Sampling Summary Report and Remediation Plan
North Brushy Draw 35-12 Produced Water Spill
Unit D, Section 2, Township 25S, Range 29E, Eddy County, NM
Spill Incident # NAB1613135790

WPX Energy Inc. (WPX) contracted Enviro Clean Services (ECS) to oversee the delineation and excavation services being performed by KO Construction, LLC (KO) at the North Brushy Draw 35-12 in Eddy County, NM. The investigation is in response to a produced water release of approximately 200 barrels (bbls) of produced water with 70 bbls recovered. The incident was reported by Lucas Smith on May 8, 2016; the initial C-141 is attached as **Appendix A**. The proposed soil assessment and remediation activities are presented below.

Site Information

The North Brushy Draw 35-12 is located on New Mexico State Land (NMSLO) 12 miles southeast of Malaga in Eddy County, New Mexico. The legal description is: Unit D, Section 2, Township 25S, Range 29E, with the GPS coordinates of 32.07898°N, 103.94493°W. A Site Map is provided in **Appendix B**.

According to the US Department of Agriculture Natural Resource Conservation Service Web Soil Survey, the surface in this area is primarily "US – Upton-Simona complex with 1 to 15% slope, eroded". This soil is found on fans and ridges, and is composed of gravelly loam with up to 75% calcium carbonate in the profile. The New Mexico Bureau of Geology and Mineral Resources Web Map indicates the local surface geology is "Qep – Quaternary (Holocene to middle Pleistocene) Eolian and piedmont deposits". Drainage courses in the area are normally dry.

A search of the New Mexico Office of the State Engineer's (OSE) Water Rights and Points of Diversion databases did not reveal any water wells within approximately three miles of the site. Groundwater in nearest well is greater than 100 feet below ground surface (bgs). **Appendix C** includes the nearest Point of Diversion information retrieved from the OSE.

Regulatory Framework

The remediation of a produced water release in New Mexico are managed under regulatory jurisdiction of the New Mexico Oil Conservation Division (OCD). Releases greater than five barrels (bbl) in volume are reportable to the OCD and are evaluated by the Recommended Remediation Action Levels (RRAL). RRALs are a ranking system used to evaluate regulatory requirements based upon depth to groundwater, distance to surface water, and distance from wellhead protection area. Using the New Mexico Oil

Conservation Division (OCD) Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993), ranking criteria for this site indicates the following:

Depth to groundwater	>100'	0
Wellhead protection area	>1,000'	0
Distance to surface water body	>1,000'	0

Based on the site ranking score of 0, the OCD RRAL are as defined in **Table 1**. In addition to the hydrocarbon RRALs, the OCD also requires all oilfield releases to be delineation assessed for chlorides to Water Quality Control Commission (WQCC) values (250 mg/Kg).

Incident Description

This release occurred when a valve malfunctioning at a water header released approximately 200 bbl of produced water. The runoff path of the spill is to the north, paralleling two pipelines downslope approximately 10 vertical feet, and impacting approximately 1.25 acres.

Initial Soil Investigation

On May 16, 2016, ECS personnel visited the location to assess the release. ECS mapped the spill area and estimated the spill area. Initial samples were taken in 12 locations (001 through 012) between 0.5 to 3 feet bgs. All samples were collected in 4-ounce glass jars, preserved on ice and transferred to Xenco Laboratories (Xenco) in Midland, Texas.

Xenco is accredited by the National Laboratory Accreditation Program (NELAP) for the technology and analytes necessary to demonstrate regulatory compliance) for total petroleum hydrocarbons (TPH) by EPA method 8015M (modified), benzene, toluene, ethylene, and xylenes (BTEX) by EPA method 8021B, and chlorides by EPA method 300.0. A summary of the analytical results is provided in **Table 1**. Copies of the laboratory report and chain of custody documentation are provided in **Appendix D.**

Laboratory analytical results indicate all samples were below the RRAL of 10 mg/kg and 50 mg/kg for benzene and BTEX, respectively. Surface sample TPH concentrations exceeded the 5,000 mg/kg RRAL in sample locations SP-002 (9,350 mg/kg) and SP-003 (5,490 mg/Kg). Chloride concentrations exceeded the WQCC value of 250 mg/Kg in all sample locations.

On June 23 - 24, 2016, an ECS crew mobilized to the location to vertically delineate the sample locations by hand auger. Bedrock refusal was encountered in sample locations SP-001 through SP-008, SP-011, and SP-012. TPH concentrations were delineated in sample locations SP-002 (589 mg/Kg) and SP-003 (738 mg/Kg). A summary of the analytical results is provided in Table 1. Copies of the laboratory report and chain of custody documentation are provided in **Appendix D.**

Table 1 - Soil Analytical Data Summary

Sample ID	Date	Depth (ft)	Benzene	BTEX	TPH C6 – C35	Chlorides
RRAL			**10**	**50**	**5,000**	**250***
SP-001	05/16/16	1	<0.0015	<0.0015	<15.0	**4,800**
001-A	06/23/16	0 – 1	--	--	--	**2,870**
SP-002	05/16/16	1	<0.0015	**0.140**	**9,350**	**3,790**
002-A	06/23/16	0 – 1	--	--	**589**	--
SP-003	05/16/16	1	<0.0015	**0.0041**	**5,490**	**10,900**
003-A	06/23/16	0-1	--	--	**738**	--
SP-004	05/16/16	0.5	<0.0015	<0.0015	**34.9**	**9,060**
004-A	06/23/16	0 – 1	--	--	--	**11,300**
SP-005	05/16/16	1.5	<0.0015	<0.0015	**16.0**	**8,910**
005-B	06/23/16	1 – 2	--	--	--	**2,150**
SP-006	05/16/16	2	<0.0015	<0.0015	<15.0	**641**
006-B	06/23/16	1 – 2	--	--	--	**3,510**
SP-007	05/16/16	3	<0.0015	<0.0015	**28.5**	**1,680**
007-D	06/23/16	3 – 4	--	--	--	**2,620**
SP-008	05/16/16	2	<0.0015	0.0046	**573**	**8,260**
008-E	06/23/16	4 – 5	--	--	--	**1,240**
SP-009	05/16/16	3	<0.0015	<0.0015	**27.2**	**276**
009-E	06/23/16	4 – 5	--	--	--	**205**
SP-010	05/16/16	2.5	<0.0015	<0.0015	**71.5**	**6,110**
010-C	06/23/16	2 – 3	--	--	--	**17.1**
SP-011	05/16/16	2.5	<0.0015	<0.0015	<15.0	**5,770**
011-E	06/23/16	4 – 5	--	--	--	**6,560**
SP-012	05/16/16	2.5	<0.0015	<0.0015	<15.0	**4,090**
012-E	06/23/16	4 – 5	--	--	--	**3,170**
Backfill Material	05/16/16	Soil Pile	<0.0015	<0.0015	**33.3**	**230**

Notes:
BTEX, TPH, and Chloride analyzed via methods 8021B, 8015M, and 300.0, respectively.
* Cleanup value based on WQCC requirements.
< indicates the concentration is below the reporting limit (RL)
All concentrations reported in milligrams per kilogram (mg/kg).
Bold values indicate the analyte was detected.
Bold and shaded values are above the RRAL.

On June 28, 2016, the OCD approved drilling a soil boring in the area with the highest chloride impact, near SP-003 and SP-004. The OCD approval correspondence is provided as **Appendix E**.

On June 29, 2016, one soil boring was installed in the area of apparent pooling and as close to the pipelines as safety allows. The soil boring was drilled with an air rotary rig by White Drilling Company (WDC), of Clyde, Texas. A right of entry permit was acquired by WPX from the NMSLO for soil investigation.

Drill cuttings were described according to the Unified Soil Classification System (USCS). Cuttings were collected every 2-feet to a depth of 20 feet, then every 5-feet from 20 to 40 feet bgs for field and laboratory analyses. Laboratory samples were collected in 4-ounce glass jars and transferred to XENCO. Samples were analyzed for Chlorides per EPA Method 300.0. A summary of the analytical results is provided in **Table 2**. Copies of the laboratory report and chain of custody documentation are provided in **Appendix D**. Soil boring log is provided in **Appendix F**.

Table 2 - Summary of Soil Boring Analytical Results

Sample ID	Sample Date	Depth (ft. bgs)	Chloride
RRAL			***250**
SB-1	06/29/16	1.5 – 2.0	**1,180**
	06/29/16	3.5 – 4.0	**260**
	06/29/16	5.5 – 6.0	**206**
	06/29/16	7.5 – 8.0	**356**
	06/29/16	9.5 – 10.0	**289**
	06/29/16	11.5 – 12.0	**321**
	06/29/16	13.5 – 14.0	**305**
	06/29/16	15.5 – 16.0	**110**
	06/29/16	17.5 – 18.0	**123**
	06/29/16	19.5 – 20.0	**34.4**
	06/29/16	24.5 – 25.0	**33.0**
	06/29/16	29.5 – 30.0	**14.2**
	06/29/16	34.5 – 35.0	**19.9**
	06/29/16	35.5 – 40.0	**11.1**

Notes:
Chloride analyzed by EPA CWA method 300.0.
* Cleanup value based on WQCC requirements.
< indicates the concentration is below the reporting limit (RL)
mg/Kg indicates concentrations in milligrams per kilogram.
Bold values indicate the analyte was detected.
Bold and shaded values are above the RRAL.

Proposed Remedial Actions

ECS respectfully requests a 2,500 mg/kg maximum chloride concentration remediation level. All soils exceeding this value will be excavated to vertical depth of 4-feet bgs. If laboratory delineation values exceed the 2,500 mg/kg remediation level at 4-feet bgs, an impervious clay liner will be installed over the exceedance area outside the pipeline right-of-way. To aid in excavation, ECS will conduct field testing using a calibrated Myron® conductivity pen and a 1 to1 soil and distilled water solution to guide excavation. Vertical and horizontal confirmation samples will be collected from the bottom and side walls of the excavated areas at a rate of one sample every 100 linear feet along the flow path. While awaiting disposal transportation, excavated soil will be placed on a polyethylene liner.

Following receipt of chloride confirmation samples, permission will be requested from the OCD and the BLM to backfill the location. Impacted soil will be transported to the R360 Red Bluff Facility in Orla, Texas. Backfill material will be imported from the North Bushy Draw 35-4 reclamation area. Backfill material has been analyzed, and is below the OCD RRAL.

As part of the final site reclamation and rehabilitation, ECS will seed the Site with native seed in order or to revegetate the impacted area in compliance with NMSLO requirements. This includes tilling the clean topsoil and dispersing BLM seed mix #2 at a rate of approximately 10-pounds per acre. To help establish

revegetation, the site will be watered once after the distribution of seeds, rain patterns will be monitored, and the Site will be monitored approximately 30 days later to determine if additional actions are needed. In the event of noxious weeds, a roustabout crew will remove weeds manually and the Site will be seeded again.

Upon completion of activities, a report detailing the excavation, sample results, and rehabilitation efficacy will be generated for WPX, and will include a copy of the initial and final C-141 Form.

Attachments: Appendix A: Initial C-141
Appendix B: Site Map
Appendix C: Groundwater Data
Appendix D: Laboratory Analytical Report
Appendix E: OCD Correspondence
Appendix F: Boring Log

APPENDIX A
INITIAL C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company WPX Energy Inc/ RKI E&P, LLC	Contact Lucas Smith
Address 3500 One Williams Center Tulsa, OK 74172	Telephone No. 539-573-0176
Facility Name: North Brushy Draw	Facility Type : Produced water gathering line

Surface Owner: Federal	Mineral Owner: Federal	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	1	26S	29E	330	FSL	500	FWL	Eddy

Latitude: 32.0926101 **Longitude**: -103.9468205

NATURE OF RELEASE

Type of Release. Produced Water	Volume of Release: 200 Bbls	Volume Recovered: 70 Bbls
Source of Release Leaking connection on header manifold	Date and Hour of Occurrence 05/08/16	Date and Hour of Discovery 05/08/16 – 11:50hrs MT
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Message left at Artesia Field Office	
By Whom? Lucas Smith	Date and Hour: 05/08/16– 1504hrs MT	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* N/A

Describe Cause of Problem and Remedial Action Taken.*
Produced water gathering system header developed a leak. The system was shut in and the free fluids were vacuumed up. The remaining impacted soils with be removed for disposal and confirmation samples will be collected.

Describe Area Affected and Cleanup Action Taken.*

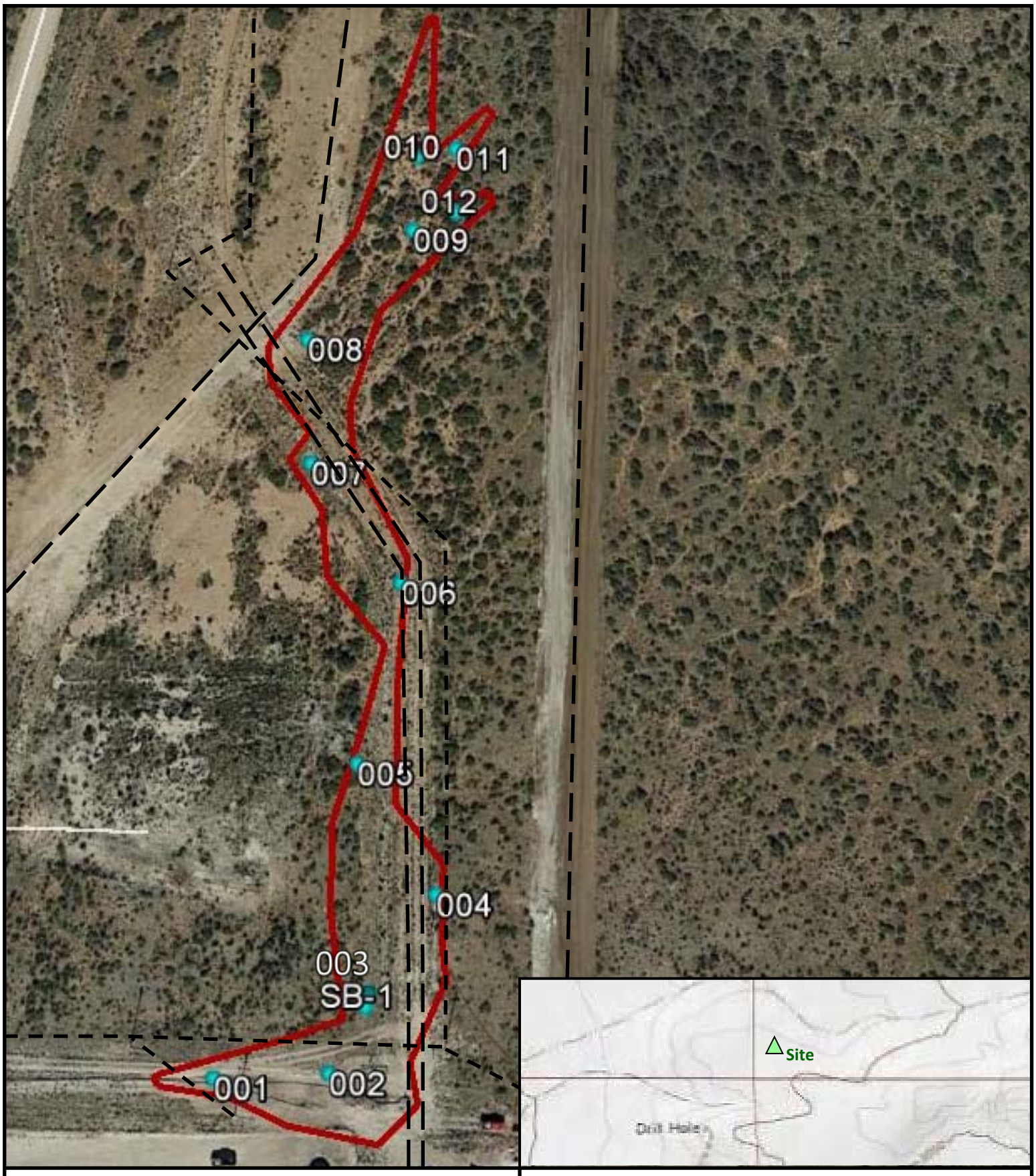
Primarily the fluids pooled on the pipeline right-of-way. At one point the fluid left the right-of-way and followed a low spot approximately 150yds by 4ft.

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:	OIL CONSERVATION DIVISION	
Printed Name: Lucas Smith	Approved by Environmental Specialist:	
Title: EHS Manager	Approval Date:	Expiration Date:
E-mail Address: Lucas.smith@wpxenergy.com	Conditions of Approval:	Attached ☐
Date: 05/09/16 Phone: 539-573-0176		

* Attach Additional Sheets If Necessary

APPENDIX B
SITE MAP



Legend

- Approximate Spill Area, May 16, 2016
- Approximate Soil Sample Locations
- Pipeline
- Overhead Powerline

N

32.07898°N
103.94493°W

Figure 1: Site Map

WPX Energy, Inc.
North Brushy Draw 35-12 Produced Water Spill
Eddy County, New Mexico

Approx. Scale: 1" = 100'	ENVIROCLEAN SERVICES, L.L.C.	Date: 07/20/2016
2405 E. Co. Rd. 123, Midland, Texas 79706		Job : WPXRTX0004

APPENDIX C
GROUNDWATER DATA

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 03483 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: EXP EXPLORATION

Primary Status: PMT PERMIT

Total Acres: **Subfile:** -

Total Diversion: 0 **Cause/Case:** -

Owner: BYRON W (SHOT) PASCHAL

Owner: BUREAU OF LAND MANAGEMENT

Contact: STEVE DALY

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	543409	COWNF 2014-03-17	CHG	PRC	C 03483	T	0	0	
get images	476565	EXPL 2011-04-15	PMT	LOG	C 03483	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Source	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Other Location Desc
C 03483	Shallow	4	4	4	05	26S	30E	604296	3548251	.5 MI E. OF C-1361;PIPELINE RD

Source

Acres	Diversion	CU	Use	Priority	Source Description
0	0		EXP		GW

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

APPENDIX D
LABORATORY ANALYTICAL REPORT

Analytical Report 530225

for

Enviroclean- Midland

Project Manager: BILL GREEN

N Bushy Draw

18-MAY-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534-15-1)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

18-MAY-16

Project Manager: **BILL GREEN**
Enviroclean- Midland
2405 ECR 123
Midland, TX 79706

Reference: XENCO Report No(s): **530225**
N Bushy Draw
Project Address: Loving, NM

BILL GREEN:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 530225. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 530225 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 530225

Enviroclean- Midland, Midland, TX

N Bushy Draw

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-001	S	05-16-16 11:10	- 1 ft	530225-001
SP-002	S	05-16-16 11:20	- 1 ft	530225-002
SP-003	S	05-16-16 11:30	- 1 ft	530225-003
SP-004	S	05-16-16 11:37	- 6 In	530225-004
SP-005	S	05-16-16 11:45	- 1.5 ft	530225-005
SP-006	S	05-16-16 11:50	- 2 ft	530225-006
SP-007	S	05-16-16 11:59	- 3 ft	530225-007
SP-008	S	05-16-16 12:10	- 2 ft	530225-008
SP-009	S	05-16-16 12:20	- 3 ft	530225-009
SP-010	S	05-16-16 13:30	- 2.5 ft	530225-010
SP-011	S	05-16-16 12:45	- 2.5 ft	530225-011
SP-012	S	05-16-16 12:50	- 2.5 ft	530225-012
SP-BF	S	05-16-16 13:10		530225-013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Batch: LBA-994515 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 530225-001,530225-004,530225-005,530225-006,530225-013,530225-009,530225-010,530225-011,530225-012,530225-007.

Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.

Certificate of Analysis Summary 530225

Enviroclean- Midland, Midland, TX

Project Name: N Bushy Draw

Project Id:
Contact: BILL GREEN
Project Location: Loving, NM

Date Received in Lab: Tue May-17-16 10:40 am
Report Date: 18-MAY-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	530225-001		530225-002		530225-003		530225-004		530225-005		530225-006	
	Field Id:	SP-001		SP-002		SP-003		SP-004		SP-005		SP-006	
	Depth:	1 ft		1 ft		1 ft		6 In		1.5 ft		2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-16-16 11:10		May-16-16 11:20		May-16-16 11:30		May-16-16 11:37		May-16-16 11:45		May-16-16 11:50	
BTEX by EPA 8021B	***Extracted:***	May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00	
	Analyzed:	May-17-16 18:51		May-17-16 19:07		May-18-16 10:55		May-17-16 19:39		May-17-16 19:56		May-17-16 20:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00150	ND	0.00150	ND	0.00149	ND	0.00150	ND	0.00149	ND	0.00150
Toluene		ND	0.00200	0.0154	0.00200	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00200
Ethylbenzene		ND	0.00200	0.0109	0.00200	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00200
m,p-Xylenes		ND	0.00200	0.0856	0.00200	0.00411	0.00199	ND	0.00200	ND	0.00199	ND	0.00200
o-Xylene		ND	0.00300	0.0282	0.00299	ND	0.00299	ND	0.00299	ND	0.00299	ND	0.00299
Total Xylenes		ND	0.00200	0.114	0.00200	0.00411	0.00199	ND	0.00200	ND	0.00199	ND	0.00200
Total BTEX		ND	0.00150	0.140	0.00150	0.00411	0.00149	ND	0.00150	ND	0.00149	ND	0.00150
Inorganic Anions by EPA 300	***Extracted:***	May-17-16 16:00		May-17-16 16:00		May-17-16 16:00		May-17-16 16:00		May-17-16 16:00		May-17-16 16:00	
	Analyzed:	May-17-16 21:08		May-17-16 21:20		May-17-16 21:33		May-17-16 21:45		May-17-16 21:57		May-17-16 22:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4800	400	3790	400	10900	400	9060	400	8910	400	641	40.0
TPH by SW 8015B	***Extracted:***	May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00	
	Analyzed:	May-18-16 07:18		May-18-16 09:54		May-18-16 09:27		May-18-16 10:46		May-18-16 06:20		May-18-16 06:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	15.0	194	74.8	26.2	15.0	16.1	14.9	ND	15.0	ND	15.0
C10-C28 Diesel Range Organics		ND	15.0	8730	74.8	5280	15.0	18.8	14.9	16.0	15.0	ND	15.0
Total TPH		ND	15.0	9350	74.8	5490	15.0	34.9	14.9	16.0	15.0	ND	15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 530225

Enviroclean- Midland, Midland, TX

Project Name: N Bushy Draw

Project Id:
Contact: BILL GREEN
Project Location: Loving, NM

Date Received in Lab: Tue May-17-16 10:40 am
Report Date: 18-MAY-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	530225-007		530225-008		530225-009		530225-010		530225-011		530225-012	
	Field Id:	SP-007		SP-008		SP-009		SP-010		SP-011		SP-012	
	Depth:	3 ft		2 ft		3 ft		2.5 ft		2.5 ft		2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-16-16 11:59		May-16-16 12:10		May-16-16 12:20		May-16-16 13:30		May-16-16 12:45		May-16-16 12:50	
BTEX by EPA 8021B	***Extracted:***	May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00	
	Analyzed:	May-17-16 20:28		May-17-16 20:44		May-17-16 21:00		May-17-16 21:17		May-17-16 22:06		May-17-16 22:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00149	ND	0.00150	ND	0.00149	ND	0.00150	ND	0.00149	ND	0.00149
Toluene		ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00199
Ethylbenzene		ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00199
m,p-Xylenes		ND	0.00199	0.00460	0.00200	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00199
o-Xylene		ND	0.00299	ND	0.00299	ND	0.00298	ND	0.00299	ND	0.00299	ND	0.00299
Total Xylenes		ND	0.00199	0.00460	0.00200	ND	0.00199	ND	0.00200	ND	0.00199	ND	0.00199
Total BTEX		ND	0.00149	0.00460	0.00150	ND	0.00149	ND	0.00150	ND	0.00149	ND	0.00149
Inorganic Anions by EPA 300	***Extracted:***	May-17-16 16:00		May-17-16 16:00		May-17-16 16:00		May-17-16 16:00		May-17-16 16:00		May-17-16 16:00	
	Analyzed:	May-17-16 22:45		May-17-16 22:57		May-17-16 23:33		May-17-16 23:46		May-17-16 23:58		May-18-16 00:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1680	100	8260	400	276	20.0	6110	400	5770	400	4090	400
TPH by SW 8015B	***Extracted:***	May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00		May-17-16 13:00	
	Analyzed:	May-18-16 07:06		May-18-16 07:29		May-18-16 07:53		May-18-16 08:15		May-18-16 08:39		May-18-16 09:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		ND	15.0	16.7	15.0	ND	15.0	ND	15.0	ND	15.0	ND	15.0
C10-C28 Diesel Range Organics		28.5	15.0	556	15.0	27.2	15.0	71.5	15.0	ND	15.0	ND	15.0
Total TPH		28.5	15.0	573	15.0	27.2	15.0	71.5	15.0	ND	15.0	ND	15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 530225

Enviroclean- Midland, Midland, TX

Project Name: N Bushy Draw

Project Id:
Contact: BILL GREEN
Project Location: Loving, NM

Date Received in Lab: Tue May-17-16 10:40 am
Report Date: 18-MAY-16
Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	530225-013					
	Field Id:	SP-BF					
	Depth:						
	Matrix:	SOIL					
	Sampled:	May-16-16 13:10					
BTEX by EPA 8021B	***Extracted:***	May-17-16 13:00					
	Analyzed:	May-17-16 22:38					
	Units/RL:	mg/kg	RL				
Benzene		ND	0.00150				
Toluene		ND	0.00200				
Ethylbenzene		ND	0.00200				
m,p-Xylenes		ND	0.00200				
o-Xylene		ND	0.00300				
Total Xylenes		ND	0.00200				
Total BTEX		ND	0.00150				
Inorganic Anions by EPA 300	***Extracted:***	May-17-16 16:00					
	Analyzed:	May-18-16 00:22					
	Units/RL:	mg/kg	RL				
Chloride		230	20.0				
TPH by SW 8015B	***Extracted:***	May-17-16 13:00					
	Analyzed:	May-18-16 09:25					
	Units/RL:	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		ND	15.0				
C10-C28 Diesel Range Organics		33.3	15.0				
Total TPH		33.3	15.0				

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Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: N Bushy Draw

Work Orders : 530225,

Project ID:

Lab Batch #: 994515 **Sample:** 530225-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 18:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	80-120	
4-Bromofluorobenzene	0.0509	0.0300	170	80-120	**

Lab Batch #: 994515 **Sample:** 530225-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 19:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0355	0.0300	118	80-120	

Lab Batch #: 994515 **Sample:** 530225-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 19:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0414	0.0300	138	80-120	**

Lab Batch #: 994515 **Sample:** 530225-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 19:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0412	0.0300	137	80-120	**

Lab Batch #: 994515 **Sample:** 530225-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 20:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	80-120	
4-Bromofluorobenzene	0.0457	0.0300	152	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: N Bushy Draw

Work Orders : 530225,

Project ID:

Lab Batch #: 994515 **Sample:** 530225-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 20:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0334	0.0300	111	80-120	
4-Bromofluorobenzene	0.0471	0.0300	157	80-120	**

Lab Batch #: 994515 **Sample:** 530225-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 20:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0359	0.0300	120	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 994515 **Sample:** 530225-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 21:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	80-120	
4-Bromofluorobenzene	0.0468	0.0300	156	80-120	**

Lab Batch #: 994515 **Sample:** 530225-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 21:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0456	0.0300	152	80-120	**

Lab Batch #: 994515 **Sample:** 530225-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 22:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	80-120	
4-Bromofluorobenzene	0.0434	0.0300	145	80-120	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: N Bushy Draw

Work Orders : 530225,

Project ID:

Lab Batch #: 994515 **Sample:** 530225-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 22:22

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0468	0.0300	156	80-120	**

Lab Batch #: 994515 **Sample:** 530225-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/17/16 22:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0341	0.0300	114	80-120	
4-Bromofluorobenzene	0.0487	0.0300	162	80-120	**

Lab Batch #: 994548 **Sample:** 530225-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 06:20

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	99.9	98	70-135	
o-Terphenyl	45.1	50.0	90	70-135	

Lab Batch #: 994548 **Sample:** 530225-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 06:43

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 994548 **Sample:** 530225-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 07:06

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.6	99.8	99	70-135	
o-Terphenyl	46.3	49.9	93	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: N Bushy Draw

Work Orders : 530225,

Project ID:

Lab Batch #: 994548 **Sample:** 530225-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 07:18

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.8	113	70-135	
o-Terphenyl	57.0	49.9	114	70-135	

Lab Batch #: 994548 **Sample:** 530225-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 07:29

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.4	100	98	70-135	
o-Terphenyl	45.7	50.0	91	70-135	

Lab Batch #: 994548 **Sample:** 530225-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 07:53

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.4	99.7	94	70-135	
o-Terphenyl	42.6	49.9	85	70-135	

Lab Batch #: 994548 **Sample:** 530225-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 08:15

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.0	99.9	99	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

Lab Batch #: 994548 **Sample:** 530225-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 08:39

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	99.9	95	70-135	
o-Terphenyl	43.0	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: N Bushy Draw

Work Orders : 530225,

Project ID:

Lab Batch #: 994548 **Sample:** 530225-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 09:01

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	99.8	98	70-135	
o-Terphenyl	45.0	49.9	90	70-135	

Lab Batch #: 994548 **Sample:** 530225-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 09:25

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	99.9	92	70-135	
o-Terphenyl	40.6	50.0	81	70-135	

Lab Batch #: 994548 **Sample:** 530225-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 09:27

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.3	99.8	99	70-135	
o-Terphenyl	52.4	49.9	105	70-135	

Lab Batch #: 994548 **Sample:** 530225-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 09:54

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.7	103	70-135	
o-Terphenyl	50.4	49.9	101	70-135	

Lab Batch #: 994548 **Sample:** 530225-003 / DL **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 10:19

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.3	99.8	93	70-135	
o-Terphenyl	48.3	49.9	97	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: N Bushy Draw

Work Orders : 530225,

Project ID:

Lab Batch #: 994548 **Sample:** 530225-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 10:46

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.6	105	70-135	
o-Terphenyl	51.3	49.8	103	70-135	

Lab Batch #: 994515 **Sample:** 530225-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 10:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0351	0.0300	117	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 994515 **Sample:** 708952-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/16/16 21:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0355	0.0300	118	80-120	

Lab Batch #: 994548 **Sample:** 708971-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/18/16 03:21

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	100	98	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

Lab Batch #: 994515 **Sample:** 708952-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/16/16 20:04

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0359	0.0300	120	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: N Bushy Draw

Work Orders : 530225,

Project ID:

Lab Batch #: 994548 **Sample:** 708971-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/18/16 03:44

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	45.9	50.0	92	70-135	

Lab Batch #: 994515 **Sample:** 708952-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/16/16 20:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0359	0.0300	120	80-120	

Lab Batch #: 994548 **Sample:** 708971-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/18/16 04:07

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	52.4	50.0	105	70-135	

Lab Batch #: 994515 **Sample:** 530085-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/16/16 20:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	80-120	

Lab Batch #: 994548 **Sample:** 530225-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 07:44

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	50.5	49.9	101	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: N Bushy Draw

Work Orders : 530225,

Project ID:

Lab Batch #: 994515 **Sample:** 530085-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/16/16 20:53

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	**Amount Found [A]**	**True Amount [B]**	**Recovery %R [D]**	**Control Limits %R**	**Flags**
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 994548 **Sample:** 530225-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/18/16 08:10

TPH by SW 8015B	SURROGATE RECOVERY STUDY				
Analytes	**Amount Found [A]**	**True Amount [B]**	**Recovery %R [D]**	**Control Limits %R**	**Flags**
1-Chlorooctane	111	99.9	111	70-135	
o-Terphenyl	49.5	50.0	99	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: N Bushy Draw

Work Order #: 530225 **Project ID:**

Analyst: PJB **Date Prepared:** 05/16/2016 **Date Analyzed:** 05/16/2016

Lab Batch ID: 994515 **Sample:** 708952-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.0967	97	0.100	0.0824	82	16	70-130	35	
Toluene	<0.00200	0.100	0.0961	96	0.100	0.0821	82	16	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0962	96	0.100	0.0823	82	16	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.201	101	0.200	0.172	86	16	70-135	35	
o-Xylene	<0.00300	0.100	0.0995	100	0.100	0.0851	85	16	71-133	35	

Analyst: MNR **Date Prepared:** 05/17/2016 **Date Analyzed:** 05/17/2016

Lab Batch ID: 994552 **Sample:** 708944-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	20.0	19.7	99	20.0	19.7	99	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: N Bushy Draw

Work Order #: 530225 **Project ID:**

Analyst: ARM **Date Prepared:** 05/17/2016 **Date Analyzed:** 05/18/2016

Lab Batch ID: 994548 **Sample:** 708971-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	802	80	1000	853	85	6	70-135	35	
C10-C28 Diesel Range Organics	<15.0	1000	855	86	1000	925	93	8	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: N Bushy Draw

Work Order #: 530225

Lab Batch #: 994552 **Project ID:**

Date Analyzed: 05/17/2016 **Date Prepared:** 05/17/2016 **Analyst:** MNR

QC- Sample ID: 530051-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2.74	20.0	23.2	102	80-120	

Lab Batch #: 994552

Date Analyzed: 05/17/2016 **Date Prepared:** 05/17/2016 **Analyst:** MNR

QC- Sample ID: 530225-006 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	641	400	1070	107	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: N Bushy Draw

Work Order # : 530225 **Project ID:**

Lab Batch ID: 994515 **QC- Sample ID:** 530085-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 05/16/2016 **Date Prepared:** 05/16/2016 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00149	0.0994	0.0547	55	0.0998	0.0532	53	3	70-130	35	X
Toluene	<0.00199	0.0994	0.0378	38	0.0998	0.0457	46	19	70-130	35	X
Ethylbenzene	<0.00199	0.0994	0.0266	27	0.0998	0.0382	38	36	71-129	35	XF
m,p-Xylenes	<0.00199	0.199	0.0518	26	0.200	0.0768	38	39	70-135	35	XF
o-Xylene	<0.00298	0.0994	0.0283	28	0.0998	0.0375	38	28	71-133	35	X

Lab Batch ID: 994548 **QC- Sample ID:** 530225-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 05/18/2016 **Date Prepared:** 05/17/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	998	880	88	999	876	88	0	70-135	35	
C10-C28 Diesel Range Organics	<15.0	998	915	92	999	906	91	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: N Bushy Draw

Work Order #: 530225

Lab Batch #: 994552 **Project ID:**

Date Analyzed: 05/17/2016 19:32 **Date Prepared:** 05/17/2016 **Analyst:** MNR

QC- Sample ID: 530051-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 / Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2.74	2.83	3	20	

Lab Batch #: 994552

Date Analyzed: 05/17/2016 22:21 **Date Prepared:** 05/17/2016 **Analyst:** MNR

QC- Sample ID: 530225-006 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300 / Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	641	670	4	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

ENVIRO CLEAN SERVICES, L.L.C.

CHAIN OF CUSTODY

Page 1 Of 2

530225

Enviro Clean / Midland Texas	Project Name/Number: N Bushy Draw
2405 E. County Rd. 123 Midland, TX 79706	Project Location: Loving NM
Email: wendy.north@eccgrp.com, bill.green@eccgrp.com — Phone No: 432.301.0209	Invoice To: ap@envirocleanps.com Enviro Clean 11717 N. Morgan Rd. Yukon, OK 73099
Project Contact: Bill Green	PO Number: WPXRTX 0004
Samplers's Name:	

Matrix Codes
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
WW = Waste Water
P = Product/Oil
SW = Surface water
SL = Sludge
OW = Ocean Water
W = Wipe
O = Other
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	ICE	Texas TPH - TX 1005	New Mexico TPH - 8015M	BTEX - 8021B	Chlorides - 300 Series	Field Comments
1	SP-001	1'	05/16	11:10	S	1								X		X	X	X	
2	SP-002	1'		11:20	S	1								X		X	X	X	
3	SP-003	1'		11:30	S	1								X		X	X	X	
4	SP-004	6"		11:37	S	1								X		X	X	X	
5	SP-005	1'6"		11:48	S	1								X		X	X	X	
6	SP-006	2'		11:50	S	1								X		X	X	X	
7	SP-007	3'		11:59	S	1								X		X	X	X	
8	SP-008	2'		12:10	S	1								X		X	X	X	
9	SP-009	3'		12:20	S	1								X		X	X	X	
10	SP-010	2'6"		13:30	S	1								X		X	X	X	
11	SP-011	2'6"		12:45	S	1								X		X	X	X	
12	SP-012	2'6"		12:50	S	1								X		X	X	X	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [x] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [x] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1 [signature]	Date Time:	Received By: 1 K Hulkaba	Relinquished By: 2 K Hulkaba	Date Time: 5-17-16 1040	Received By: 2 Ashley Owens
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable [ ]	On Ice [X] — Cooler Temp. 3.2°C — Thermo. Corr. Factor 0°C

ENVIRO CLEAN SERVICES, L.L.C.

CHAIN OF CUSTODY

530225

Enviro Clean / Midland Texas 2405 E. County Rd. 123 Midland, TX 79706	Project Name/Number: N Bushy Draw 35-12 Project Location: Loving NM
Email: wendy.north@eccgrp.com bill.green@eccgrp.com Phone No: 432.301.0209	Invoice To: ap@envirocleanps.com Enviro Clean 11717 N. Morgan Rd. Yukon, OK 73099
Project Contact: Bill Green	PO Number: WQYRTX0004
Samplers's Name:	

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Preservative Used: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	ICE	Texas TPH - TX 1005	New Mexico TPH - 8015M	BTEX - 8021B	Chlorides - 300 Series	Field Comments
1	SP-BF	Com.	05/16	1:10	S	1								X		X	X	X	
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Analytical Information

Matrix Codes
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
WW = Waste Water
P = Product/Oil
SW = Surface water
SL = Sludge
OW = Ocean Water
W = Wipe
O = Other
A = Air

Field Comments

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [X] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [X] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1	Date Time:	Received By: 1	Relinquished By: 2	Date Time: 5-17-16 1040	Received By: 2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable [ ]	On Ice [X] Cooler Temp. 3.2°C Thermo. Corr. Factor 0°C

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Enviroclean- Midland

Date/ Time Received: 05/17/2016 10:40:00 AM

Work Order #: 530225

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 05/17/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 05/18/2016

Analytical Report 532413

for

Enviroclean- Midland

Project Manager: BILL GREEN

WPX-N. Bushy Draw 35-12

WPXRTX0004

07-JUL-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

07-JUL-16

Project Manager: **BILL GREEN**
Enviroclean- Midland
2405 ECR 123
Midland, TX 79706

Reference: XENCO Report No(s): **532413**
WPX-N. Bushy Draw 35-12
Project Address: NM

BILL GREEN:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 532413. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 532413 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Julian Martinez
Odessa Laboratory Director

Sample Cross Reference 532413

Enviroclean- Midland, Midland, TX

WPX-N. Bushy Draw 35-12

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
001-A (0-1')	S	06-23-16 11:18	0 - 1 ft	532413-001
002-A (0-1')	S	06-23-16 11:25	0 - 1 ft	532413-002
003-A (0-1')	S	06-23-16 11:30	0 - 1 ft	532413-003
004-A (0-1')	S	06-23-16 11:40	0 - 1 ft	532413-004
005-B (1-2')	S	06-23-16 11:50	1 - 2 ft	532413-005
006-B (1-2')	S	06-23-16 12:00	1 - 2 ft	532413-006
007-D (3-4')	S	06-23-16 12:10	3 - 4 ft	532413-007
008-E (4-5')	S	06-23-16 12:20	4 - 5 ft	532413-008
009-E (4-5')	S	06-23-16 12:30	4 - 5 ft	532413-009
010-C (2-3')	S	06-23-16 12:15	2 - 3 ft	532413-010
011-E (4-5')	S	06-23-16 12:40	4 - 5 ft	532413-011
012-E (4-5')	S	06-23-16 12:50	4 - 5 ft	532413-012

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 532413

Enviroclean- Midland, Midland, TX

Project Name: WPX-N. Bushy Draw 35-12

Project Id: WPXRTX0004
Contact: BILL GREEN
Project Location: NM

Date Received in Lab: Tue Jun-28-16 10:35 am
Report Date: 07-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532413-001		532413-002		532413-003		532413-004		532413-005		532413-006	
	Field Id:	001-A (0-1')		002-A (0-1')		003-A (0-1')		004-A (0-1')		005-B (1-2')		006-B (1-2')	
	Depth:	0-1 ft		0-1 ft		0-1 ft		0-1 ft		1-2 ft		1-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-23-16 11:18		Jun-23-16 11:25		Jun-23-16 11:30		Jun-23-16 11:40		Jun-23-16 11:50		Jun-23-16 12:00	
Inorganic Anions by EPA 300	***Extracted:***	Jul-06-16 14:00						Jul-06-16 14:00		Jul-06-16 14:00		Jul-06-16 14:00	
	Analyzed:	Jul-07-16 11:15						Jul-07-16 11:39		Jul-07-16 11:46		Jul-07-16 12:10	
	Units/RL:	mg/kg	RL					mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2870	200					11300	1000	2150	100	3510	200
TPH by SW 8015M	***Extracted:***			Jun-28-16 11:00		Jun-28-16 11:00							
	Analyzed:			Jun-28-16 18:12		Jun-28-16 18:35							
	Units/RL:			mg/kg	RL	mg/kg	RL						
C6-C10 Gasoline Range Hydrocarbons				20.4	15.0	ND	15.0						
C10-C28 Diesel Range Hydrocarbons				569	15.0	738	15.0						
C28-C35 Oil Range Hydrocarbons				ND	15.0	ND	15.0						
Total TPH				589	15.0	738	15.0						

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Certificate of Analysis Summary 532413

Enviroclean- Midland, Midland, TX

Project Name: WPX-N. Bushy Draw 35-12

Project Id: WPXRTX0004
Contact: BILL GREEN
Project Location: NM

Date Received in Lab: Tue Jun-28-16 10:35 am
Report Date: 07-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532413-007		532413-008		532413-009		532413-010		532413-011		532413-012	
	Field Id:	007-D (3-4')		008-E (4-5')		009-E (4-5')		010-C (2-3')		011-E (4-5')		012-E (4-5')	
	Depth:	3-4 ft		4-5 ft		4-5 ft		2-3 ft		4-5 ft		4-5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-23-16 12:10		Jun-23-16 12:20		Jun-23-16 12:30		Jun-23-16 12:15		Jun-23-16 12:40		Jun-23-16 12:50	
Inorganic Anions by EPA 300	***Extracted:***	Jul-06-16 14:00		Jul-06-16 14:00		Jul-06-16 14:00		Jul-06-16 14:00		Jul-06-16 14:00		Jul-06-16 14:00	
	Analyzed:	Jul-07-16 12:18		Jul-07-16 12:41		Jul-07-16 12:49		Jul-07-16 12:57		Jul-07-16 13:04		Jul-07-16 13:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2620	200	1240	100	205	10.0	17.1	10.0	6560	500	3170	200

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: WPX-N. Bushy Draw 35-12

Work Orders : 532413,

Project ID: WPXRTX0004

Lab Batch #: 997172 **Sample:** 532413-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 18:12

SURROGATE RECOVERY STUDY

TPH by SW 8015M

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.9	101	70-135	
o-Terphenyl	53.3	50.0	107	70-135	

Lab Batch #: 997172 **Sample:** 532413-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 18:35

SURROGATE RECOVERY STUDY

TPH by SW 8015M

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	48.4	49.9	97	70-135	

Lab Batch #: 997172 **Sample:** 710459-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/16 13:32

SURROGATE RECOVERY STUDY

TPH by SW 8015M

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 997172 **Sample:** 710459-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/16 13:56

SURROGATE RECOVERY STUDY

TPH by SW 8015M

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	61.9	50.0	124	70-135	

Lab Batch #: 997172 **Sample:** 710459-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/16 14:20

SURROGATE RECOVERY STUDY

TPH by SW 8015M

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	59.6	50.0	119	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: WPX-N. Bushy Draw 35-12

Work Orders : 532413,

Project ID: WPXRTX0004

Lab Batch #: 997172 **Sample:** 532336-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 15:06

TPH by SW 8015M Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.9	127	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 997172 **Sample:** 532336-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/16 15:30

TPH by SW 8015M Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: WPX-N. Bushy Draw 35-12

Work Order #: 532413 **Project ID:** WPXRTX0004

Analyst: MNR **Date Prepared:** 07/06/2016 **Date Analyzed:** 07/07/2016

Lab Batch ID: 997641 **Sample:** 710669-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	231	92	250	233	93	1	90-110	20	

Analyst: ARM **Date Prepared:** 06/28/2016 **Date Analyzed:** 06/28/2016

Lab Batch ID: 997172 **Sample:** 710459-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015M Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	966	97	1000	903	90	7	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	997	100	1000	962	96	4	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

Form 3 - MS Recoveries

Project Name: WPX-N. Bushy Draw 35-12

Work Order #: 532413

Lab Batch #: 997641 **Project ID:** WPXRTX0004

Date Analyzed: 07/07/2016 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532368-022 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<10.8	270	231	86	80-120	

Lab Batch #: 997641

Date Analyzed: 07/07/2016 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532413-005 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2150	2500	4800	106	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: WPX-N. Bushy Draw 35-12

Work Order # : 532413 **Project ID:** WPXRTX0004

Lab Batch ID: 997172 **QC- Sample ID:** 532336-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/28/2016 **Date Prepared:** 06/28/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015M Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	213	999	1040	83	1000	1060	85	2	70-135	35	
C10-C28 Diesel Range Hydrocarbons	22.0	999	972	95	1000	966	94	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: WPX-N. Bushy Draw 35-12

Work Order #: 532413

Lab Batch #: 997641 **Project ID:** WPXRTX0004

Date Analyzed: 07/07/2016 10:05 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532368-022 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	<10.8	<10.8	0	20	U

Lab Batch #: 997641

Date Analyzed: 07/07/2016 11:54 **Date Prepared:** 07/06/2016 **Analyst:** MNR

QC- Sample ID: 532413-005 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2150	2280	6	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Version: 1.%

CHAIN OF CUSTODY RECORD

532413 No. 00732

ENVIRO CLEAN SERVICES, LLC
(918) 794-7828

PROJECT NUMBER: WPXRTX0004
PROJECT NAME: WPX - N. Brushy Draw 35-12
COC 1 of ____
SHIPPED TO:
PROJECT MANAGER: William Green
TAT: Normal

SAMPLER'S PRINTED NAME: Walter Petruzzi
SAMPLER'S SIGNATURE:

ASOW:

TPH is NM-modified 8015M with specific TPH Ranges

Date	Time (Mountain)	Sample ID	Sample Matrix	# of Sample Containers	Cl - 300.0	TPH - NM 8015	REMARKS
6/23/16	1118	001-A (0-1')	S	1	X		
	1125	002-A (0-1')	S	1		X	
	1130	003-A (0-1')	S	1		X	
	1140	004-A (0-1')			X		
	1150	005-B (1-2')			X		
	1200	006-B (1-2')			X		
	1210	007-D (3-4')			X		
	1220	008-E (4-5')			X		
	1230	009-E (4-5')			X		
1215	~~1215~~ 1210	010-C (2-3')			X		
	1240	011-E (4-5')			X		
	1250	012-E (4-5)			X		

TOTAL NUMBER OF CONTAINERS → 12

RELINQUISHED BY:	DATE 6/28/16	RECEIVED BY:	DATE 6/28/16
	TIME 1035		TIME 10:35
RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
	TIME		TIME

METHOD OF SHIPMENT:
AIRBILL NUMBER:

RECEIVED IN LABORATORY BY: DATE / TIME
Send PDF, EDD, and INVOICE (if applicable) to: JULIE CZECH at jczech@envirocleanps.com

LABORATORY CONTACT:
LABORATORY ADDRESS:

Temp: 4.2°C IR ID:R-8
C/F:0
Corrected Temp: 4.2°C

POINT OF ORIGIN: ☐ OKLAHOMA CITY ☐ TULSA ☐ NORMAN ☐ WOODWARD ☐ ARLINGTON ☐ MIDLAND ☐ OTHER:

PAGE #1 - RECEIVING LAB PAGE #2 - ENVIRO CLEAN PROJECT FILE PAGE #3 - ENVIRO CLEAN QA/QC DEPT

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Enviroclean- Midland

Date/ Time Received: 06/28/2016 10:35:00 AM

Work Order #: 532413

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.2
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 06/28/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 06/28/2016

Analytical Report 532561

for

Enviroclean- Midland

Project Manager: BILL GREEN

N. Brushy Draw 35-12

WPXRTX0004

30-JUN-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

30-JUN-16

Project Manager: **BILL GREEN**
Enviroclean- Midland
2405 ECR 123
Midland, TX 79706

Reference: XENCO Report No(s): **532561**
N. Brushy Draw 35-12
Project Address: New Mexico

BILL GREEN:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 532561. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 532561 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 532561

Enviroclean- Midland, Midland, TX

N. Brushy Draw 35-12

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 @ 1.5-2'	S	06-29-16 08:32	1.5 - 2 ft	532561-001
SB-1 @ 3.5-4'	S	06-29-16 08:33	3.5 - 4 ft	532561-002
SB-1 @ 5.5-6'	S	06-29-16 08:34	5.5 - 6 ft	532561-003
SB-1 @ 7.5-8'	S	06-29-16 08:35	7.5 - 8 ft	532561-004
SB-1 @ 9.5-10'	S	06-29-16 08:38	9.5 - 10 ft	532561-005
SB-1 @ 11.5-12'	S	06-29-16 08:40	11.5 - 12 ft	532561-006
SB-1 @ 13.5-14'	S	06-29-16 08:42	13.5 - 14 ft	532561-007
SB-1 @ 15.5-16'	S	06-29-16 08:43	15.5 - 16 ft	532561-008
SB-1 @ 17.5-18'	S	06-29-16 08:44	17.5 - 18 ft	532561-009
SB-1 @ 19.5-20'	S	06-29-16 08:45	19.5 - 20 ft	532561-010
SB-1 @ 24.5-25'	S	06-29-16 08:48	24.5 - 25 ft	532561-011
SB-1 @ 29.5-30'	S	06-29-16 08:50	29.5 - 30 ft	532561-012
SB-1 @ 34.5-35'	S	06-29-16 08:52	34.5 - 35 ft	532561-013
SB-1 @ 39.5-40'	S	06-29-16 08:54	39.5 - 40 ft	532561-014

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 532561

Enviroclean- Midland, Midland, TX

Project Name: N. Brushy Draw 35-12

Project Id: WPXRTX0004
Contact: BILL GREEN
Project Location: New Mexico

Date Received in Lab: Wed Jun-29-16 03:18 pm
Report Date: 30-JUN-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532561-001		532561-002		532561-003		532561-004		532561-005		532561-006	
	Field Id:	SB-1 @ 1.5-2'		SB-1 @ 3.5-4'		SB-1 @ 5.5-6'		SB-1 @ 7.5-8'		SB-1 @ 9.5-10'		SB-1 @ 11.5-12'	
	Depth:	1.5-2 ft		3.5-4 ft		5.5-6 ft		7.5-8 ft		9.5-10 ft		11.5-12 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-29-16 08:32		Jun-29-16 08:33		Jun-29-16 08:34		Jun-29-16 08:35		Jun-29-16 08:38		Jun-29-16 08:40	
Inorganic Anions by EPA 300	***Extracted:***	Jun-29-16 15:30		Jun-29-16 15:30		Jun-29-16 15:30		Jun-29-16 15:30		Jun-29-16 15:30		Jun-29-16 15:30	
	Analyzed:	Jun-29-16 18:18		Jun-29-16 18:25		Jun-29-16 18:33		Jun-29-16 18:41		Jun-29-16 18:49		Jun-29-16 18:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1180	100	260	10.0	206	10.0	356	50.0	289	50.0	321	50.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532561

Enviroclean- Midland, Midland, TX

Project Name: N. Brushy Draw 35-12

Project Id: WPXRTX0004
Contact: BILL GREEN
Project Location: New Mexico

Date Received in Lab: Wed Jun-29-16 03:18 pm
Report Date: 30-JUN-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	532561-007		532561-008		532561-009		532561-010		532561-011		532561-012	
	Field Id:	SB-1 @ 13.5-14'		SB-1 @ 15.5-16'		SB-1 @ 17.5-18'		SB-1 @ 19.5-20'		SB-1 @ 24.5-25'		SB-1 @ 29.5-30'	
	Depth:	13.5-14 ft		15.5-16 ft		17.5-18 ft		19.5-20 ft		24.5-25 ft		29.5-30 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-29-16 08:42		Jun-29-16 08:43		Jun-29-16 08:44		Jun-29-16 08:45		Jun-29-16 08:48		Jun-29-16 08:50	
Inorganic Anions by EPA 300	***Extracted:***	Jun-29-16 15:30		Jun-29-16 15:30		Jun-29-16 15:30		Jun-29-16 15:30		Jun-29-16 15:30		Jun-29-16 15:30	
	Analyzed:	Jun-29-16 19:20		Jun-29-16 19:28		Jun-29-16 19:36		Jun-29-16 19:59		Jun-29-16 20:07		Jun-29-16 20:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		305	50.0	110	10.0	123	10.0	34.4	10.0	33.0	10.0	14.2	10.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 532561

Enviroclean- Midland, Midland, TX

Project Name: N. Brushy Draw 35-12

Project Id: WPXRTX0004
Contact: BILL GREEN
Project Location: New Mexico

Date Received in Lab: Wed Jun-29-16 03:18 pm
Report Date: 30-JUN-16
Project Manager: Kelsey Brooks

Analysis Requested									
	Lab Id:	532561-013		532561-014					
	Field Id:	SB-1 @ 34.5-35'		SB-1 @ 39.5-40'					
	Depth:	34.5-35 ft		39.5-40 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jun-29-16 08:52		Jun-29-16 08:54					
Inorganic Anions by EPA 300	***Extracted:***	Jun-29-16 15:30		Jun-29-16 15:30					
	Analyzed:	Jun-29-16 20:22		Jun-29-16 20:30					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		19.9	10.0	11.1	10.0				

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Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

BS / BSD Recoveries

Project Name: N. Brushy Draw 35-12

Work Order #: 532561, 532561 **Project ID:** WPXRTX0004

Analyst: MNR **Date Prepared:** 06/29/2016 **Date Analyzed:** 06/29/2016

Lab Batch ID: 997244 **Sample:** 710495-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	248	99	250	249	100	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: N. Brushy Draw 35-12

Work Order #: 532561

Lab Batch #: 997244 **Project ID:** WPXRTX0004

Date Analyzed: 06/29/2016 **Date Prepared:** 06/29/2016 **Analyst:** MNR

QC- Sample ID: 532558-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	2960	5000	7760	96	80-120	

Lab Batch #: 997244

Date Analyzed: 06/29/2016 **Date Prepared:** 06/29/2016 **Analyst:** MNR

QC- Sample ID: 532561-009 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	123	250	343	88	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Sample Duplicate Recovery

Project Name: N. Brushy Draw 35-12

Work Order #: 532561

Lab Batch #: 997244 **Project ID:** WPXRTX0004

Date Analyzed: 06/29/2016 17:54 **Date Prepared:** 06/29/2016 **Analyst:** MNR

QC- Sample ID: 532558-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	2960	3080	4	20	

Lab Batch #: 997244

Date Analyzed: 06/29/2016 19:43 **Date Prepared:** 06/29/2016 **Analyst:** MNR

QC- Sample ID: 532561-009 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	123	121	2	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

CHAIN OF CUSTODY

Page 1 Of 2

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Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job # 532501

Client / Reporting Information

Company Name / Branch: Enviro Clean

Company Address: Midland TX

Email: bill.green@eccgrp.com

Phone No:

Project Contact: Bill Green

Samplers's Name:

Project Information

Project Name/Number: N. Brushy Draw 35-12/WPXRTX0004

Project Location: New Mexico

Invoice To:

PO Number:

Analytical Information

300.0 Chlorides

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	SB-1 @ 1.5 - 2'		6/29	832	S	1								X	X
2	SB-1 @ 3.5 - 4'			833											
3	SB-1 @ 5.5 - 6'			834											
4	SB-1 @ 7.5 - 8'			835											
5	SB-1 @ 9.5 - 10'			838											
6	SB-1 @ 11.5 - 12'			840											
7	SB-1 @ 13.5 - 14'			842											
8	SB-1 @ 15.5 - 16'			843											
9	SB-1 @ 17.5 - 18'			844											
10	SB-1 @ 19.5 - 20'			845											

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [x] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by:	Date Time:	Received By:
1		6/29 318	1
2	Relinquished By:	Date Time:	Received By: 2
3	Relinquished by:	Date Time:	Received By: 3
4	Relinquished By:	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5

Custody Seal # | Preserved where applicable | On Ice: X | Cooler Temp.: -1.0°C | Thermo. Corr. Factor: 0°C

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negiotiated under a fully executed client contract.

Final 1.000

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CHAIN OF CUSTODY

Page 2 Of 2

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Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job # 532561

Client / Reporting Information

Company Name / Branch: Enviro Clean

Company Address: Midland, TX

Email: bill.green@eccgrp.com

Phone No:

Project Contact:

Samplers's Name: William Green

Project Information

Project Name/Number: N. Brushy Draw 35-12

Project Location: Eddy Co., New Mexico

Invoice To:

PO Number:

Analytical Information

300.0 X Chlorides

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	SB-1 @ 24.5 - 25'		6/29	848	S	1									
2	SB-1 @ 29.5 - 30'			850											
3	SB-1 @ 34.5 - 35'			852											
4	SB-1 @ 39.5 - 40'			854											
5															
6															
7															
8															
9															
10															

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		6/29 318		2		2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☒ Cooler Temp. -1.0 Thermo. Corr. Factor 0°C

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

Final 1.000

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Enviroclean- Midland

Date/ Time Received: 06/29/2016 03:18:00 PM

Work Order #: 532561

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-1
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Carley Owens
Carley Owens
Date: 06/29/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 06/30/2016

APPENDIX E
OCD CORRESPONDENCE

From: Bratcher, Mike, EMNRD
To: Kimberly Huckaba
Cc: Patterson, Heather, EMNRD; Tucker, Shelly; "agroves@slo.state.nm.us"
Subject: FW: Correction 2RP-3684 Delineation Requirements
Date: Tuesday, June 28, 2016 10:24:34 AM

Kimberly,

Sorry for any confusion. Looks like the release is on State surface, but associated with a Federal well.

Thanks,

Mike Bratcher
NMOCD District 2
811 S. First Street
Artesia, NM 88210
O: 575-748-1283 X108
C: 575-626-0857
F: 575-748-9720

From: Bratcher, Mike, EMNRD
Sent: Tuesday, June 28, 2016 8:37 AM
To: 'Kimberly Huckaba'; Patterson, Heather, EMNRD; Tucker, Shelly
Cc: Smith, Lucas; Bill Green; Craig McMahon; Brittany Neal
Subject: RE: Correction 2RP-3684 Delineation Requirements

RE: 2RP-3684

Kimberly,

OCD does request a representative delineation of the impacted area. The pooling area, which theoretically should be the “worst” spot along the release area, and you have identified as sample locations 003 and 004, will be acceptable for vertical delineation purposes for this site. OCD does agree to a 4’ excavation with liner placement to retard migration of contaminants left behind. Especially in rocky areas, OCD does request adequate cushioning be installed for liner protection . Please provide OCD with analytical data from the proposed delineation prior to backfilling, and provide updates as the project progresses. Federal sites will require like approval from BLM.

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If you have any questions or concerns, and for notification, please contact me.

Thanks.

Mike Bratcher
NMOCD District 2
811 S. First Street
Artesia, NM 88210
O: 575-748-1283 X108
C: 575-626-0857
F: 575-748-9720

From: Kimberly Huckaba [mailto:khuckaba@eccgrp.com]
Sent: Monday, June 27, 2016 7:53 PM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: Smith, Lucas; Bill Green; Craig McMahon; Brittany Neal
Subject: RE: Correction 2RP-3684 Delineation Requirements

Please note the following correction.

After reviewing the work plan and data presented therein, the pooling area is not in the vicinity of 010, 011, and 012, but near the source of the release in the vicinity of sample locations 003 and 004 where the highest Cl values were detected.

Kimberly Huckaba
Project Coordinator/Geologist
432.741.0855
khuckaba@eccgrp.com
www.EnviroCleanPS.com

From: Kimberly Huckaba
Sent: Monday, June 27, 2016 6:47 PM
To: 'mike.bratcher@state.nm.us' <mike.bratcher@state.nm.us>; 'heather.patterson@state.nm.us' <heather.patterson@state.nm.us>
Cc: 'Smith, Lucas' <Lucas.Smith@wpxenergy.com>; Bill Green <Bill.Green@eccgrp.com>; Craig McMahon <Craig.McMahon@eccgrp.com>; Brittany Neal <Brittany.Neal@eccgrp.com>
Subject: 2RP-3684 Delineation Requirements

Mike,

I am emailing you after a conversation I had with Heather Patterson last Wednesday, June 22, 2016.

We are working on project 2RP-3684 together with WPX Energy.
I understand Heather is on vacation this week and referred me to you with any questions.

Heather and I had discussed the delineation requirement after the second attempt to delineate the area and finding refusal at the restrictive layer. We discussed placing a liner in the areas where chloride exceeded 2,500 mg/Kg at the bedrock or at 4 feet below ground surface. We also discussed sampling a boring in the area of sample locations 010, 011, and 012 where the spill pooled. However, I did not receive this in writing and wanted to be sure we had OCD approval before continuing with the boring, excavation and liner placement.

If OCD grants approval to continue we would like to begin work beginning with the soil boring in the vicinity of 010, 011, and 012 on Wednesday, June 29, 2016.

Thank you for your time.

Sincerely,

Kimberly Huckaba
Project Coordinator/Geologist
432.741.0855
khuckaba@eccgrp.com
www.EnviroCleanPS.com

APPENDIX F
BORING LOG

ENVIRO CLEAN CARDINAL

BORING LOG

Site Name:	WPX N. Brushy Draw 35-12	**Boring ID:**	SB-1; 32° 4' 45.13" N, 103° 56' 41.9" W
Job Number:	WPXRTX0004	**Date:**	6/29/2016
Driller:	White Drilling/Bo Atkins	**Geologist:**	William D. Green, TX PG No. 136

Depth	Time	µS/cm @ °C	Lab Chloride	USCS	Munsell Color	Description
1.5-2	832	2,155 @ 21.1°	1,180	SP	10YR 7/4	Very pale brown fine sand; rounded and spherical grains, with slight carbonate reaction
3.5-4	833	269 @ 20.3°	260	SP	10YR 7/3	Very pale brown fine sand; rounded and spherical grains, with slight carbonate reaction
5.5-6	834	473 @ 20.1°	206	SS	7.5YR 7/4	Rock ledge at ~5 feet. Pink very fine sandstone with carbonate cement
7.5-8	835	1,139 @ 19.8°	356	SP	7.5YR 7/3	Pink very fine sand; rounded and spherical grains
9.5-10	838	867 @ 20.3°	289	SS	7.5YR 7/3	Pink very fine sandstone with carbonate cement
11.5-12	840	522 @ 20.8°	321	SS	7.5YR 7/3	Pink very fine sandstone with carbonate cement
13.5-14	842	540 @ 20.2°	305	SP	5YR 7/3	Pink fine rounded sand
15.5-16	843	296 @ 19.9°	110	SS	10YR 4/2	Abrupt lithology change at 15.5 feet. Dark grayish brown well-lithified fine-grained sandstone
17.5-18	844	314 @ 20.8°	123	SS/Shale	10YR 5/1	Gray fine-grained sandstone with carbonate cement and thin shales interbedded
19.5-20	845	152 @ 20.8°	34.4	SW	10YR 7/2	Light gray fine sand and 1/4- to 1/2-inch smoothed gravels with carbonate cement
						Lithology change at about 23 feet.
24.5-25	848	161 @ 21.6°	33.0	SM	7.5YR 6/4	Light brown silty to fine-grained sand; about 10% 1/4-inch to 1-inch gravel
29.5-30	850	148 @ 21.8°	14.2	SM	10YR 6/6	Brownish yellow silty to fine-grained sand; round and spherical
34.5-35	852	154 @ 21.4°	19.9	SM	10YR 6/4	Light yellowish brown silty to fine-grained sand; round and spherical
39.5-40	854	200 @ 21.5°	11.1	SM	10YR 6/4	Light yellowish brown silty to fine-grained sand; round and spherical

Note: Boring installed with Air Rotary and samples collected from return cuttings.