May 18, 2016

Mr. John Devoss
WPX Energy Inc.
One Williams Center
Tulsa, OK 74103

RE: Excavation Oversight Work-Plan
WPX Energy, Inc.
North Brushy Draw 35-12
Eddy County, NM

Dear Mr. Devoss:

WPX Energy Inc. (WPX) has contracted Enviro Clean Services (ECS) to oversee the excavation services being performed by KO Construction, LLC (KO) at the North Brushy Draw 35-12 in Eddy County, NM. ECS will also perform all confirmation sampling. The proposed soil assessment and proposed remediation activities are presented below.

Site Information

The North Brushy Draw 35-12 is located 12 miles southeast of Malaga in Eddy County, New Mexico on New Mexico State Land. The legal location is Unit D, Section 2, Township 25S, Range 29E, with a latitude of 32.07898° north and a longitude of 103.94493° west. The Site Plan is provided in **Appendix A**.

According to the US Department of Agriculture Natural Resource Conservation Service soil survey, the soil in this area is made up of Upton-Simona complex with 1 to 15% eroded slopes. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface geology is Holocene to middle Pleistocene in age and is comprised of eolian sands. Drainage courses in the area are normally dry. Groundwater in this area is greater than 100 feet below ground surface (bgs), according to the New Mexico Office of the State Engineer. See **Appendix B** for the referenced groundwater data. The nearest well to the site is approximately 3 miles southeast of the site.

Ranking for this site, according to the New Mexico Oil Conservation Division (OCD) *Guidelines for Remediation of Leaks, Spills and Releases* (August 13, 1993), is **0** based on the following:

Depth to groundwater >100’

Wellhead protection area >1,000’
Distance to surface water body >1,000’

Based on the site ranking score the OCD Recommended Remediation Action Level (RRAL) are defined in Table 1. OCD also requires all oilfield releases to be assessed for chlorides, which are to be delineated horizontally and vertically to 250 mg/Kg.

Incident Description

This release occurred due to a valve malfunctioning at a water header, and an estimated 150 barrels (bbl) of produced water was released. The runoff path of the spill impacted approximately 1.25 square 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 below ground surface (bgs). Samples were collected in 4-ounce glass jars and transferred to Xenco Laboratories in Midland, Texas (accredited by the National Laboratory Accreditation Program (NELAP) for the technology and analytes necessary to demonstrate regulatory compliance) for Chlorides per EPA Method 300.0, total petroleum hydrocarbons (TPH) by method 8015 modified and benzene, toluene, ethylene, and xylenes (BTEX) by EPA method 8021B. 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 C**.

Table 1 Soil Analytical Data Summary

Sample ID	Date	Depth (ft)	Benzene (mg/Kg)	BTEX (mg/Kg)	TPH C6 – C35 (mg/Kg)	Chlorides (mg/Kg)
RRAL			**10**	**50**	**5,000**	***250**
001	05/16/16	1	<0.0015	<0.0015	<15.0	4,800
002	05/16/16	1	<0.0015	0.140	9,350	3,790
003	05/16/16	1	<0.0015	0.0041	5,490	10,900
004	05/16/16	0.5	<0.0015	<0.0015	34.9	9,060
005	05/16/16	1.5	<0.0015	<0.0015	16.0	8,910
006	05/16/16	2	<0.0015	<0.0015	<15.0	641
007	05/16/16	3	<0.0015	<0.0015	28.5	1,680
008	05/16/16	2	<0.0015	0.0046	573	8,260
009	05/16/16	3	<0.0015	<0.0015	27.2	276
010	05/16/16	2.5	<0.0015	<0.0015	71.5	6,110

011	05/16/16	2.5	<0.0015	<0.0015	<15.0	5,770
012	05/16/16	2.6	<0.0015	<0.0015	<15.0	4,090
Backfill	05/16/16	Soil Pile	<0.0015	<0.0015	33.3	230

Notes:
1. BTEX, TPH, and Chloride analyses were by EPA 8021B, SW 8015B, and EPA 300, respectively.
2. *Cleanup goal not defined by OCD regulations, value based on Water Quality Control Commission (WQCC) requirements.
3. < indicates the concentration is below the reporting limit (RL)
4. mg/Kg indicates concentrations in milligrams per kilogram.
5. Red values are above the RRAL.

All samples were below the RRAL of 10 mg/Kg and 50 mg/Kg for Benzene and BTEX, respectively. TPH concentrations exceeded the RRAL of 5,000 mg/Kg in sample locations 002 (9,350 mg/Kg) and 003 (5,490 mg/Kg). Chloride concentrations exceeded the WQCC value of 250 mg/Kg in sample locations 001 through 005, 007 through 008, and 010 through 011 Chloride concentrations ranged between 1,680 mg/Kg in sample location 007 to 10,900 mg/Kg in sample location 003.

Proposed Remedial Actions

ECS proposes the following activities:

- Obtain Right of Entry (ROE) Request for Remediation from the New Mexico State Land Office (NMOSE), form provided in **Appendix D**.
- Excavate to two feet bgs in the vicinity of 001, 002, 003, 004, and 005.
- Excavate to four feet bgs in the vicinity of 007, 008, 010, 011, and 012 and insert a liner in the base of the excavation.
- Collect confirmation samples in the bottom of the excavated areas.
- Delineate chloride to 250 mg/Kg in all sample locations.

ECS will oversee and direct the excavation of the impacted soil. Following the excavation, confirmation samples will be collected from the bottom of the excavation to ensure TPH and chloride are below the RRAL. Samples will also be collected at five feet below the excavation bottom in order to delineate chloride concentrations. Soil will be hauled to the R360 Waste Facility in Carlsbad, New Mexico by KO. Backfill material will be acquired from the North Bushy Draw 35-4 reclamation area. Backfill material has been analyzed, and is below the OCD RRAL.

A report detailing the excavation activities and sample results will be generated upon completion of the project and provided to WPX, and will include a copy of the initial and final C-141 Form. If you have any questions about the information presented in this work plan, please don't hesitate to contact Brittany Neal or me at (432) 301-0209.

Sincerely,

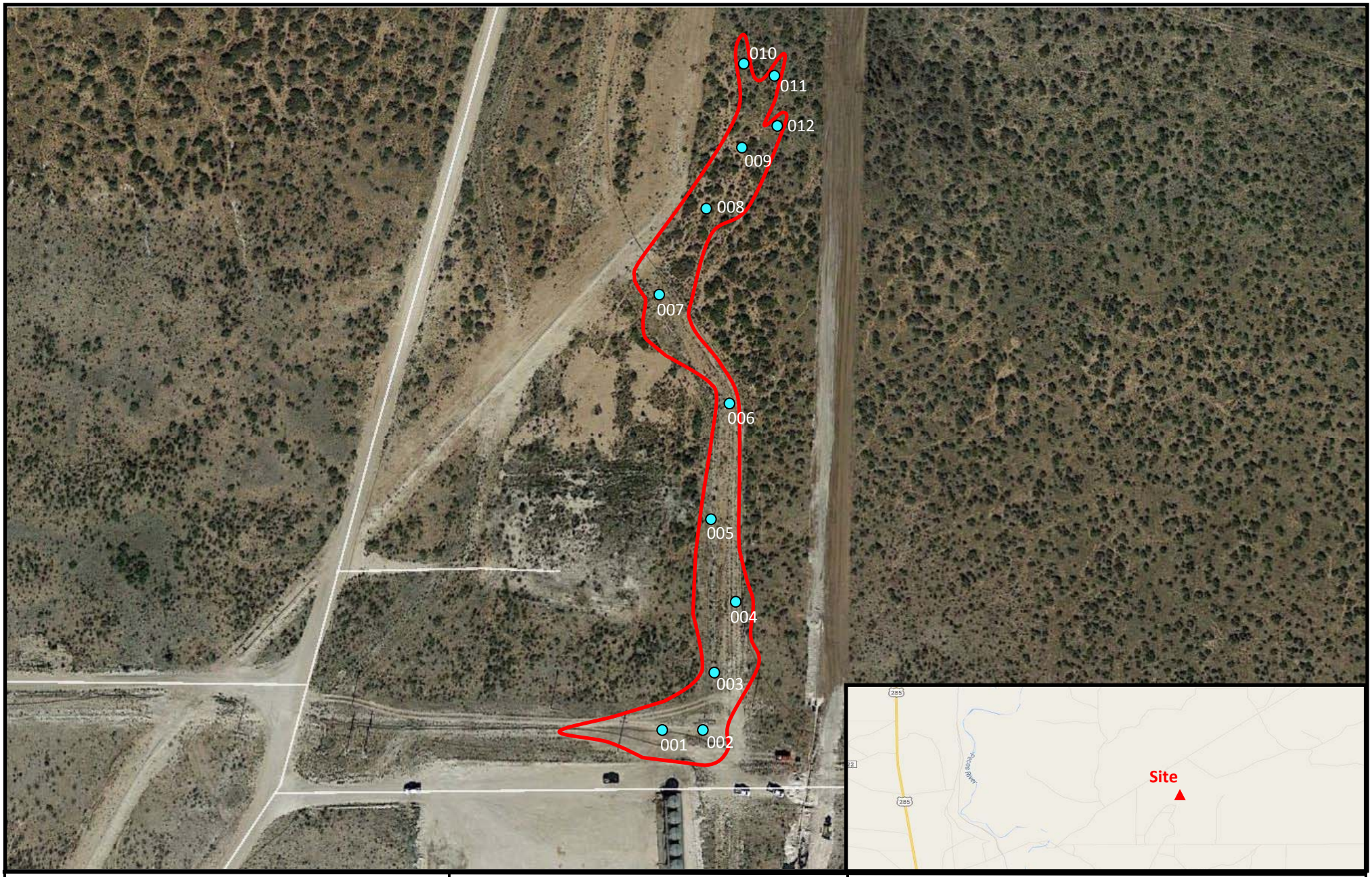
Enviro Clean Services, LLC

Tom J. Weber, PE
Texas Regional Manager

Attachments: Appendix A: Site Plan
Appendix B: Groundwater Data
Appendix C: Laboratory Analytical Report
Appendix D: Right of Entry Request for Remediation

APPENDIX A

SITE MAP



Legend

Approximate Spill Area, May 16, 2016

Approximate Soil Sample Locations, May 16, 2016

32.07898°N
103.94493°W

Figure 1: Site Map

WPX Energy, Inc.

North Bushy Draw 35-12 Remediation

Eddy County, New Mexico

Approx. Scale: 1" = 50'	ENVIROCLEAN SERVICES, L.L.C.	Date: 05/18/2016
2405 E. Co. Rd. 123, Midland, Texas 79706		Proj. No.: WPXRTX0004

APPENDIX B

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	

APPENDIX C

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

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 Hydrocarbons		ND	15.0	8730	74.8	5280	15.0	18.8	14.9	16.0	15.0	ND	15.0
C28-C35 Oil Range Hydrocarbons		ND	15.0	423	74.8	184	15.0	ND	14.9	ND	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

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 Hydrocarbons		28.5	15.0	556	15.0	27.2	15.0	71.5	15.0	ND	15.0	ND	15.0
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0	ND	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

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 Hydrocarbons		33.3	15.0					
C28-C35 Oil Range Hydrocarbons		ND	15.0					
Total TPH		33.3	15.0					

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	

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

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	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

SURROGATE RECOVERY STUDY

TPH by SW 8015B 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 Hydrocarbons	<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 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	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 Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
	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 Hydrocarbons	<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	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	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	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	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

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

Collection / Preservative Used / Analytical Information

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'		12:26	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"		12:56	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

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:

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

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 [signature]		1 K Hukaba	2 K Hukaba	5-17-16 1040	2 [signature] 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 Samplers's Name:	PO Number: WQYRTX0004

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

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

APPENDIX D

RIGHT OF ENTRY FOR REMEDIATION

New Mexico State Land Office

Rights of Way Division

(505) 827-5842 P.O. Box 1148 Santa Fe, NM 87504

RIGHT OF ENTRY (ROE) REQUEST FOR REMEDIATION

Company Name _____
Address _____
City, State, Zip _____
Contact Person: _____
Telephone #: _____
Email: _____

Purpose of request: _____
_____
_____

Section _____ Township _____ Range _____ Unit Letter _____

Qtr/Qtr _____ County_____

GPS Location (decimal degrees): Latitude _____ W Longitude _____ N

If this is a remediation for a spill please attach a copy of the OCD C-141 form.

Is the completed C-141 attached? Yes ☐ No ☐

Square footage of spill impacted surface: _____

Estimated square footage of total disturbance: _____

Reclamation Plan (*attach addl. sheet if necessary*) _____
_____
_____

Driving directions from nearest state highway or road (*attach a map of the location*):
_____
_____

Lease number associated with the ROE request: _____

Well Name and/or Operator (if applicable):_____

Time expected to complete remediation:_____

Personnel present on State Land_____

Equipment & materials present on State Land_____

$30.00 application fee and $500.00 permit amount (based on 180 days) renewable for up to 3 yrs.

Payable to: The Commissioner of Public Lands
P. O. Box 1148
Santa Fe, NM 87504-1148

Revised (12/23/2015) * ***When you provide a check as payment, you authorize the State of New Mexico to either use information from your check to make a one-time electronic fund transfer from your account or to process the payment as a check transaction.***