

ENVIRONMENTAL PLUS, INC.

2100 Ave 'O'
P.O. Box 1558
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Fax: (575) 394-2601



Site Characterization and Work Plan

**Vanguard
Pathfinder AFT State #11
Chaves County, New Mexico
Unit Letter "J", Section 21, Township 10 South, Range 27 East
Latitude 33.4285202 North, Longitude 104.1967087 West
NMOCD Reference #2RP-4086**

Prepared For:

Vanguard Operating, LLC
4001 Penbrook, Suite 201
Odessa, Texas 79762

Prepared By:

Environmental Plus, Inc.
2100 Ave 'O'
Eunice, NM 88231

June 2017

A handwritten signature in black ink, appearing to read 'Daniel Dominguez', is written over a horizontal line.

Daniel Dominguez
Project Manager



The following *Site Characterization and Work Plan* serves as a condensed update on field activities undertaken and proposed actions for the afore referenced Site.

Background:

The site is located in Unit Letter J (NW ¼ SE ¼), Section 21, Township 10 South, Range 27 East, approximately nineteen miles east of Roswell, in Chaves County, New Mexico. The property is owned by the State of New Mexico.

The release site is located in the pasture off an active tank battery and flow line; latitude 33.485202 North, longitude 104.1967087 West. Area Map, Site Location Map, and Sample/Site Map are included as Figure 1, Figure 2, and Figure 3, respectively. The Initial NMOCD Form C-141 indicates lightning struck the tank battery. A 210 steel tank and a 210 fiberglass tank were destroyed along with flowlines and fittings. The fire department chose to let the fire burn out on its own with everything in containment. The visually stained area totals approximately 1,200 square feet. The Initial NMOCD Form C-141 is included as Attachment IV.

NMOCD Site Classification:

A search for water wells was completed utilizing the New Mexico Office of the State Engineer’s (NMOSE) website. There is one monitoring well located in the area surrounding the release site (reference *Table I*). Also, no wells (domestic, agriculture or public) and no bodies of surface water exist within a 1,000-foot radius of the release site (reference *Figure 2*). The NMOSE database indicates average water depth is approximately 87 feet below ground surface (bgs) within an 8,000-meter radius (reference *Attachment II*). However, as this is too great a distance to accurately determine depth to water for this location and the closest documented well to this location is 913 meters away and doesn’t provide depth to groundwater, the Chavez county groundwater flowline map was utilized to determine an approximate depth to water of seventy-five to one hundred feet bgs.

Utilizing this information, the NMOCD guidelines indicate the Pathfinder AFT State #11 release site to have a ranking score of ten. Based on this score, the NMOCD Recommended Remedial Action Levels (RRALs) for delineation at this Site were determined as follows: Benzene – 10 mg/Kg, BTEX – 50 mg/Kg, TPH – 1,000 mg/Kg, and Chloride – 600 mg/Kg.

The visually stained area within containment totals an area of approximately 1,200 square feet. The containment area is caliche approximately one foot thick.

Delineation Progress:

On April 24, 2017 EPI personnel mobilized on site to collect soil samples to determine the vertical extent of contamination. A total of twelve soil samples were collected from two sample locations; SP1 – SP2. Two soil samples from each sample location were sent to Cardinal Labs in Hobbs, New Mexico, for testing. Laboratory analytical results indicate Chlorides above NMOCD RRALs at surface level (reference *Figure 3* and *Table 2*).

Portions of select soil samples were field tested for organic vapors and chloride concentrations. Soil samples collected for field testing of organic vapors were placed in self-sealing polyethylene

bags and allowed to equilibrate to ~70° F. Field testing of organic vapors utilized a Mini-Rae™ Photoionization Detector (PID) equipped with a 10.6 electron-volt (eV) calibrated for benzene response. Chloride concentrations were determined via use of a LaMotte Chloride Kit (Titration Method).

Soil samples designated for laboratory analyses were collected into laboratory provided glass containers, labeled and inserted into self-sealing polyethylene bags, placed in a cooler, chilled and transported to an independent laboratory for quantification of contaminant concentrations under Chain-of-Custody protocol.

On April 25, 2017 EPI personnel were on site to collect soil samples to determine the horizontal extent of contamination. A total of eight samples were collected from four sample locations; SP3 – SP6. All eight samples were sent to Cardinal labs for testing. Laboratory analytical results indicate that the areas adjacent to the release areas, horizontally, are void of Benzene, BTEX, TPH, and Chloride concentrations more than NMOCD RRALs (reference *Figure 3* and *Table 2*).

On June 9, 2017 EPI personnel were on site to collect additional soil samples. Field testing indicated that chloride levels were trending upward at SP3, so an additional sample was collected at six feet bgs. To ensure complete horizontal delineation an additional sample location, SP7, was drilled and sampled adjacent to SP3. A total of three samples were collected from two sample locations; SP3 and SP7. All three samples were sent to Cardinal labs for testing. Laboratory analytical results indicate these areas to be void of Benzene, BTEX, TPH, and Chloride concentrations more than NMOCD RRALs (reference *Figure 3* and *Table 2*).

Proposed Actions:

Based on field testing and laboratory analytical data, EPI proposes to excavate the release area around SP1, SP2, and SP3 to approximately four feet bgs, install a 20-millimeter poly-ethylene liner and backfill with clean caliche. The berms, damaged tanks, and process equipment have already been removed and will be replaced when remediation activities are complete.

Caliche will be free of deleterious material or rocks or large clumps. Backfilling will continue until the excavation is closed. Upon completion of backfill activities, the area will be contoured to blend with existing pad area and protected against wind/water erosion.

Revegetation Plan:

As the release area occurred within a bermed tank battery on an active lease pad, no seeding will be required.

Noxious Weed Management Plan:

In an effort to prevent the spread of noxious weeds such as African Rue, Siberian Elm, Jointed Goatgrass, Russian Olive, Camelthorn, Saltcedar, Starthistle varieties, Hoary Cress and Russian Knapweed, the area will be confirmed to be clear of any noxious weeds. If any are located they will be removed by hand and the area treated with an appropriate herbicide. After a period of three months the area will be examined for noxious weed growth and re-treated if any growth has occurred.

Following completion of NMOCD and NMSLO approved Proposed Actions, EPI will provide a detailed *Final Closure Report* to Vanguard, NMOCD, and NMSLO personnel. Vanguard and EPI personnel would welcome an opportunity to briefly discuss the *Work Plan* at your earliest convenience.

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 or Mr. Chuck Johnston at (432) 202-4771 or via e-mail at cjohnston@vnrlc.com. All official communication should be addressed to:

Mr. Chuck Johnston
Vanguard
4001 Penbrook, Suite 2001
Odessa, Texas 79762

Sincerely,

ENVIRONMENTAL PLUS, INC.

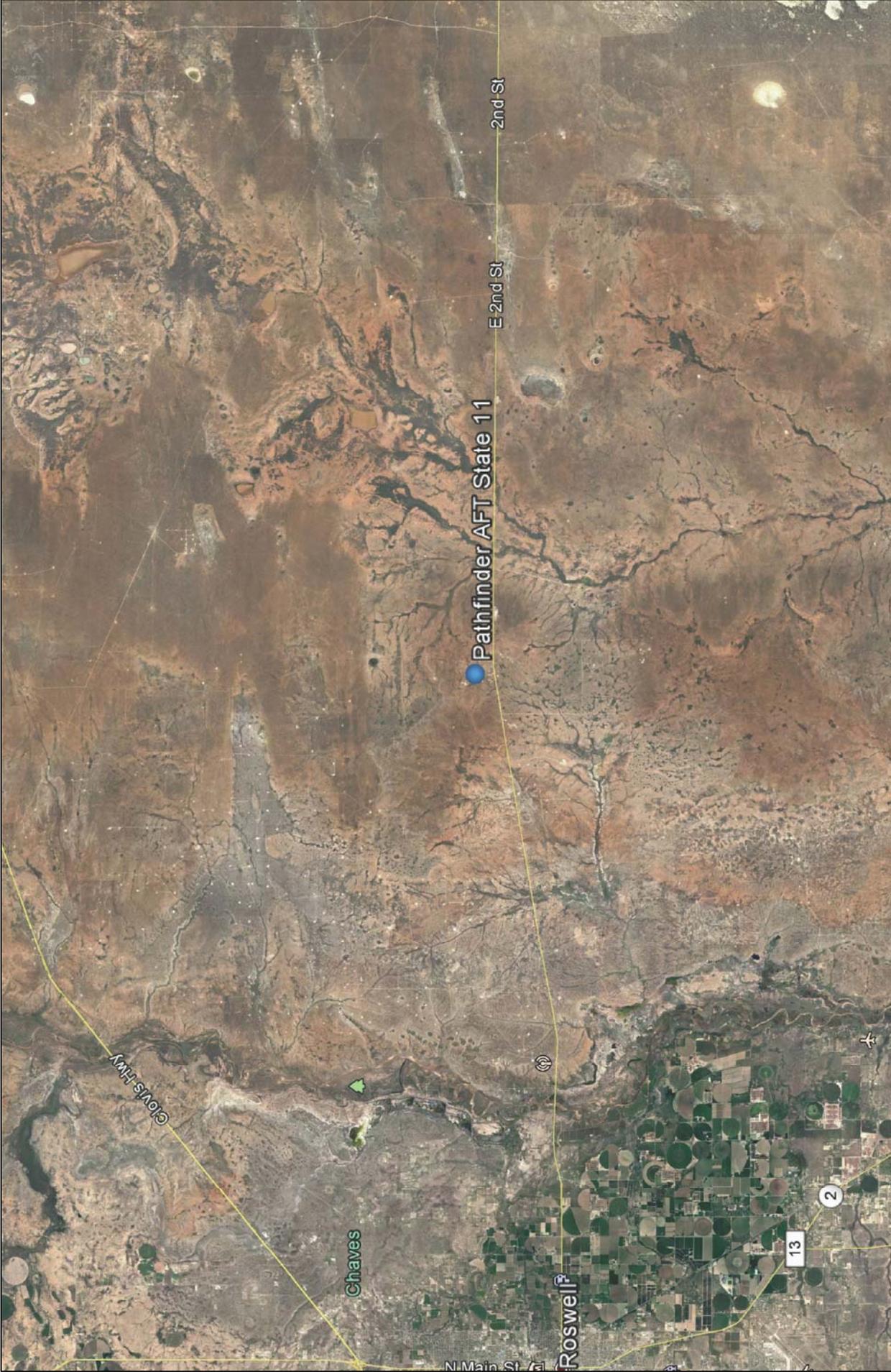


Daniel Dominguez
Environmental Consultant

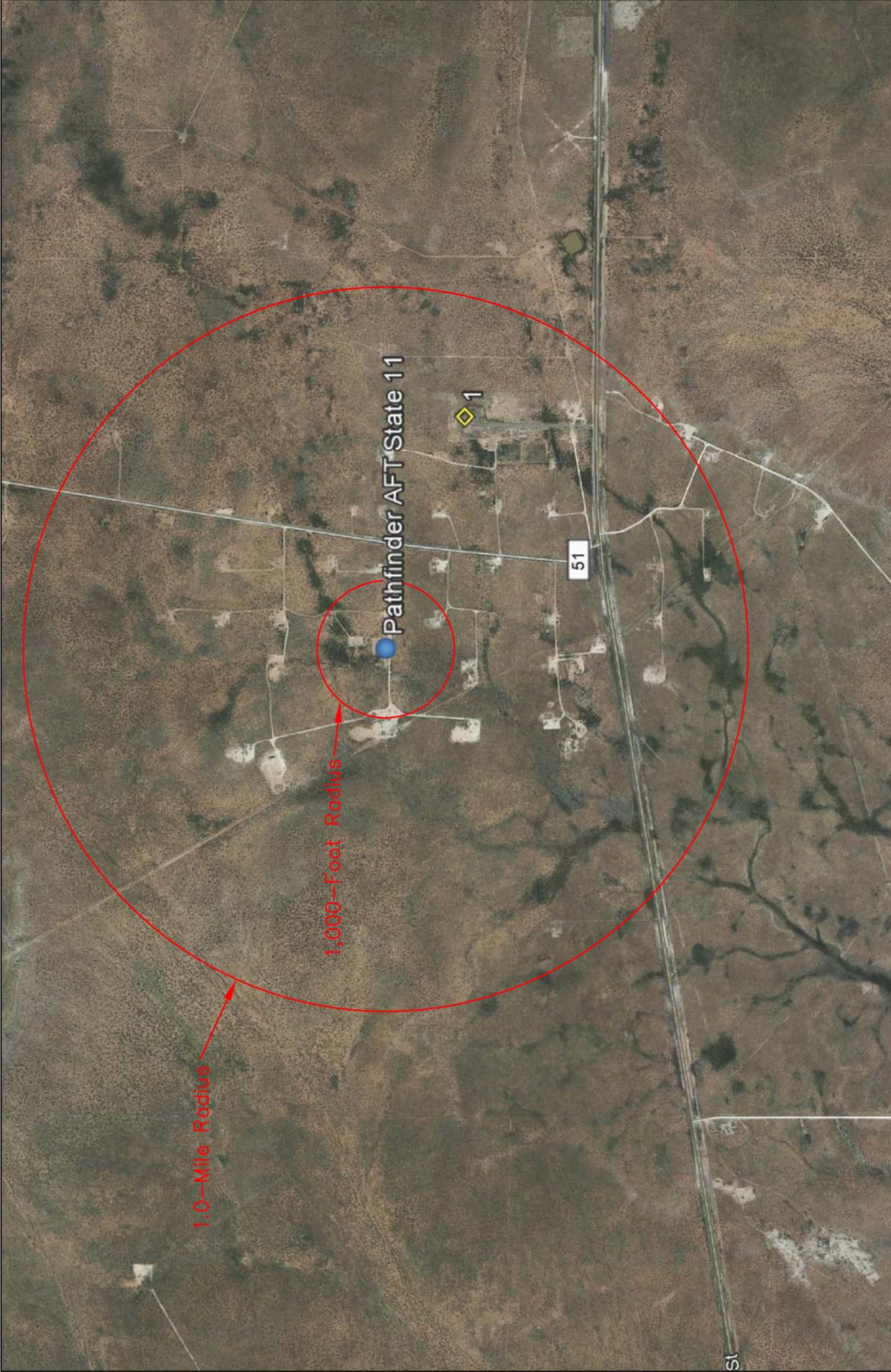
cc: Mike Bratcher, Environmental Specialist – NMOCD District 2, Hobbs, NM
Amber Groves, Remediation Specialist – NMSLO, Hobbs, NM
Chuck Johnston, EHS – Vanguard
File

Encl.: Figure 1 – Area Map
Figure 2 – Site Location Map
Figure 3 – Sample/Site Map
Table 1 – Well Data
Table 2 – Summary of Soil Sample Field Testing and Laboratory Analytical Results
Attachment I – Photographs
Attachment II – NMOSE Average Depth to Groundwater
Attachment III – Laboratory Analytical Results
Attachment IV – Copy of Initial NMOCD Form C-141

FIGURES



<p>Figure 1 Area Map Vanguard Pathfinder AFT State #11</p>		<p>Chaves County, New Mexico NW 1/4 of SE 1/4, Sec. 21, T10S, R27E N 32° 25' 42.40" W 104° 11' 50.49" Elevation: 3,834 feet amsl</p>		<p>DWG By: D Dominguez May 2017</p>		<p>REVISED:</p>			
				<p>0 3 6 Miles</p>		<p>6 SHEET 1 of 1</p>			



1.0-Mile Radius

1,000-Foot Radius

Pathfinder AFT State 11

1

51

St

<p>Figure 2 Site Location Map Vanguard Pathfinder AFT State #11</p>	<p>Chaves County, New Mexico NW 1/4 of SE 1/4, Sec. 21, T10S, R27E N 32° 25' 42.40" W 104° 11' 50.49" Elevation: 3,834 feet amsl</p>		<p>REVISED:</p>	
	<p>DWG By: D Dominguez May 2017</p>	<p>4,000 2,000 0</p> <p>Feet</p>		



LEGEND

- XSP1 Sample Location
- Release Area (~1,200 sq.ft.)

DWG By: D Dominguez
May 2017

REVISD:
June 2017

40 SHEET
1 of 1

0 20 40 Feet

Chaves County, New Mexico
NW 1/4 of SE 1/4, Sec. 21, T10S, R27E
N 32° 25' 42.40" W 104° 11' 50.49"
Elevation: 3,834 feet amsl

Figure 3
Site/Sample Map
Vanguard
Pathfinder AFT State #11

TABLES

TABLE 1

Well Data

Vanguard - Pathfinder AFT State #11

Ref #	Well Number	Use	Diversion ^A	Owner	q64	q16	q4	Sec	Twsp	Rng	Easting	Northing	Distance ^B	Date Measured	Surface Elevation ^C	Depth to Water (ft bgs)
1	RA 09408	MON	0	WATER DEVELOPMENT CORP		3	3	22	10S	27E	575484	3698786	913	--	3,833	--
2	RA 12286	STK	3	LA RANCH	3	1	4	31	10S	27E	571447	3695797	4,557	--	3,682	--
3	RA 02928 REPAR	DOM	3	MRS. JOHN ALLEN	2	2	2	12	11S	27E	576001	3694363	4,910	06-Jul-84	3,746	--
4	RA 09423	COM	20	LA RANCH	3	3	3	31	10S	27E	570562	3695415	5,461	--	3,695	--
5	RA 09717	PUB		J.W. JONES CONST. CO.	1	1	1	10	11S	27E	571395	3694340	5,725	--	3,670	--
6	RA 08330	DOM	3	JACK R. LUCE, SR.	4	4	3	26	10S	26E	567914	3696986	7,019	--	3,667	--
7	RA 12283	STK	3	LA RANCH	3	2	3	35	10S	26E	567807	3695820	7,545	--	3,631	--
8	RA 09061	COM	120	L & L CATTLE	3	3	4	28	09S	27E	574514	3706716	7,642	--	3,879	--
9	RA 11536	STK	3	LE RANCH	2	3	2	29	10S	28E	582228	3698230	7,659	27-Jul-09	3,732	87

* = Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters.ose.state.nm.us:7001/IWATERS/wr_RegisServlet1)

^A = In acre feet per annum

^B = In meters

^C = Elevation interpolated from USGS topographical map based on referenced location.

MON = Monitoring Well

STK = 72-12-1 Livestock watering

DOM = 72-12-1 Domestic one household

COM = Commercial

PUB = 72-12-1 Construction of public works

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
Vanguard
Pathfinder AFT State #11

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	Surface	In-Situ	24-Apr-17	10.5	800	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	896
	2.5	In-Situ	24-Apr-17	4.2	560	--	--	--	--	--	--	--	--	--
	5	In-Situ	24-Apr-17	2.9	400	--	--	--	--	--	--	--	--	--
	7.5	In-Situ	24-Apr-17	2.8	640	--	--	--	--	--	--	--	--	--
	10	In-Situ	24-Apr-17	1.8	160	--	--	--	--	--	--	--	--	--
	18	In-Situ	24-Apr-17	1.7	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	32
SP2	Surface	In-Situ	24-Apr-17	5.6	880	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	22.3	22.3	832
	2.5	In-Situ	24-Apr-17	3.2	560	--	--	--	--	--	--	--	--	--
	5	In-Situ	24-Apr-17	2.1	80	--	--	--	--	--	--	--	--	--
	7.5	In-Situ	24-Apr-17	2.1	880	--	--	--	--	--	--	--	--	--
	10	In-Situ	24-Apr-17	1.4	160	--	--	--	--	--	--	--	--	--
	18	In-Situ	24-Apr-17	1.2	160	<0.050	<0.050	0.060	<0.150	<0.300	<10.0	<10.0	<20.0	48

TABLE 2
Summary of Soil Sample Field Testing and Laboratory Analytical Results
Vanguard
Pathfinder AFT State #11

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)
SP3	Surface	In-Situ	25-Apr-17	2.3	240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	224
	2.5	In-Situ	25-Apr-17	2.1	480	<0.050	<0.050	0.060	<0.150	<0.300	<10.0	<10.0	<20.0	576
	6	In-Situ	09-Jun-17	1.2	200	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	112
SP4	Surface	In-Situ	25-Apr-17	3.9	440	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	368
	2.5	In-Situ	25-Apr-17	2.0	400	<0.050	<0.050	0.060	<0.150	<0.300	<10.0	<10.0	<20.0	336
SP5	Surface	In-Situ	25-Apr-17	3.9	400	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	336
	2.5	In-Situ	25-Apr-17	3.5	400	<0.050	<0.050	0.060	<0.150	<0.300	<10.0	<10.0	<20.0	432
SP6	Surface	In-Situ	25-Apr-17	3.5	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	32
	2.5	In-Situ	25-Apr-17	2.1	320	<0.050	<0.050	0.060	<0.150	<0.300	<10.0	<10.0	<20.0	224
SP7	Surface	In-Situ	09-Jun-17	1.4	400	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	368
	2.5	In-Situ	09-Jun-17	1.9	240	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<20.0	208
NMOCD Recommended Remedial Action Levels														
100														
50														

--- = Not Analyzed
Red values are in excess of NMOCD Recommended Remedial Action Levels
 Shaded values indicates soil has been excavated

ATTACHMENTS

ATTACHMENT I
Photographs



Photograph #1- Lease sign



Photograph #2- Looking across removed damaged surface equipment



Photograph #3- Looking across removed damaged surface equipment



Photograph #4- Looking across release area with berms and surface equipment removed



Photograph #5- Looking across removed damaged surface equipment

ATTACHMENT II
NMOSE Average Depth to Groundwater



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 574616.93

Northing (Y): 3699074

Radius: 4000



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 02928 REPAR			CH	2	2	2	12	11S	27E	576001	3694363*	4910			
RA 11536 POD1			CH	2	3	2	29	10S	28E	582228	3698230	7659	140	87	53

Average Depth to Water: **87 feet**

Minimum Depth: **87 feet**

Maximum Depth: **87 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 574616

Northing (Y): 3699074

Radius: 8000

*UTM location was derived from PLSS - see Help

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

ATTACHMENT III
Laboratory Analytical Results



May 02, 2017

Daniel Dominguez
Environmental Plus, Inc.
P.O. Box 1558
Eunice, NM 88231

RE: PATHFINDER AFT STATE 11

Enclosed are the results of analyses for samples received by the laboratory on 04/26/17 15:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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.

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.

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:	04/26/2017	Sampling Date:	04/24/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP1 (SURFACE) (H701119-01)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/27/2017	ND	198	99.1	200	1.29	
DRO >C10-C28	<10.0	10.0	04/27/2017	ND	195	97.3	200	2.64	

Surrogate: 1-Chlorooctane 83.2 % 28.3-164
Surrogate: 1-Chlorooctadecane 80.3 % 34.7-157

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.



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:	04/26/2017	Sampling Date:	04/24/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP1 (18') (H701119-02)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/27/2017	ND	198	99.1	200	1.29	
DRO >C10-C28	<10.0	10.0	04/27/2017	ND	195	97.3	200	2.64	

Surrogate: 1-Chlorooctane 92.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 85.8 % 34.7-157

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.



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:	04/26/2017	Sampling Date:	04/24/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP2 (SURFACE) (H701119-03)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/27/2017	ND	198	99.1	200	1.29	
DRO >C10-C28	22.3	10.0	04/27/2017	ND	195	97.3	200	2.64	

Surrogate: 1-Chlorooctane 102 % 28.3-164

Surrogate: 1-Chlorooctadecane 98.5 % 34.7-157

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Analytical Results For:

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 Eunice NM, 88231
 Fax To: (505) 394-2601

Received:	04/26/2017	Sampling Date:	04/24/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP2 (18') (H701119-04)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/27/2017	ND	198	99.1	200	1.29	
DRO >C10-C28	<10.0	10.0	04/27/2017	ND	195	97.3	200	2.64	

Surrogate: 1-Chlorooctane 103 % 28.3-164

Surrogate: 1-Chlorooctadecane 93.6 % 34.7-157

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Received:	04/26/2017	Sampling Date:	04/25/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP3 (SURFACE) (H701119-05)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569		
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564		
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223		
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409		
Total BTEX	<0.300	0.300	04/28/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	04/28/2017	ND	400	100	400	7.69		

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	04/27/2017	ND	198	99.1	200	1.29		
DRO >C10-C28	<10.0	10.0	04/27/2017	ND	195	97.3	200	2.64		

Surrogate: 1-Chlorooctane 90.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 88.4 % 34.7-157

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Received:	04/26/2017	Sampling Date:	04/25/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP3 (2.5') (H701119-06)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/27/2017	ND	198	99.1	200	1.29	
DRO >C10-C28	<10.0	10.0	04/27/2017	ND	195	97.3	200	2.64	

Surrogate: 1-Chlorooctane 95.2 % 28.3-164
Surrogate: 1-Chlorooctadecane 92.4 % 34.7-157

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Received:	04/26/2017	Sampling Date:	04/25/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP4 (SURFACE) (H701119-07)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569		
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564		
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223		
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409		
Total BTEX	<0.300	0.300	04/28/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	04/28/2017	ND	400	100	400	7.69		

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	04/28/2017	ND	202	101	200	2.83		
DRO >C10-C28	<10.0	10.0	04/28/2017	ND	208	104	200	8.77		

Surrogate: 1-Chlorooctane 85.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 90.7 % 34.7-157

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Received:	04/26/2017	Sampling Date:	04/25/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP4 (2.5') (H701119-08)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/28/2017	ND	202	101	200	2.83	
DRO >C10-C28	<10.0	10.0	04/28/2017	ND	208	104	200	8.77	

Surrogate: 1-Chlorooctane 100 % 28.3-164

Surrogate: 1-Chlorooctadecane 105 % 34.7-157

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Received:	04/26/2017	Sampling Date:	04/25/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP5 (SURFACE) (H701119-09)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569		
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564		
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223		
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409		
Total BTEX	<0.300	0.300	04/28/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	04/28/2017	ND	400	100	400	7.69		

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	04/28/2017	ND	202	101	200	2.83		
DRO >C10-C28	<10.0	10.0	04/28/2017	ND	208	104	200	8.77		

Surrogate: 1-Chlorooctane 66.0 % 28.3-164

Surrogate: 1-Chlorooctadecane 67.6 % 34.7-157

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Received:	04/26/2017	Sampling Date:	04/25/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP5 (2.5') (H701119-10)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/28/2017	ND	202	101	200	2.83	
DRO >C10-C28	<10.0	10.0	04/28/2017	ND	208	104	200	8.77	

Surrogate: 1-Chlorooctane 103 % 28.3-164

Surrogate: 1-Chlorooctadecane 105 % 34.7-157

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Received:	04/26/2017	Sampling Date:	04/25/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP6 (SURFACE) (H701119-11)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/28/2017	ND	202	101	200	2.83	
DRO >C10-C28	<10.0	10.0	04/28/2017	ND	208	104	200	8.77	

Surrogate: 1-Chlorooctane 66.8 % 28.3-164
Surrogate: 1-Chlorooctadecane 85.3 % 34.7-157

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Received:	04/26/2017	Sampling Date:	04/25/2017
Reported:	05/02/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP 6 (2.5') (H701119-12)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/28/2017	ND	1.85	92.4	2.00	0.569	
Toluene*	<0.050	0.050	04/28/2017	ND	1.92	96.2	2.00	0.564	
Ethylbenzene*	<0.050	0.050	04/28/2017	ND	1.95	97.6	2.00	0.223	
Total Xylenes*	<0.150	0.150	04/28/2017	ND	5.80	96.7	6.00	0.409	
Total BTEX	<0.300	0.300	04/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	04/28/2017	ND	400	100	400	7.69	

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	04/28/2017	ND	204	102	200	8.95	
DRO >C10-C28	<10.0	10.0	04/28/2017	ND	201	100	200	11.2	

Surrogate: 1-Chlorooctane 98.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 95.0 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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



Celey D. Keene, Lab Director/Quality Manager



June 15, 2017

Daniel Dominguez
Environmental Plus, Inc.
P.O. Box 1558
Eunice, NM 88231

RE: PATHFINDER AFT STATE 11

Enclosed are the results of analyses for samples received by the laboratory on 06/12/17 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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.

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, flowing "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:	06/12/2017	Sampling Date:	06/09/2017
Reported:	06/15/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP3 (6') (H701532-01)

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	06/13/2017	ND	2.11	106	2.00	1.75	
Toluene*	<0.050	0.050	06/13/2017	ND	2.04	102	2.00	1.06	
Ethylbenzene*	<0.050	0.050	06/13/2017	ND	2.08	104	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/13/2017	ND	5.66	94.3	6.00	1.34	
Total BTEX	<0.300	0.300	06/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/13/2017	ND	448	112	400	3.64	

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	06/13/2017	ND	199	99.5	200	1.37	
DRO >C10-C28	<10.0	10.0	06/13/2017	ND	204	102	200	2.33	

Surrogate: 1-Chlorooctane 103 % 28.3-164
Surrogate: 1-Chlorooctadecane 86.2 % 34.7-157

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:	06/12/2017	Sampling Date:	06/09/2017
Reported:	06/15/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP7 (SURFACE) (H701532-02)

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	06/13/2017	ND	2.11	106	2.00	1.75		
Toluene*	<0.050	0.050	06/13/2017	ND	2.04	102	2.00	1.06		
Ethylbenzene*	<0.050	0.050	06/13/2017	ND	2.08	104	2.00	1.71		
Total Xylenes*	<0.150	0.150	06/13/2017	ND	5.66	94.3	6.00	1.34		
Total BTEX	<0.300	0.300	06/13/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	06/13/2017	ND	448	112	400	3.64		

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	06/13/2017	ND	199	99.5	200	1.37		
DRO >C10-C28	<10.0	10.0	06/13/2017	ND	204	102	200	2.33		

Surrogate: 1-Chlorooctane 97.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 83.1 % 34.7-157

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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:	06/12/2017	Sampling Date:	06/09/2017
Reported:	06/15/2017	Sampling Type:	Soil
Project Name:	PATHFINDER AFT STATE 11	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	UL-J SEC. 21, T10S, R27E		

Sample ID: SP7 (2') (H701532-03)

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	06/13/2017	ND	2.11	106	2.00	1.75	
Toluene*	<0.050	0.050	06/13/2017	ND	2.04	102	2.00	1.06	
Ethylbenzene*	<0.050	0.050	06/13/2017	ND	2.08	104	2.00	1.71	
Total Xylenes*	<0.150	0.150	06/13/2017	ND	5.66	94.3	6.00	1.34	
Total BTEX	<0.300	0.300	06/13/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	06/13/2017	ND	448	112	400	3.64	

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	06/13/2017	ND	199	99.5	200	1.37	
DRO >C10-C28	<10.0	10.0	06/13/2017	ND	204	102	200	2.33	

Surrogate: 1-Chlorooctane 98.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 87.8 % 34.7-157

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



Celey D. Keene, Lab Director/Quality Manager

ATTACHMENT IV
Copy of Initial NMOCD Form C-141

JAN 20 2017

Form C-141
Revised August 8, 2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1702442185 OPERATOR Initial Report Final Report

Name of Company: Vanguard Operating, LLC <u>258350</u>	Contact : Chuck Johnston
Address: 4001 Penbrook Suite 201 Odessa, TX 79762	Telephone No. 432-202-4771
Facility Name: Pathfinder AFT State #011	Facility Type: Tank Battery
Surface Owner	Mineral Owner
API No. 30-005-62810	

LOCATION OF RELEASE

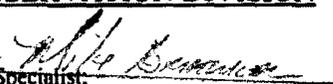
Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	21	10 S	27E	1650	S	1980	East	Chaves

Latitude 33.4285202 Longitude -104.1967087

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 54.8bbbls	Volume Recovered: 0 Oil burned in fire
Source of Release: Lightning Struck oil tank	Date and Hour of Occurrence	Date and Hour of Discovery 1-17-2017 4:14 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Left message with Crystal Weaver	
By Whom? Dennis Howard	Date and Hour: 1-19-2017 8:05 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Lightning struck the oil tank igniting the oil and the water tank. Well was shut in and power shut off at control box.		
Describe Area Affected and Cleanup Action Taken.* A 210 steel oil tank and 210 Fiberglass tank were destroyed along with flowlines and fittings. The fire department chose to let the fire burn out on its own with everything in containment. An estimated 55 bbls oil burned during the fire.		

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Chuck Johnston	Signed By:  Approved by Environmental Specialist:	
Title: EHS / Operations Specialist	Approval Date: <u>1/23/17</u>	Expiration Date: <u>N/A</u>
E-mail Address: cjohnston@vnrllc.com	Conditions of Approval: <u>See attached</u>	Attached <input type="checkbox"/>
Date: 1-20-2017	Phone: 432-202-4771	

* Attach Additional Sheets If Necessary

ARD-4080