Oilfield Services (Raging Bull) retained Enviro Clean Services, LLC (ECS) to collect soil samples near the Trionyx 6 Fed 5H site located in Lea County, New Mexico (approximately 32.15322°N, 103.71263°W), following a produced water release. **Figure 1** is a site map depicting the area of release and soil sample locations. The affected area is in a Devon water line, Plains Pipeline, and a power line easement to the north of the Trionyx facility.

The New Mexico Oil Conservation Division's (OCD) Form C-141 prepared for this site indicates that on the afternoon of June 17, 2015, a lay flat line released 75 barrels (bbls) of produced water, with two bbls recovered by vacuum truck. The net loss is 73 bbls of produced water.

On July 24, 2015, ECS field personnel collected soil samples from five locations within the impacted area. Sample depths were from the surface and at one-foot intervals to three feet below ground surface (bgs). The samples were transported under chain-of-custody to Permian Basin Environmental Lab, LP in Midland, Texas using industry standards for care and preservation. All samples were analyzed for Chlorides (EPA method 300.0) and Total Petroleum Hydrocarbons (TPH, EPA method 8015M).

General Site Characteristics

The affected property is along a pipeline right-of-way leased from the Bureau of Land Management (BLM). The *Geologic Map of New Mexico* (NMBGMR, 2003) indicates the site's surface geology is comprised of Qep – Quaternary eolian and piedmont deposits (Holocene to middle Pleistocene). This designation is for interlayed eolian sands and piedmont-slope deposits along the eastern flank of the Pecos River valley, primarily between Roswell and Carlsbad. The unit is typically capped by thin eolian deposits. The Natural Resource Conservation Service identifies the local soils as PT – Pyote loamy fine sand, which consist of sandy eolian deposits derived from sedimentary rock, typically with a profile of loamy fine sand at the surface, with fine

S:\ECS Midland\ER&R\PROJECTS\Raging Bull\RBLRNM0001 Trionyx Tank Spill

sandy loam at a depth of five feet. These descriptions are consistent with the affected native soils.

The OCD Recommended Remediation Action Levels (RRALs) are a ranking system used to evaluate regulatory requirements. RRALs are based on depth to water, wellhead protection area distance, and the distance to surface water bodies. The nearest water well is more than a mile away, and the reported depth to groundwater is approximately 636 feet bgs. There is no surface water within several miles of the site.

Using the site-specific data, the RRALs for the site are 10 parts per million (ppm, or mg/Kg) benzene, 50 ppm BTEX, and 5,000 ppm TPH. All of the sample locations exhibited elevated levels of chlorides at varying depths when compared to this standard. Table 1 summarizes the analytical results, and the laboratory analytical report and chain of custody documentation are attached for your records.

Sample ID	Depth (feet)	Date Collected	TPH C6-C12	TPH >C12-C28	TPH >C28-C35	Total TPH	Chlorides*
	RRAL					5,000	1,000
001	0	7/24/2015	<26.0	33.6	68.5	102	5,420
001A	1	7/24/2015	<26.0	<26.0	<26.0	<26.0	1,780
001B	2	7/24/2015	<26.0	<26.0	<26.0	<26.0	42.0
001C	3	7/24/2015	<26.0	<26.0	<26.0	<26.0	52.0
002	0	7/24/2015	<26.9	<26.9	<26.9	<26.9	15.3
002A	1	7/24/2015	<27.5	<27.5	<27.5	<27.5	18.6
002B	2	7/24/2015	<28.7	<28.7	<28.7	<28.7	83.9
002C	3	7/24/2015	<27.2	<27.2	<27.2	<27.2	7,960
003	0	7/24/2015	<26.9	<26.9	<26.9	<26.9	53
003A	1	7/24/2015	<26.9	<26.9	<26.9	<26.9	297
003B	2	7/24/2015	<26.9	<26.9	<26.9	<26.9	10,100
003C	3	7/24/2015	<27.5	<27.5	<27.5	<27.5	812
004	0	7/24/2015	<26.9	<26.9	<26.9	<26.9	15.8
004A	1	7/24/2015	<26.9	<26.9	<26.9	<26.9	22.9
004B	2	7/24/2015	<27.8	<27.8	<27.8	<27.8	14,100
004C	3	7/24/2015	<27.8	<27.8	<27.8	<27.8	55.6
005	0	7/24/2015	<26.6	<26.6	<26.6	<26.6	1,040
005A	1	7/24/2015	<25.8	<25.8	<25.8	<25.8	85,600
005B	2	7/24/2015	<26.6	<26.6	<26.6	<26.6	426
005C	3	7/24/2015	<27.2	<27.2	<27.2	<27.2	358
BG	0	7/24/2015	<25.8	<25.8	<25.8	<25.8	12.5
BG 1'	1	7/24/2015	<25.5	<25.5	<25.5	<25.5	7.28
BG 2'	2	7/24/2015	<25.5	<25.5	<25.5	<25.5	6.53
All values are	e in milligrams	per kilogram ((mg/Kg, ppm)		Analyte dete	ctions are bol	ded.

Table 1 – Analy	tical Results Summary	
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All values are in milligrams per kilogram (mg/Kg, ppm) Values that exceed the Recommended Remediation Action Levels (RRAL) are shaded.

*Chloride values are site specific; 1,000 is a regionally accepted target value.

Oil Conservation Division Work Plan

Based on the analytical result, the impacted soils are less than two feet bgs in the vicinity of 001 and 005, the extreme ends of the flow area. Within the vicinity of sample collection points 002, 003, and 004 the surface is unimpacted, but elevated chloride concentrations are detected at two and three feet depths. These higher concentrations at depths may be due to lower clay content soil allowing the produced water to drain quicker to the subsurface, leaving little chloride adsorption to the sands. The recommended course of action would be to excavate impacted soils and either blending to dilute concentrations or replacing the impacted soils as directed by the BLM (surface owner). With Raging Bull's concurrence, ECS will prepare a cost estimate to surgically excavate these locations and collect vertical delineation confirmation samples.

ECS appreciates the opportunity to be of service to Raging Bull. If you have any questions about the information presented in this report, please contact me at <u>bgreen@envirocleanps.com</u> or at 432.301.0209.

Sincerely,

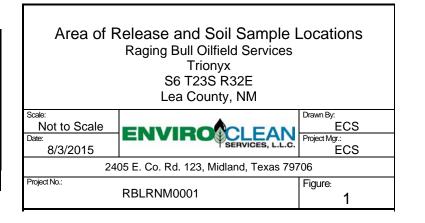
Enviro Clean Services, LLC

William D. Green, PG Geologist, Texas No. 136

Attachments: Figure 1: Area of Release and Soil Sample Locations Initial C-141 Laboratory Analytical Report and Chain of Custody Documentation Photographic Documentation



Sample	Sample Location GPS Points										
Sample											
Location	Latitude	Longitude									
001	N32.15322°	W103.71263°									
002	N32.15321°	W103.71295°									
003	N32.15342°	W103.71313°									
004	N32.15325°	W103.71370°									
005	N32.15334°	W103.71375°									



Oil Conservation Division 1220 South St. Francis Dr.

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

	South	St. Franc	is Dr.		
1220 S. St. Francis Dr., Santa Fe, NM 87505 Sar	nta Fe	, NM 875	05		
Release Notifica				ction	
		OPERA			al Report 📃 Final Repo
Name of Company:Devon Energy Production Co LP(6137)		Contact:	Jeff H		
Address:PO Box 250 Artesia, NM 88211		Felephone N	No. 575-5	13-2274	
Facility Name:Trionyx 6 Fed 5H]	Facility Typ	e: Pastur	е	
Surface Owner: Federal Mineral Ov	wner:	Federal		API No	. 30-025-40045
LOCA	TION	OF REI	LEASE	·	
	North/	South Line South	Feet from the 2310	East/West Line East	County Lea
Latitude: 32.152576590)387	_Longitu	le: <u>103.71331</u>	6335273	
	URE	OF REL			
Type of Release: Produced Water		Volume of	Release: 75 bbl	s Volume F	Recovered: 2 bbls
Source of Release: Lay Flat Water Transfer Line			our of Occurrenc /15, 3:30 PM		Hour of Discovery 17/15, 3:30 PM
Was Immediate Notice Given?	quired	If YES, To O	Whom? CD- Thomas Ob	bering B	LM- Jim Amos
By Whom?	_	Date and H		-	
Jeff Heath, Devon Foreman			/17/15, 7:30 PM		
Was a Watercourse Reached?		If YES, Vo	lume Impacting t N/A	he Watercourse.	
If a Watercourse was Impacted, Describe Fully.*	N/A				
Describe Cause of Problem and Remedial Action Taken.* Raging Bull employee started to transfer produced water from inspected the lay flat line. The line was uncoupled which cause					y before he had driven and
Describe Area Affected and Cleanup Action Taken.*					
The spill occurred off location in the pasture in an area approx produced water. Talon will take soil samples and prepare a ren			are feet. A vacuu	m truck was able	to recover 2 barrels of the
I hereby certify that the information given above is true and complet regulations all operators are required to report and/or file certain re- public health or the environment. The acceptance of a C-141 repor should their operations have failed to adequately investigate and re- or the environment. In addition, NMOCD acceptance of a C-141 re- federal, state, or local laws and/or regulations.	lease no t by the mediate	otifications as NMOCD m contaminati	nd perform correct arked as "Final R on that pose a thr	tive actions for rele eport" does not reli eat to ground water	eases which may endanger eve the operator of liability , surface water, human health
Signature:			OIL CON	SERVATION	DIVISION
Printed Name: Denise Menoud		Approved by	Environmental S	pecialist:	
Title: Field Admin Support	1	Approval Dat	e:	Expiration	Date:
E-mail Address: Denise.Menoud@dvn.com	(Conditions of	Approval:		Attached
Date: 6/18/2015 Phone: 575-746-5544					

* Attach Additional Sheets If Necessary

PERMIAN BASIN ENVIRONMENTAL LAB, LP 10014 SCR 1213 Midland, TX 79706



Analytical Report

Prepared for:

Joel Ortiz EnviroClean PS 2405 E CR 123 Midland, TEXAS 79706

Project: Raging Bull Project Number: Trionyx tank Location: New Mexico

Lab Order Number: 5G28003



NELAP/TCEQ # T104704156-13-3

Report Date: 08/04/15

EnviroClean PS 2405 E CR 123 Midland TEXAS, 79706

Project: Raging Bull Project Number: Trionyx tank Project Manager: Joel Ortiz

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SAMPLE 001	5G28003-01	Soil	07/24/15 11:48	07-28-2015 10:25
SAMPLE 001A	5G28003-02	Soil	07/24/15 11:50	07-28-2015 10:25
SAMPLE 001B	5G28003-03	Soil	07/24/15 12:20	07-28-2015 10:25
SAMPLE 001C	5G28003-04	Soil	07/24/15 12:25	07-28-2015 10:25
SAMPLE 002	5G28003-05	Soil	07/24/15 12:30	07-28-2015 10:25
SAMPLE 002A	5G28003-06	Soil	07/24/15 12:35	07-28-2015 10:25
SAMPLE 002B	5G28003-07	Soil	07/24/15 12:35	07-28-2015 10:25
SAMPLE 002C	5G28003-08	Soil	07/24/15 12:40	07-28-2015 10:25
SAMPLE 003	5G28003-09	Soil	07/24/15 12:43	07-28-2015 10:25
SAMPLE 003A	5G28003-10	Soil	07/24/15 12:45	07-28-2015 10:25
SAMPLE 003B	5G28003-11	Soil	07/24/15 12:47	07-28-2015 10:25
SAMPLE 003C	5G28003-12	Soil	07/24/15 12:50	07-28-2015 10:25
SAMPLE 004	5G28003-13	Soil	07/24/15 12:52	07-28-2015 10:25
SAMPLE 004A	5G28003-14	Soil	07/24/15 12:54	07-28-2015 10:25
SAMPLE 004B	5G28003-15	Soil	07/24/15 12:55	07-28-2015 10:25
SAMPLE 004C	5G28003-16	Soil	07/24/15 13:00	07-28-2015 10:25
SAMPLE 005	5G28003-17	Soil	07/24/15 13:05	07-28-2015 10:25
SAMPLE 005A	5G28003-18	Soil	07/24/15 13:06	07-28-2015 10:25
SAMPLE 005B	5G28003-19	Soil	07/24/15 13:10	07-28-2015 10:25
SAMPLE 005C	5G28003-20	Soil	07/24/15 13:12	07-28-2015 10:25
BG	5G28003-21	Soil	07/24/15 11:53	07-28-2015 10:25
BG 1'	5G28003-22	Soil	07/24/15 11:55	07-28-2015 10:25
BG 2'	5G28003-23	Soil	07/24/15 11:57	07-28-2015 10:25

SAMPLE 001

5G28003-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permi	an Basin F	Invironmen	tal Lab,	L.P.				
General Chemistry Parameters by EPA	/ Standard Methods								
Chloride	5420	26.0	mg/kg dry	25	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	4.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35	by EPA Method 801	5M							
C6-C12	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C12-C28	33.6	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C28-C35	68.5	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: 1-Chlorooctane		80.3 %	70-1.	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: o-Terphenyl		97.9 %	70-1.	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	102	26.0	mg/kg dry	1	[CALC]	07/28/15	07/28/15	calc	

SAMPLE 001A

5G28003-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Environmei	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	Standard Method	ls							
Chloride	1780	5.21	mg/kg dry	5	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	4.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	015M							
C6-C12	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: 1-Chlorooctane		79.4 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: o-Terphenyl		97.0 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	07/28/15	07/28/15	calc	

SAMPLE 001B

5G28003-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Environmer	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	S							
Chloride	42.0	1.04	mg/kg dry	1	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	4.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: 1-Chlorooctane		81.8 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: o-Terphenyl		<i>99.7 %</i>	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	07/28/15	07/28/15	calc	

SAMPLE 001C

5G28003-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Invironmer	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	s							
Chloride	52.0	1.04	mg/kg dry	1	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	4.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: 1-Chlorooctane		78.3 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: o-Terphenyl		95.4 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	07/28/15	07/28/15	calc	

SAMPLE 002

5G28003-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	Environmei	ital Lab, I	L.P.				
General Chemistry Parameters by EPA / S	Standard Method	ls							
Chloride	15.3	1.08	mg/kg dry	1	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	7.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	015M							
C6-C12	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: 1-Chlorooctane		82.7 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: o-Terphenyl		101 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	07/28/15	07/28/15	calc	

SAMPLE 002A

5G28003-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	nvironme	ital Lab, I	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	ls							
Chloride	18.6	1.10	mg/kg dry	1	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	9.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	015M							
C6-C12	ND	27.5	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: 1-Chlorooctane		74.3 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: o-Terphenyl		91.1 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	07/28/15	07/28/15	calc	

SAMPLE 002B

5G28003-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	nvironmer	ital Lab,	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	s							
Chloride	83.9	1.15	mg/kg dry	1	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	13.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	28.7	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: 1-Chlorooctane		78.4 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: o-Terphenyl		97.2 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	07/28/15	07/28/15	calc	

SAMPLE 002C

5G28003-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Invironmen	ntal Lab, I	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	ls							
Chloride	7960	27.2	mg/kg dry	25	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	8.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	27.2	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: 1-Chlorooctane		77.9 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Surrogate: o-Terphenyl		95.5 %	70-1	30	P5G3007	07/28/15	07/28/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	07/28/15	07/28/15	calc	

SAMPLE 003

5G28003-09 (Soil)

Annalista	Dervilt	Reporting	T T: 4-	Dilution	Datah	Duranad	A	Matha d	Natas
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	nian Basin E	nvironmer	ital Lab, I	L.P.				
General Chemistry Parameters by EPA / St	andard Method	ls							
Chloride	52.7	1.08	mg/kg dry	1	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	7.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80)15M							
C6-C12	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		80.4 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		99.3 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 003A

5G28003-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Environmer	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	s							
Chloride	297	1.08	mg/kg dry	1	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	7.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		77.0 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		94.3 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 003B

5G28003-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	Invironmer	ntal Lab,	L.P.				
General Chemistry Parameters by EPA /	Standard Method	S							
Chloride	10100	53.8	mg/kg dry	50	P5G3010	07/28/15	07/30/15	EPA 300.0	
% Moisture	7.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 b	y EPA Method 80	15M							
C6-C12	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		78.3 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		96.5 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 003C

5G28003-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	nvironme	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	Standard Method	S							
Chloride	812	1.10	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	9.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	27.5	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		76.8 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		95.0 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 004

5G28003-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Invironme	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	Standard Method	S							
Chloride	15.8	1.08	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	7.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		79.7 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		98.5 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 004A

5G28003-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Environme	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	Standard Method	s							
Chloride	22.9	1.08	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	7.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	015M							
C6-C12	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		79.8 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		98.4 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 004B

5G28003-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	nvironmen	tal Lab,	L.P.				
General Chemistry Parameters by EPA / S	standard Method	s							
Chloride	14100	55.6	mg/kg dry	50	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	10.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	27.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		74.6 %	70-1.	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		90.3 %	70-1.	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 004C

5G28003-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin E	nvironmen	tal Lab,	L.P.				
General Chemistry Parameters by EPA / S	standard Method	s							
Chloride	10200	55.6	mg/kg dry	50	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	10.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	27.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		76.1 %	70-1.	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		93.4 %	70-1.	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 005

5G28003-17 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Environmei	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	Standard Method	ls							
Chloride	1040	1.06	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	6.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	015M							
C6-C12	ND	26.6	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		72.7 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		89.3 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 005A

5G28003-18 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Cnvironmer	ital Lab,	L.P.				
General Chemistry Parameters by EPA / S	Standard Method	S							
Chloride	7940	25.8	mg/kg dry	25	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	3.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	y EPA Method 80	15M							
C6-C12	ND	25.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		73.7%	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		90.2 %	70-1	30	P5G3007	07/28/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	07/28/15	07/29/15	calc	

SAMPLE 005B

5G28003-19 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	nvironme	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	s							
Chloride	426	1.06	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	6.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	26.6	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		91.0 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		113 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	07/29/15	07/29/15	calc	

SAMPLE 005C

5G28003-20 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Perm	ian Basin F	Environmei	ntal Lab,	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	s							
Chloride	358	1.09	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	8.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M							
C6-C12	ND	27.2	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		88.8 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		110 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	07/29/15	07/29/15	calc	

BG

5G28003-21 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes					
	Perm	ian Basin E	Environme	ntal Lab, I	L.P.									
General Chemistry Parameters by EPA / Standard Methods														
Chloride	12.5	1.03	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0						
% Moisture	3.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation						
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 80	15M												
C6-C12	ND	25.8	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M						
>C12-C28	ND	25.8	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M						
>C28-C35	ND	25.8	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M						
Surrogate: 1-Chlorooctane		85.9 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M						
Surrogate: o-Terphenyl		108 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M						
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	07/29/15	07/29/15	calc						

BG 1'

5G28003-22 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	1ian Basin E	Cnvironmei	ntal Lab, I	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	ls							
Chloride	7.28	1.02	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	2.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 8()15M							
C6-C12	ND	25.5	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		89.7 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		111 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	07/29/15	07/29/15	calc	

BG 2'

5G28003-23 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pern	11an Basin E	nvironmen	ital Lab, 1	L.P.				
General Chemistry Parameters by EPA / S	tandard Method	ls							
Chloride	6.53	1.02	mg/kg dry	1	P5G3011	07/30/15	07/30/15	EPA 300.0	
% Moisture	2.0	0.1	%	1	P5G2901	07/29/15	07/29/15	% calculation	
Total Petroleum Hydrocarbons C6-C35 by	EPA Method 8()15M							
C6-C12	ND	25.5	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P5G3008	07/29/15	07/29/15	TPH 8015M	
Surrogate: 1-Chlorooctane		88.8 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M	
Surrogate: o-Terphenyl		111 %	70-1	30	P5G3008	07/29/15	07/29/15	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	07/29/15	07/29/15	calc	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P5G2901 - *** DEFAULT PREP ***										
Blank (P5G2901-BLK1)				Prepared &	Analyzed	: 07/29/15				
% Moisture	ND	0.1	%							
Duplicate (P5G2901-DUP1)	Sour	·ce: 5G28006-	-02	Prepared &	Analyzed	: 07/29/15				
% Moisture	ND	0.1	%		1.0			200	20	
Duplicate (P5G2901-DUP2)	Sour	·ce: 5G28006-	-03	Prepared &	Analyzed	: 07/29/15				
% Moisture	5.0	0.1	%		5.0			0.00	20	
Duplicate (P5G2901-DUP3)	Sour	·ce: 5G28006-	-04	Prepared &	Analyzed	: 07/29/15				
% Moisture	2.0	0.1	%		4.0			66.7	20	
/	2.0	0.1	/0		4.0			00.7	20	
Batch P5G3010 - *** DEFAULT PREP ***	2.0	0.1	70		4.0			00.7	20	
Batch P5G3010 - *** DEFAULT PREP ***	2.0	0.1	/0	Prepared: 0		Analyzed: 07	7/30/15	00.7		
Batch P5G3010 - *** DEFAULT PREP *** Blank (P5G3010-BLK1)	ND		/o mg/kg wet	Prepared: 0		Analyzed: 07	7/30/15			
Batch P5G3010 - *** DEFAULT PREP *** Blank (P5G3010-BLK1) Chloride)7/28/15 A	Analyzed: 07 Analyzed: 07				
Batch P5G3010 - *** DEFAULT PREP *** Blank (P5G3010-BLK1) Chloride LCS (P5G3010-BS1)		1.00)7/28/15 A					
Batch P5G3010 - *** DEFAULT PREP *** Blank (P5G3010-BLK1) Chloride LCS (P5G3010-BS1) Chloride	ND	1.00	mg/kg wet	Prepared: 0	07/28/15 A	Analyzed: 07	7/30/15 80-120			
Batch P5G3010 - *** DEFAULT PREP *** Blank (P5G3010-BLK1) Chloride LCS (P5G3010-BS1) Chloride LCS Dup (P5G3010-BSD1)	ND	1.00	mg/kg wet	Prepared: 0	07/28/15 A	Analyzed: 07 99.7	7/30/15 80-120	3.26	20	
	ND 99.7 103	1.00	mg/kg wet mg/kg wet mg/kg wet	Prepared: 0 100 Prepared: 0 100	07/28/15 A 07/28/15 A 07/28/15 A	Analyzed: 07 99.7 Analyzed: 07	7/30/15 80-120 7/30/15 80-120			
Batch P5G3010 - *** DEFAULT PREP *** Blank (P5G3010-BLK1) Chloride LCS (P5G3010-BS1) Chloride LCS Dup (P5G3010-BSD1) Chloride Duplicate (P5G3010-DUP1)	ND 99.7 103	1.00 1.00 1.00 •ce: 5G21002-	mg/kg wet mg/kg wet mg/kg wet	Prepared: 0 100 Prepared: 0 100	07/28/15 A 07/28/15 A 07/28/15 A	<u>Analyzed:</u> 07 99.7 <u>Analyzed:</u> 07 103	7/30/15 80-120 7/30/15 80-120			
Batch P5G3010 - *** DEFAULT PREP *** Blank (P5G3010-BLK1) Chloride LCS (P5G3010-BS1) Chloride LCS Dup (P5G3010-BSD1) Chloride	ND 99.7 103 Sour 2570	1.00 1.00 1.00 •ce: 5G21002-	mg/kg wet mg/kg wet mg/kg wet •02 mg/kg dry	Prepared: 0 100 Prepared: 0 100 Prepared: 0	07/28/15 A 07/28/15 A 07/28/15 A 07/28/15 A 2570	<u>Analyzed:</u> 07 99.7 <u>Analyzed:</u> 07 103	7/30/15 80-120 7/30/15 80-120 7/30/15	3.26	20	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P5G3010 - *** DEFAULT PREP ***										
Matrix Spike (P5G3010-MS1)	Sour	ce: 5G21002	-02	Prepared: (07/28/15 A	nalyzed: 07	/30/15			
Chloride	3690	11.4	mg/kg dry	1140	2570	98.6	80-120			
Batch P5G3011 - *** DEFAULT PREP ***										
Blank (P5G3011-BLK1)				Prepared &	Analyzed:	07/30/15				
Chloride	ND	1.00	mg/kg wet							
LCS (P5G3011-BS1)				Prepared &	Analyzed:	07/30/15				
Chloride	102	1.00	mg/kg wet	100		102	80-120			
LCS Dup (P5G3011-BSD1)				Prepared &	Analyzed:	07/30/15				
Chloride	105	1.00	mg/kg wet	100		105	80-120	3.47	20	
Duplicate (P5G3011-DUP1)	Sour	ce: 5G28003	-12	Prepared &	Analyzed:	07/30/15				
Chloride	810	1.10	mg/kg dry		812			0.244	20	
Duplicate (P5G3011-DUP2)	Sour	ce: 5G28003	-22	Prepared &	Analyzed:	07/30/15				
Chloride	6.87	1.02	mg/kg dry		7.28			5.77	20	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - 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 P5G3007 - TX 1005										
Blank (P5G3007-BLK1)				Prepared &	Analyzed:	07/28/15				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	89.0		"	100		89.0	70-130			
Surrogate: o-Terphenyl	55.0		"	50.0		110	70-130			
LCS (P5G3007-BS1)				Prepared &	Analyzed:	07/28/15				
C6-C12	1100	25.0	mg/kg wet	1000		110	75-125			
>C12-C28	1010	25.0	"	1000		101	75-125			
Surrogate: 1-Chlorooctane	111		"	100		111	70-130			
Surrogate: o-Terphenyl	55.1		"	50.0		110	70-130			
LCS Dup (P5G3007-BSD1)				Prepared &	Analyzed:	07/28/15				
C6-C12	948	25.0	mg/kg wet	1000		94.8	75-125	15.2	20	
>C12-C28	1020	25.0	"	1000		102	75-125	0.717	20	
Surrogate: 1-Chlorooctane	114		"	100		114	70-130			
Surrogate: o-Terphenyl	56.3		"	50.0		113	70-130			

Blank (P5G3008-BLK1)]	Prepared & An	alyzed: 07/29/15		
C6-C12	ND	25.0 mg/kg wet				
>C12-C28	ND	25.0 "				
>C28-C35	ND	25.0 "				
Surrogate: 1-Chlorooctane	84.3	"	100	84.3	70-130	
Surrogate: o-Terphenyl	52.2	"	50.0	104	70-130	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P5G3008 - TX 1005										
LCS (P5G3008-BS1)				Prepared &	Analyzed:	07/29/15				
C6-C12	899	25.0	mg/kg wet	1000		89.9	75-125			
>C12-C28	916	25.0	"	1000		91.6	75-125			
Surrogate: 1-Chlorooctane	106		"	100		106	70-130			
Surrogate: o-Terphenyl	48.6		"	50.0		97.3	70-130			
LCS Dup (P5G3008-BSD1)				Prepared &	Analyzed:	07/29/15				
C6-C12	853	25.0	mg/kg wet	1000		85.3	75-125	5.25	20	
>C12-C28	946	25.0	"	1000		94.6	75-125	3.24	20	
Surrogate: 1-Chlorooctane	100		"	100		100	70-130			
Surrogate: o-Terphenyl	49.6		"	50.0		99.2	70-130			

Notes and Definitions

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

un Barron 8/4/2015 Date:

Report Approved By:

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

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Viewing East – Distressed vegetation is noted in the vicinity of soil sample 001.



Viewing Northwest – The foreground is the area of the point of release.





Viewing West – A portion of the released water appears to have flowed parallel near the road.



Viewing West from near sample point 001.





Viewing West – Stakes for sample points 003 (foreground) and 005 parallel the water line.



Viewing West - Sample point 005.