



31 March 2015

Mr. Mike Bratcher  
Environmental Specialist  
NMOCD  
811 S. First St.  
Artesia, New Mexico 88210

RE: Remediation Progress Report and Closure Proposal  
XTO Energy – ADU #816  
UL-D, Section 4, Township 21 South, Range 27 East  
Eddy County, New Mexico  
NMOCD Reference # 2RP-2674

Mr. Bratcher:

The following *Remediation Progress Report and Closure Proposal* serves as a condensed update on remedial activities undertaken and closure proposal for the above referenced Site.

**Remediation Progress:**

EPI personnel mobilized on the site on November 10, 2014 to collect soil samples to determine the vertical extent of contamination. A total of eleven (11) soil samples were collected at varying depths from three (3) sample locations; SP1 – SP3. All samples were sent to Cardinal Labs for testing. Laboratory analytical results indicate Benzene and BTEX concentrations do not exceed NMOCD Recommended Remedial Action Levels (NMOCD RRALs) of 10 mg/Kg and 50 mg/Kg, respectively, at any depth. However TPH concentrations exceeded NMOCD RRALs of 250 mg/Kg in SP2 at one (1) foot bgs and SP3 at one (1) and four (4) feet bgs. Chloride concentrations exceeded NMOCD RRALs in all samples to a depth of four (4) feet bgs.

From November 11 through 20, 2014 approximately 960 tons of contaminated material were excavated and transported to state approved facility for disposal. At the conclusion of excavation activities six (6) soil samples, SW1 – SW6, were collected from excavation sidewalls and three (3) soil samples, B1 – B3, were collected from the excavation floor. Samples were sent to Cardinal Labs in Hobbs for testing.

On December 5, 2014 sample locations B1 – B3 from the excavation floor were re-drilled with soil samples collected at eighteen (18) feet bgs. Then on January 19, 2015 sample point SP2 was re-drilled with a soil sample collected at thirty-two (32) bgs. All samples were sent to Cardinal Labs for testing.

Laboratory analytical results indicate the excavation sidewalls and floor are void of Benzene, BTEX, and TPH concentrations in excess of NMOCD RRALs of 10 mg/Kg, 50 mg/Kg, and 100 mg/Kg respectively. However, Chloride concentrations exceed NMOCD RRALs of 250 mg/Kg in all samples other than SW3 and SW5 (reference *Figure 4* and *Table 2*).

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**Closure Proposal:**

Sidewalls of the excavation will be excavated in two (2) foot increments until Chloride concentrations are below NMOCD RRALs. However, taking into consideration the vertical depth of contamination, it would require a very large excavation for removal of all Chloride impacted soil to a depth between approximately four (4) and thirty-two (32) vertical feet. In lieu of this, EPI proposes to place a twenty (20) mil thick polyethylene liner in the bottom of the excavated area (reference *Figure 5*). Bottom of the polyethylene liner will lay on a one (1) foot thick layer of clean top soil. Remainder of the excavation will be backfilled with selected top soil to finish grade. Top soil will be free of deleterious material or rocks or large clumps.

Backfilling will continue until the entire excavation is closed. Upon completion of backfill activities, the entire disturbed area will be contoured to blend with existing pasture area and protected against wind/water erosion. Disturbed areas will be disced and deep drill seeded with a mixture approved by the property owner. However, it is recommended completing this activity in late spring 2015 when ground conditions are more conducive to vegetative growth.

EPI and XTO personnel are aware this represents a “risk based” closure procedure, but feel it is justified under conditions as described above with the sheer volume of soil that would need to be excavated.

Following completion of remediation activities, EPI will provide a detailed *Final Closure Report* to XTO Energy and NMOCD personnel.

XTO Energy and EPI personnel would welcome an opportunity to briefly discuss the *Closure Proposal* at your earliest convenience. However, should you have any questions or concerns please feel free to contact me at (575) 394-3481 or via e-mail at [ddominguezepi@gmail.com](mailto:ddominguezepi@gmail.com) or Mr. John Robinson at (575) 441-5199 or via e-mail at [john\\_robinson@xtoenergy.com](mailto:john_robinson@xtoenergy.com). All official communication should be addressed to:

Mr. John Robinson  
XTO Energy  
P.O. Box 700  
Eunice, New Mexico 88231

Sincerely,

ENVIRONMENTAL PLUS, INC.

Daniel Dominguez  
Environmental Consultant

cc: John Robinson – XTO Energy  
File

Encl.: Figure 1 – Area Map  
Figure 2 – Site Location Map  
Figure 3 – Site/Sample Map  
Figure 4 – Excavation/Sample Map  
Figure 5 – Proposed Liner Location  
Table 1 – Well Data  
Table 2 – Summary of Soil Sample Field Testing and Laboratory Analytical Results  
Attachment I – Photographs  
Attachment II – Laboratory Analytical Results  
Attachment III – Copy of Initial NMOCD Form C-141

## FIGURES



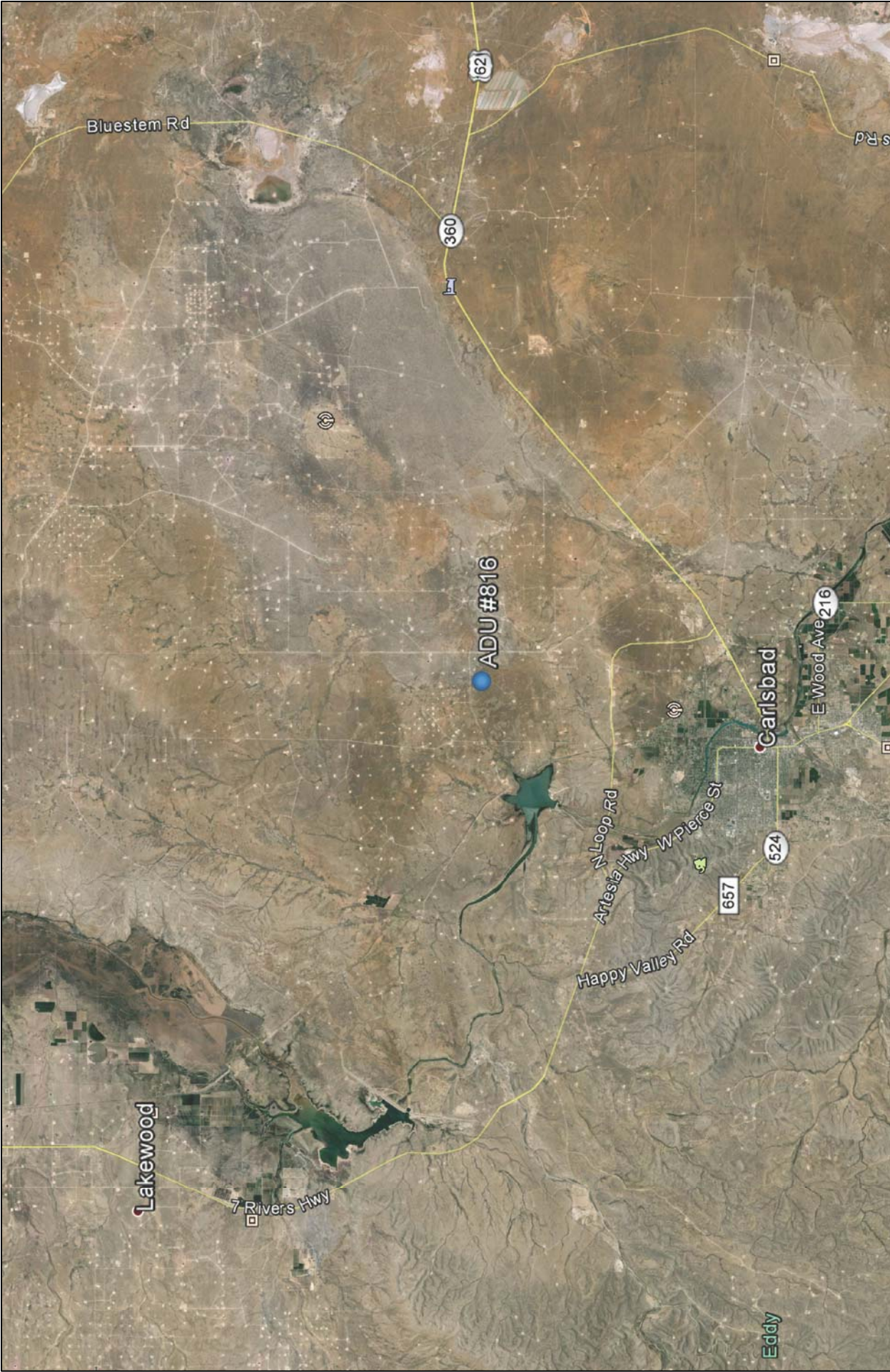


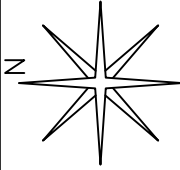
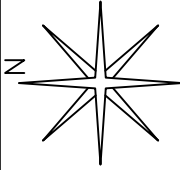
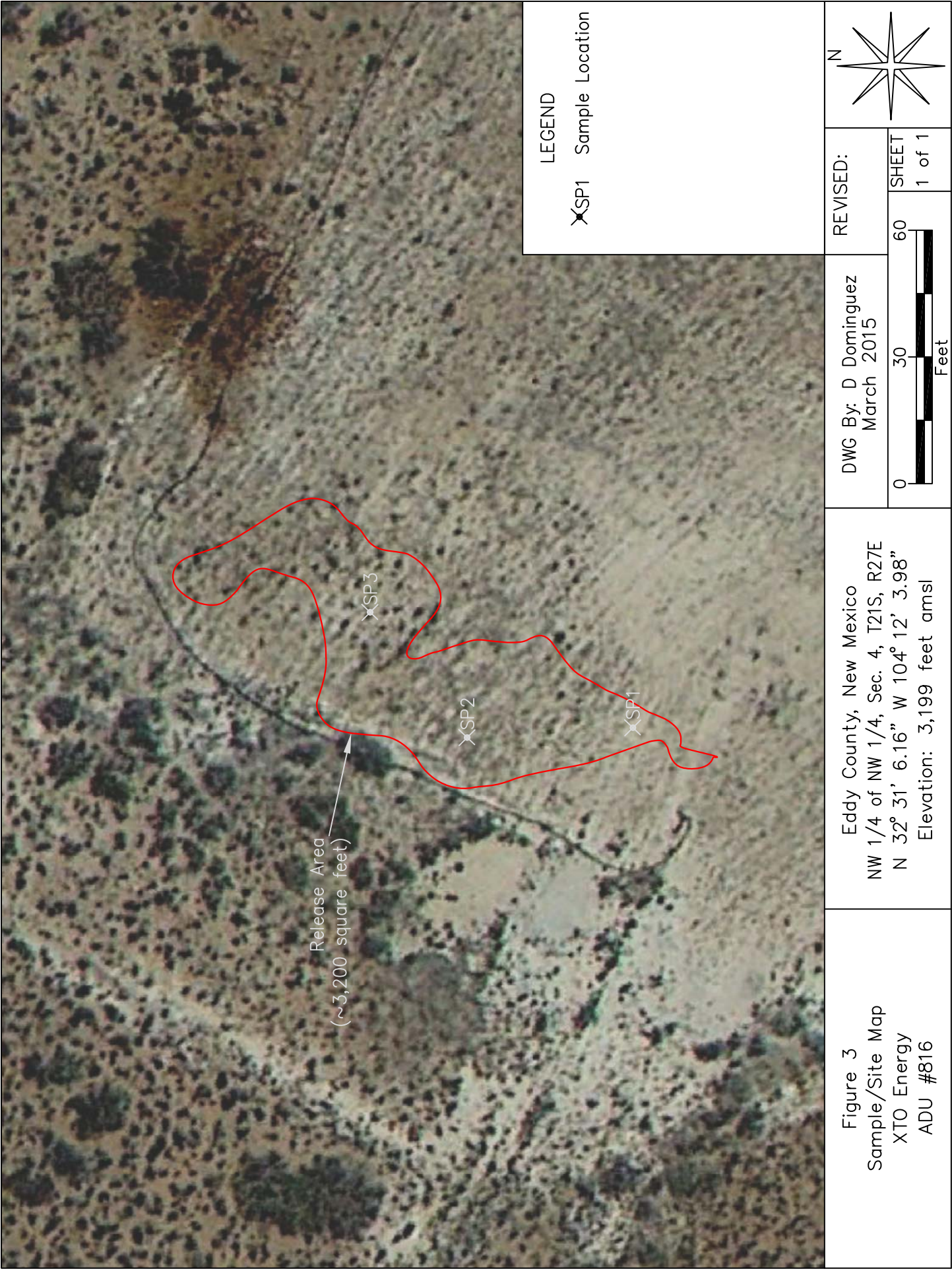
Figure 1 Area Map XTO Energy ADU #816	Eddy County, New Mexico  NW 1/4 of NW 1/4, Sec. 4, T21S, R27E  N 32° 31' 6.16" W 104° 12' 3.98"  Elevation: 3,199 feet amsl	DWG By: D Dominguez March 2015		REVISED:	
		 Miles		SHEET 1 of 1	






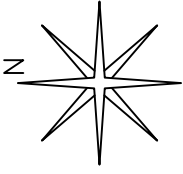

Figure 2 Site Location Map XTO Energy ADU #816	Eddy County, New Mexico NW 1/4 of NW 1/4, Sec. 4, T21S, R27E N 32° 31' 6.16" W 104° 12' 3.98" Elevation: 3,199 feet amsl		DWG By: D Dominguez March 2015	REVISED:	
			0 2,000 4,000	SHEET 1 of 1	
					



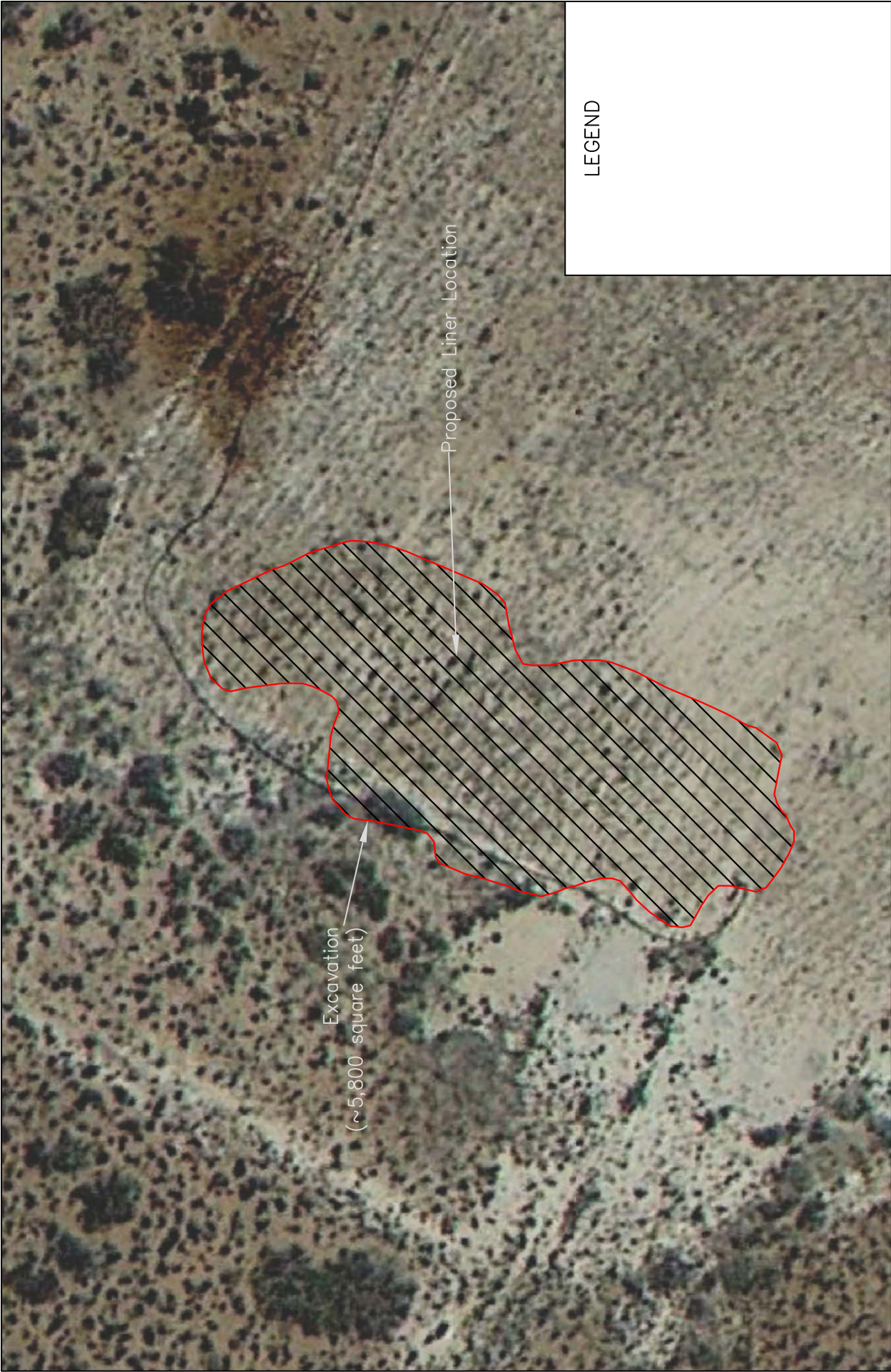



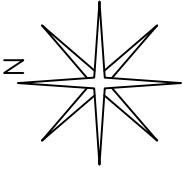




	Figure 4 Excavation/Sample Map XTO Energy ADU #816		Eddy County, New Mexico NW 1/4 of NW 1/4, Sec. 4, T21S, R27E N 32° 31' 6.16" W 104° 12' 3.98" Elevation: 3,199 feet amsl		DWG By: D Dominguez March 2015	REVISED:	
					0 30 60 Feet	SHEET 1 of 1	
<div>LEGEND</div> <div> SW1 Sample Location</div>							





		Eddy County, New Mexico NW 1/4 of NW 1/4, Sec. 4, T21S, R27E N 32° 31' 6.16" W 104° 12' 3.98" Elevation: 3,199 feet amsl		DWG By: D Dominguez March 2015		REVISED:			
				0 30 60 Feet		SHEET 1 of 1			
Figure 5 Proposed Liner Location XTO Energy ADU #816		LEGEND							

## **TABLES**



TABLE 1

## Well Data

## XTO Energy - ADU %816

Ref #	Well Number	Use	Diversion <sup>A</sup>	Owner	q64	q16	q4	Sec	Twsp	Rng	Easting	Northing	Date Measured	Surface Elevation <sup>B</sup>	Depth to Water (ft bgs)
1	C 01147	STK	3	GERALD ELMORE				4	21S	27E	575637	3597162	--	3,181	--
2	C 02907	DOL	3	RITA NELSON	3	2	1	3	21S	27E	576959	3597669	29-Jan-03	3,201	14
3	C 01333	PRO	0	HUMBLE OIL & REFINING COMPANY	1	1	4	5	21S	27E	574128	3597045	11-May-66	3,327	350
7	CP 00851	SAN	3	EXXON CORPORATION	4	1	2	31	20S	28E	573791	3599940	14-Sep-95	3,248	115
8	CP 00746	STK	3	BRUCE RIGGS	1	3	4	32	20S	28E	575229	3598948	24-Jan-90	3,206	29
9	CP 00671	DOL	3	MARY WALKER		1	3	33	20S	28E	576129	3599260	05-Mar-85	3,209	35
10	CP 00920	STK	3	MATTHEW COX	2	4	1	33	20S	28E	576627	3599766	31-Dec-62	3,209	29
11	CP 00921	COM	13	MATTHEW COX	2	3	1	33	20S	28E	576223	3599763	31-Dec-49	3,210	30
12	CP 00922	STK	3	MATTHEW COX	2	3	3	33	20S	28E	576233	3598956	31-Dec-49	3,207	27
4	C 02482	DOM	3	VERNON W BRAMAN	3	3	4	8	21S	27E	574236	3594942	20-Jan-96	3,249	185
5	C 01330	STK	3	GERALD ELMORE	3	3	3	9	21S	27E	574941	3594849	18-Apr-66	3,240	80
6	C 01339	EXP	0	INDIAN HILLS GAS SYSTEM LTD.		1	4	9	21S	27E	575842	3595353	31-Aug-66	3,237	120

\* = Data obtained from the New Mexico Office of the State Engineer Website ([http://iwaters.ose.state.nm.us:7001/iWATERS/wr\\_RegisServlet1](http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1)) and USGS Database

<sup>A</sup> = In acre feet per annum

<sup>B</sup> = Elevation interpolated from USGS topographical map based on referenced location.

STK = 72-12-1 Livestock watering

DOL = 72-12-1 Domestic and Livestock watering

PRO = 72-12-1 Prospecting or development of Natural Resource

DOM = 72-12-1 Domestic one household

EXP = Exploration

SAN = 72-12-1 Sanitary in conjunction with a commercial use

COM = Commercial

quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are smallest to biggest

-- = Data not provided on the NM iwaters website

**Shaded area indicates wells not shown in Figure 2**

**TABLE 2**  
**Summary of Soil Sample Field Testing and Laboratory Analytical Results**  
**XTO Energy**  
**ADU #816**

Lab Sample ID	Depth (feet)	Soil Status	Sample Date	PID Reading (ppm)	Field Chloride (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	GRO C6-C10 (mg/Kg)	DRO C10-C28 (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)
SP1	1	Excavated	10-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	<b>6,800</b>
	2	Excavated	10-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	<b>10,000</b>
	4	Excavated	10-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	<b>10,400</b>
SP2	1	Excavated	10-Nov-14	--	4,000	<0.050	0.050	0.237	0.767	1.05	18.1	545	<b>563</b>	<b>10,100</b>
	2	Excavated	10-Nov-14	--	4,000	<0.050	<0.050	0.053	0.360	0.477	<10.0	54	54	<b>10,400</b>
	3	Excavated	10-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	<b>6,530</b>
	4	Excavated	10-Nov-14	--	3,200	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	<b>3,600</b>
SP3	1	Excavated	10-Nov-14	--	4,000	<0.050	0.129	0.166	2.530	2.82	<10.0	14,000	<b>14,000</b>	<b>2,760</b>
	2	Excavated	10-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	<b>3,880</b>
	3	Excavated	10-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	<b>9,860</b>
	4	Excavated	10-Nov-14	--	4,000	<0.050	<0.050	<0.050	0.261	<0.300	<10.0	527	<b>527</b>	<b>9,200</b>
SW1	2	In Situ	21-Nov-14	--	480	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>384</b>
SW2	2	In Situ	21-Nov-14	--	400	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>288</b>
SW3	2	In Situ	21-Nov-14	--	240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	48
SW4	2	In Situ	21-Nov-14	--	560	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>416</b>
SW5	2	In Situ	21-Nov-14	--	320	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	80
SW6	2	In Situ	21-Nov-14	--	400	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>288</b>



**TABLE 2**  
**Summary of Soil Sample Field Testing and Laboratory Analytical Results**  
**XTO Energy**  
**ADU #816**

Lab Sample ID	Depth (feet)	Soil Status	Sample Date	PID Reading (ppm)	Field Chloride (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	GRO C6-C10 (mg/Kg)	DRO C10-C28 (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)
B1	4	In Situ	21-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>13,200</b>
	18	In Situ	05-Dec-14	--	2,480	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>2,480</b>
B2	4	In Situ	21-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>14,400</b>
	18	In Situ	05-Dec-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>7,200</b>
B3	4	In Situ	21-Nov-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>14,000</b>
	18	In Situ	05-Dec-14	--	4,000	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<30.0	<b>6,640</b>
SP2A	32	In Situ	19-Jan-15	--	--	--	--	--	--	--	--	--	--	<b>8,320</b>
NMOCD Recommended Remedial Action Levels				100		10				50			100	250

-- = Not Analyzed

**Bold** values are in excess of NMOCD Recommended Remedial Action Levels

Shaded values indicates soil has been excavated

## **ATTACHMENTS**



**ATTACHMENT I**  
**Photographs**



Photograph #1 – Looking north-westerly across excavation



Photograph #2 – Looking north-westerly across excavation



Photograph #3 – Looking northerly across excavation



Photograph #4 – Looking northerly across excavation



**ATTACHMENT II**  
**Laboratory Analytical Results**



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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November 25, 2014

Daniel Dominguez

Environmental Plus, Inc.

P.O. Box 1558

Eunice, NM 88231

RE: ADU #816

Enclosed are the results of analyses for samples received by the laboratory on 11/19/14 15:48.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Hope S. Moreno". The signature is written in a cursive style with a long, sweeping underline.

Hope S. Moreno For Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received:	11/19/2014	Sampling Date:	11/10/2014
Reported:	11/25/2014	Sampling Type:	Soil
Project Name:	ADU #816	Sampling Condition:	Cool & Intact
Project Number:	XTO	Sample Received By:	Jodi Henson
Project Location:	UL-D SEC. 4, T21S, R27E		

**Sample ID: SP 1 (1') (H403562-01)**

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65	
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93	
Ethylbenzene*	<0.050	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61	
Total Xylenes*	<0.150	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47	
Total BTX	<0.300	0.300	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.3 % 61-154

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6880	16.0	11/20/2014	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/21/2014	ND	207	104	200	0.664	
DRO >C10-C28	<10.0	10.0	11/21/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 127 % 47.2-157

Surrogate: 1-Chlorooctadecane 135 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Hope S. Moreno For Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 1 (2') (H403562-02)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65		
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93		
Ethylbenzene*	<0.050	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61		
Total Xylenes*	<0.150	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47		
Total BTEx	<0.300	0.300	11/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 88.9 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10000	16.0	11/20/2014	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/21/2014	ND	207	104	200	0.664	
DRO >C10-C28	<10.0	10.0	11/21/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 116 % 47.2-157

Surrogate: 1-Chlorooctadecane 128 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Hope S. Moreno For Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 1 (4') (H403562-03)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65	
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93	
Ethylbenzene*	<0.050	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61	
Total Xylenes*	<0.150	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47	
Total BTX	<0.300	0.300	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.3 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10400	16.0	11/20/2014	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/21/2014	ND	207	104	200	0.664	
DRO >C10-C28	<10.0	10.0	11/21/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 119 % 47.2-157

Surrogate: 1-Chlorooctadecane 123 % 52.1-176

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\*=Accredited Analyte

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Hope S. Moreno For Caley D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 2 (1') (H403562-04)**

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65	
<b>Toluene*</b>	<b>0.050</b>	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93	
<b>Ethylbenzene*</b>	<b>0.237</b>	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61	
<b>Total Xylenes*</b>	<b>0.767</b>	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47	
<b>Total BTX</b>	<b>1.05</b>	0.300	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 139 % 61-154

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>10100</b>	16.0	11/20/2014	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10</b>	<b>18.1</b>	10.0	11/21/2014	ND	207	104	200	0.664	
<b>DRO &gt;C10-C28</b>	<b>545</b>	10.0	11/21/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 120 % 47.2-157

Surrogate: 1-Chlorooctadecane 157 % 52.1-176

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Hope S. Moreno For Caley D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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Daniel Dominguez  
P.O. Box 1558  
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Fax To: (505) 394-2601

Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 2 (2') (H403562-05)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65	
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93	
Ethylbenzene*	0.053	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61	
Total Xylenes*	0.360	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47	
Total BTX	0.477	0.300	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10400	16.0	11/20/2014	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/21/2014	ND	207	104	200	0.664	
DRO >C10-C28	54.0	10.0	11/21/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 128 % 47.2-157

Surrogate: 1-Chlorooctadecane 139 % 52.1-176

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Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 2 (3') (H403562-06)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65	
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93	
Ethylbenzene*	<0.050	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61	
Total Xylenes*	<0.150	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47	
Total BTEx	<0.300	0.300	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6530	16.0	11/20/2014	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/21/2014	ND	207	104	200	0.664	
DRO >C10-C28	<10.0	10.0	11/21/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 128 % 47.2-157

Surrogate: 1-Chlorooctadecane 140 % 52.1-176

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 Fax To: (505) 394-2601

 Received: 11/19/2014  
 Reported: 11/25/2014  
 Project Name: ADU #816  
 Project Number: XTO  
 Project Location: UL-D SEC. 4, T21S, R27E

 Sampling Date: 11/10/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 (4') (H403562-07)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65	
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93	
Ethylbenzene*	<0.050	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61	
Total Xylenes*	<0.150	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47	
Total BTEx	<0.300	0.300	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.4 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	11/20/2014	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/21/2014	ND	207	104	200	0.664	
DRO >C10-C28	<10.0	10.0	11/21/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 126 % 47.2-157

Surrogate: 1-Chlorooctadecane 137 % 52.1-176

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Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 3 (1') (H403562-08)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	11/24/2014	ND	1.76	88.0	2.00	4.65	
Toluene*	0.129	0.100	11/24/2014	ND	1.62	81.2	2.00	4.93	
Ethylbenzene*	0.166	0.100	11/24/2014	ND	1.56	78.2	2.00	4.61	
Total Xylenes*	2.53	0.300	11/24/2014	ND	4.72	78.7	6.00	4.47	
Total BTEX	2.82	0.600	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2760	16.0	11/20/2014	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: ms				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<200	200	11/22/2014	ND	207	104	200	0.664	
DRO >C10-C28	14000	200	11/22/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 155 % 47.2-157

Surrogate: 1-Chlorooctadecane 423 % 52.1-176

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Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 3 (2') (H403562-09)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65		
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93		
Ethylbenzene*	<0.050	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61		
Total Xylenes*	<0.150	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47		
Total BTEX	<0.300	0.300	11/24/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.4 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3880	16.0	11/20/2014	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/22/2014	ND	207	104	200	0.664	
DRO >C10-C28	<10.0	10.0	11/22/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 121 % 47.2-157

Surrogate: 1-Chlorooctadecane 132 % 52.1-176

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Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 3 (3') (H403562-10)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65	
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93	
Ethylbenzene*	<0.050	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61	
Total Xylenes*	<0.150	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47	
Total BTEX	<0.300	0.300	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.7 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9860	16.0	11/20/2014	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/22/2014	ND	207	104	200	0.664	
DRO >C10-C28	<10.0	10.0	11/22/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 125 % 47.2-157

Surrogate: 1-Chlorooctadecane 136 % 52.1-176

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Fax To: (505) 394-2601

Received: 11/19/2014  
Reported: 11/25/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/10/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SP 3 (4') (H403562-11)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/24/2014	ND	1.76	88.0	2.00	4.65	
Toluene*	<0.050	0.050	11/24/2014	ND	1.62	81.2	2.00	4.93	
Ethylbenzene*	<0.050	0.050	11/24/2014	ND	1.56	78.2	2.00	4.61	
<b>Total Xylenes*</b>	<b>0.261</b>	0.150	11/24/2014	ND	4.72	78.7	6.00	4.47	
Total BTEX	<0.300	0.300	11/24/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9200	16.0	11/20/2014	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/22/2014	ND	207	104	200	0.664	
DRO >C10-C28	527	10.0	11/22/2014	ND	218	109	200	0.554	

Surrogate: 1-Chlorooctane 123 % 47.2-157

Surrogate: 1-Chlorooctadecane 141 % 52.1-176

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### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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## Chain of Custody Form

**LAB**  
**Cardinal**

[illegible]



# Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231  
(575) 394-3481 FAX: (575) 394-2601

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form  
LAB Cardinal

Company Name Environmental Plus, Inc.

EPI Project Manager Daniel Dominguez

Mailing Address P.O. BOX 1558

City, State, Zip Eunice New Mexico 88231

EPI Phone#/Fax# 575-394-3481 / 575-394-2601

Client Company XTO

Facility Name ADU #816

Location UL-D Sec. 4, T21S, R27E

Project Reference

EPI Sampler Name Dustin Crockett

Attn: Daniel Dominguez  
P.O. Box 1558  
Eunice, NM 88231

Bill To

ANALYSIS REQUEST



Attn: Daniel Dominguez  
P.O. Box 1558  
Eunice, NM 88231

LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING		BTEX 8021B	TPH 8015M	CHLORIDES (Cl <sup>-</sup> )	SULFATES (SO <sub>4</sub> <sup>2-</sup> )	pH	TCLP	OTHER >>>	PAH
					GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE								
H403562	11	SP3 (4')	G	1			X				X		10-Nov-14	10:45	X	X	X					
	12																					
	13																					
	14																					
	15																					
	16																					
	17																					
	18																					
	19																					
	20																					

Sampler Relinquished:

Date: 11/19/14

Received By: [Signature]

E-mail results to: ddominguezepi@gmail.com & rbooneepi@gmail.com

NOTES:

Relinquished by:

Date: 11/19/14

Received By: (lab staff)

Delivered by:

-2.30

Sample Cool & Intact

Checked By: [Signature]

#54



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

December 03, 2014

Daniel Dominguez

Environmental Plus, Inc.

P.O. Box 1558

Eunice, NM 88231

RE: ADU #816

Enclosed are the results of analyses for samples received by the laboratory on 11/24/14 15:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/24/2014  
Reported: 12/03/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/21/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SW 1 (2') (H403620-01)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4	
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1	
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64	
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1	
Total BTEX	<0.300	0.300	12/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	11/25/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/25/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/25/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 129 % 47.2-157

Surrogate: 1-Chlorooctadecane 147 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/24/2014  
Reported: 12/03/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/21/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SW 2 (2') (H403620-02)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4		
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1		
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64		
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1		
Total BTEX	<0.300	0.300	12/02/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	11/25/2014	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/25/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/25/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 117 % 47.2-157

Surrogate: 1-Chlorooctadecane 129 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/24/2014  
Reported: 12/03/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/21/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SW 3 (2') (H403620-03)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4		
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1		
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64		
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1		
Total BTX	<0.300	0.300	12/02/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/25/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/25/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/25/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 116 % 47.2-157

Surrogate: 1-Chlorooctadecane 130 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/24/2014  
Reported: 12/03/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/21/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SW 4 (2') (H403620-04)**

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4	
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1	
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64	
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1	
Total BTEx	<0.300	0.300	12/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	11/25/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/25/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/25/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 126 % 47.2-157

Surrogate: 1-Chlorooctadecane 138 % 52.1-176

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Fax To: (505) 394-2601

Received: 11/24/2014  
Reported: 12/03/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/21/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: SW 5 (2') (H403620-05)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4		
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1		
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64		
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1		
Total BTX	<0.300	0.300	12/02/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/25/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/25/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/25/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 126 % 47.2-157

Surrogate: 1-Chlorooctadecane 138 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Environmental Plus, Inc.  
 Daniel Dominguez  
 P.O. Box 1558  
 Eunice NM, 88231  
 Fax To: (505) 394-2601

 Received: 11/24/2014  
 Reported: 12/03/2014  
 Project Name: ADU #816  
 Project Number: XTO  
 Project Location: UL-D SEC. 4, T21S, R27E

 Sampling Date: 11/21/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SW 6 (2') (H403620-06)**

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4		
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1		
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64		
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1		
Total BTEx	<0.300	0.300	12/02/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	11/25/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/25/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/25/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 120 % 47.2-157

Surrogate: 1-Chlorooctadecane 130 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/24/2014  
Reported: 12/03/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/21/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 1 (4') (H403620-07)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4	
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1	
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64	
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1	
Total BTX	<0.300	0.300	12/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13200	16.0	11/25/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/25/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/25/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 119 % 47.2-157

Surrogate: 1-Chlorooctadecane 133 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/24/2014  
Reported: 12/03/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/21/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 2 (4') (H403620-08)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4	
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1	
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64	
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1	
Total BTX	<0.300	0.300	12/02/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14400	16.0	11/25/2014	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/25/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/25/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 111 % 47.2-157

Surrogate: 1-Chlorooctadecane 126 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 11/24/2014  
Reported: 12/03/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 11/21/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 3 (4') (H403620-09)**

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/02/2014	ND	1.65	82.7	2.00	10.4		
Toluene*	<0.050	0.050	12/02/2014	ND	1.64	81.8	2.00	10.1		
Ethylbenzene*	<0.050	0.050	12/02/2014	ND	1.64	82.1	2.00	9.64		
Total Xylenes*	<0.150	0.150	12/02/2014	ND	5.00	83.4	6.00	10.1		
Total BTX	<0.300	0.300	12/02/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	14000	16.0	11/25/2014	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/27/2014	ND	197	98.7	200	0.107	
DRO >C10-C28	<10.0	10.0	11/27/2014	ND	198	99.1	200	1.15	

Surrogate: 1-Chlorooctane 108 % 47.2-157

Surrogate: 1-Chlorooctadecane 123 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



# Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231  
(575) 394-3481 FAX: (575) 394-2601

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form

LAB Cardinal

Company Name Environmental Plus, Inc.

EPI Project Manager Daniel Dominguez

Mailing Address P.O. BOX 1558

City, State, Zip Eunice New Mexico 88231

EPI Phone/Fax# 575-394-3481 / 575-394-2601

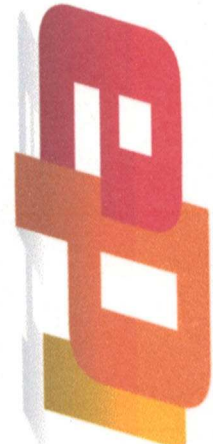
Client Company XTO

Facility Name ADU #816

Location UL-D Sec. 4, T21S, R27E

Project Reference

EPI Sampler Name Dustin Crockett



Attn: Daniel Dominguez  
P.O. Box 1558  
Eunice, NM 88231

Bill To

ANALYSIS REQUEST

Company Name		Daniel Dominguez	
EPI Project Manager		P.O. BOX 1558	
Mailing Address		Eunice New Mexico 88231	
City, State, Zip		575-394-3481 / 575-394-2601	
EPI Phone#/Fax#		XTO	
Client Company		ADU #816	
Facility Name		UL-D Sec. 4, T21S, R27E	
Location		Attn: Daniel Dominguez P.O. Box 1558 Eunice, NM 88231	
Project Reference			
EPI Sampler Name		Dustin Crockett	

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							PRESERV.	SAMPLING	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl <sup>-</sup> )	SULFATES (SO <sub>4</sub> <sup>=</sup> )	pH	TCLP	OTHER >>>	PAH
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE												
H403620	1 SW1 (2')	G	1			X					X		21-Nov-14	1:30	X	X	X					
	2 SW2 (2')	G	1			X					X		21-Nov-14	1:40	X	X	X					
	3 SW3 (2')	G	1			X					X		21-Nov-14	1:50	X	X	X					
	4 SW4 (2')	G	1			X					X		21-Nov-14	2:00	X	X	X					
	5 SW5 (2')	G	1			X					X		21-Nov-14	2:10	X	X	X					
	6 SW6 (2')	G	1			X					X		21-Nov-14	2:20	X	X	X					
	7 B1 (4')	G	1			X					X		21-Nov-14	3:15	X	X	X					
	8 B2 (4')	G	1			X					X		21-Nov-14	3:20	X	X	X					
	9 B3 (4')	G	1			X					X		21-Nov-14	3:25	X	X	X					
	10																					

Sample Relinquished by: *Dustin Crockett*

Date: 11/24/14 Time: 7:00 AM

Received By: *Dustin Crockett*

Relinquished by: *Dustin Crockett*

Date: 11/24/14 Time: 3:40 PM

Received By: *Dustin Crockett*

Delivered by: *Dustin Crockett*

Date: 11/24/14

Time: 3:40 PM

Received By: *Dustin Crockett*

Sample Cool & Intact

Yes

NOTES: E-mail results to: ddominguezepi@gmail.com & rbooneepi@gmail.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

December 15, 2014

Daniel Dominguez

Environmental Plus, Inc.

P.O. Box 1558

Eunice, NM 88231

RE: ADU #816

Enclosed are the results of analyses for samples received by the laboratory on 12/08/14 15:46.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received:	12/08/2014	Sampling Date:	12/05/2014
Reported:	12/15/2014	Sampling Type:	Soil
Project Name:	ADU #816	Sampling Condition:	Cool & Intact
Project Number:	XTO	Sample Received By:	Jodi Henson
Project Location:	UL-D SEC. 4, T21S, R27E		

**Sample ID: B 1 (18') (H403738-01)**

BTX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2014	ND	1.98	98.9	2.00	4.25	
Toluene*	<0.050	0.050	12/11/2014	ND	1.97	98.7	2.00	4.01	
Ethylbenzene*	<0.050	0.050	12/11/2014	ND	1.89	94.4	2.00	3.87	
Total Xylenes*	<0.150	0.150	12/11/2014	ND	5.72	95.3	6.00	3.73	
Total BTX	<0.300	0.300	12/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 61-154

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2480	16.0	12/09/2014	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2014	ND	188	93.9	200	0.211	
DRO >C10-C28	<10.0	10.0	12/10/2014	ND	201	100	200	0.909	

Surrogate: 1-Chlorooctane 86.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 83.3 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 12/08/2014  
Reported: 12/15/2014  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 12/05/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**Sample ID: B 2 (18') (H403738-02)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2014	ND	1.98	98.9	2.00	4.25	
Toluene*	<0.050	0.050	12/11/2014	ND	1.97	98.7	2.00	4.01	
Ethylbenzene*	<0.050	0.050	12/11/2014	ND	1.89	94.4	2.00	3.87	
Total Xylenes*	<0.150	0.150	12/11/2014	ND	5.72	95.3	6.00	3.73	
Total BTX	<0.300	0.300	12/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7200	16.0	12/09/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2014	ND	188	93.9	200	0.211	
DRO >C10-C28	<10.0	10.0	12/10/2014	ND	201	100	200	0.909	

Surrogate: 1-Chlorooctane 92.2 % 47.2-157

Surrogate: 1-Chlorooctadecane 86.0 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

 Environmental Plus, Inc.  
 Daniel Dominguez  
 P.O. Box 1558  
 Eunice NM, 88231  
 Fax To: (505) 394-2601

 Received: 12/08/2014  
 Reported: 12/15/2014  
 Project Name: ADU #816  
 Project Number: XTO  
 Project Location: UL-D SEC. 4, T21S, R27E

 Sampling Date: 12/05/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: B 3 (18') (H403738-03)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2014	ND	1.98	98.9	2.00	4.25	
Toluene*	<0.050	0.050	12/11/2014	ND	1.97	98.7	2.00	4.01	
Ethylbenzene*	<0.050	0.050	12/11/2014	ND	1.89	94.4	2.00	3.87	
Total Xylenes*	<0.150	0.150	12/11/2014	ND	5.72	95.3	6.00	3.73	
Total BTX	<0.300	0.300	12/11/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 61-154

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6640	16.0	12/09/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2014	ND	188	93.9	200	0.211	
DRO >C10-C28	<10.0	10.0	12/10/2014	ND	201	100	200	0.909	

Surrogate: 1-Chlorooctane 88.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 85.4 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

# Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231  
(575) 394-3481 FAX: (575) 394-2601

P.O. Box 1558, Eunice, NM 88231

LAB Cardinal

Chain of Custody Form

Company Name		Environmental Plus, Inc.		Bill To		ANALYSIS REQUEST																																							
EPI Project Manager		Daniel Dominguez																																											
Mailing Address		P.O. BOX 1558																																											
City, State, Zip		Eunice New Mexico 88231																																											
EPI Phone#/Fax#		575-394-3481 / 575-394-2601																																											
Client Company		XTO																																											
Facility Name		ADU #816																																											
Location		UL-D Sec. 4, T21S, R27E																																											
Project Reference																																													
EPI Sampler Name		Dustin Crockett		Attn: Daniel Dominguez P.O. Box 1558 Eunice, NM 88231																																									
LAB I.D.		H403738		SAMPLE I.D.																																									
				(G)RAB OR (C)OMP.		# CONTAINERS		GROUND WATER		WASTEWATER		SOIL		CRUDE OIL		SLUDGE		OTHER:		ACID/BASE		ICE/COOL		OTHER		DATE		TIME		BTX 8021B		TPH 8015M		CHLORIDES (Cl <sup>-</sup> )		SULFATES (SO <sub>4</sub> <sup>2-</sup> )		pH		TCLP		OTHER >>>		PAH	
1 B1 (18')				G		1						X										X				05-Dec-14		9:30		X		X		X											
2 B2 (18')				G		1						X										X				05-Dec-14		12:15		X		X		X											
3 B3 (18')				G		1						X										X				05-Dec-14		13:20		X		X		X											
4																																													
5																																													
6																																													
7																																													
8																																													
9																																													
10																																													

Sampler Relinquished by: *[Signature]* Date: 12/8/14 Time: 3:44pm Received By: *[Signature]* Date: 12/9/14 Time: 3:44pm

Reinquired by: *[Signature]* Date: 12/9/14 Time: 3:44pm Received By: (lab stamp) *[Signature]* Date: 12/9/14 Time: 3:44pm

Delivered by: *[Signature]* Date: 12/9/14 Time: 3:44pm Sample Cool & Intact: ☒ Yes ☐ No Checked By: *[Signature]*

NOTES: E-mail results to: ddominguezepi@gmail.com & rbooneepi@gmail.com & john\_robinson@xtcoenergy.com



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

January 20, 2015

Daniel Dominguez

Environmental Plus, Inc.

P.O. Box 1558

Eunice, NM 88231

RE: ADU #816

Enclosed are the results of analyses for samples received by the laboratory on 01/20/15 10:04.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Environmental Plus, Inc.  
Daniel Dominguez  
P.O. Box 1558  
Eunice NM, 88231  
Fax To: (505) 394-2601

Received: 01/20/2015  
Reported: 01/20/2015  
Project Name: ADU #816  
Project Number: XTO  
Project Location: UL-D SEC. 4, T21S, R27E

Sampling Date: 01/19/2015  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Jodi Henson

**Sample ID: SP 2A (32') (H500178-01)****Chloride, SM4500Cl-B****mg/kg****Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>8320</b>	16.0	01/20/2015	ND	400	100	400	0.00	

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

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---

Celey D. Keene, Lab Director/Quality Manager

# Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231  
(575) 394-3481 FAX: (575) 394-2601

P.O. Box 1558, Eunice, NM 88231

Chain of Custody Form  
LAB Cardinal

Company Name Environmental Plus, Inc.

EPI Project Manager Daniel Dominguez

Mailing Address P.O. BOX 1558

City, State, Zip Eunice New Mexico 88231

EPI Phone#/Fax# 575-394-3481 / 575-394-2601

Client Company XTO

Facility Name ADU #816

Location UL-D Sec. 4, T21S, R27E

Project Reference

EPI Sampler Name Roger Boone

Attn: Daniel Dominguez  
P.O. Box 1558  
Eunice, NM 88231

Bill To

ANALYSIS REQUEST



LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING		BTEX 8021B	TPH 8015M	CHLORIDES (Cl <sup>-</sup> )	SULFATES (SO <sub>4</sub> <sup>=</sup> )	pH	TCLP	OTHER >>>	PAH	
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:		ACID/BASE	ICE/COOL									OTHER
H500178	1 SP2A (32")	G	1			X					X		19-Jan-15	14:10			X				
	2																				
	3																				
	4																				
	5																				
	6																				
	7																				
	8																				
	9																				
	10																				

Sampler Relinquished:

Date 1-20-15

Received By:

Relinquished by:

Date 1-20-15

Received By: (lab staff)

Delivered by:

Date 10-4-15

Sample Cool & Intact

Checked By:

E-mail results to: ddominguezepi@gmail.com & rbooneepi@gmail.com  
NOTES: & john\_robinson@xtoenergy.com

**ATTACHMENT III**  
**Copy of Initial NMOCD Form C-141**

# NM OIL CONSERVATION

ARTESIA DISTRICT

State of New Mexico  
Energy Minerals and Natural Resources

DEC 17 2014

Form C-141  
Revised August 8, 2011

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

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

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

## Release Notification and Corrective Action

NAB1435334041

### OPERATOR

X Initial Report ☐ Final Report

Name of Company	XTO Energy Inc. 5880	Contact	John Robinson
Address	500 West Illinois, Suite 100 Midland TX 79701	Telephone No.	575-441-5199
Facility Name	ADU 816 (AVALON DELAWARE UNIT)	Facility Type	Injection Well
Surface Owner	Mineral Owner	API No.	3001524696

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	5	21S	27E	563	North	560	East	EDDY

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

### NATURE OF RELEASE

Type of Release	Oil and Produced Water	Volume of Release	5 Oil and 60 Water	Volume Recovered	None
Source of Release	Injection Line	Date and Hour of Occurrence	9-27-14 7:00am	Date and Hour of Discovery	9-27-14 7:00 am
Was Immediate Notice Given?	X Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Jeff Robertson		
By Whom?	John Robinson	Date and Hour	9-27-14 3:00pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes X No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Corrosion on flow line. Shut in well

Describe Area Affected and Cleanup Action Taken.\*

Pasture. No action taken yet

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: <i>John Robinson</i>	OIL CONSERVATION DIVISION	
Printed Name: John Robinson	Approved by Environmental Specialist	Signed By <i>[Signature]</i>
Title: Maintenance Foreman	Approval Date:	Expiration Date:
E-mail Address: john_robinson@xtoenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 10-1-14	Phone: 575-441-5199	

\* Attach Additional Sheets If Necessary

2RP-2674