



17 January 2017

Ms. Kristen Lynch  
Environmental Specialist  
NMOCD  
1625 N. French Drive  
Hobbs, New Mexico 88240

RE: Remediation Progress Report and Proposal of No Further Action  
Vanguard Operating, LLC – Hill Tank Battery  
UL-B, Section 4, Township 21 South, Range 37 East  
Lea County, New Mexico  
NMOCD Reference # 1RP 4450

**INFORMATION ONLY**

Ms. Lynch:

The following *Remediation Progress Report and Proposal of No Further Action* 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 October 7, 2016 to collect soil samples to determine the vertical extent of contamination. A total of twelve (12) soil samples were collected from four (4) sample locations; SP1 – SP4. Four (4) representative samples, one (1) from each sample point, were jarred, chilled, and sent to Cardinal Labs for chloride testing. Laboratory analytical results indicate the release area is void of Chloride concentrations in excess of NMOCD Recommended Remedial Action Levels (NMOCD RRALs) of 250 mg/Kg (reference *Figure 3* and *Table 2*).

Field testing of the surface sample from SP4 indicated elevated chlorides above NMOCD RRALs. In lieu of excavation the area was dug up, blended, resampled, and backfilled. The composite sample collected was sent to Cardinal Labs for chloride testing. Laboratory analytical results indicate the area to be void of Chloride concentrations in excess of NMOCD Recommended Remedial Action Levels (NMOCD RRALs) of 250 mg/Kg (reference *Figure 3* and *Table 2*).

**Closure Proposal:**

Having received laboratory analysis confirming the area is below NMOCD RRALs, EPI and Vanguard request the site be considered closed and no further action be required.

Vanguard and EPI personnel would welcome an opportunity to briefly discuss the *Proposal of No Further Action* 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. Chuck Johnston at (432) 202-4771 or via e-mail at [cjohnston@vnrlc.com](mailto:cjohnston@vnrlc.com).



All official communication should be addressed to:

Mr. Chuck Johnston  
Vanguard Operating, LLC  
4001 Penbrook, Suite 201  
Odessa, TX 79762

Sincerely,

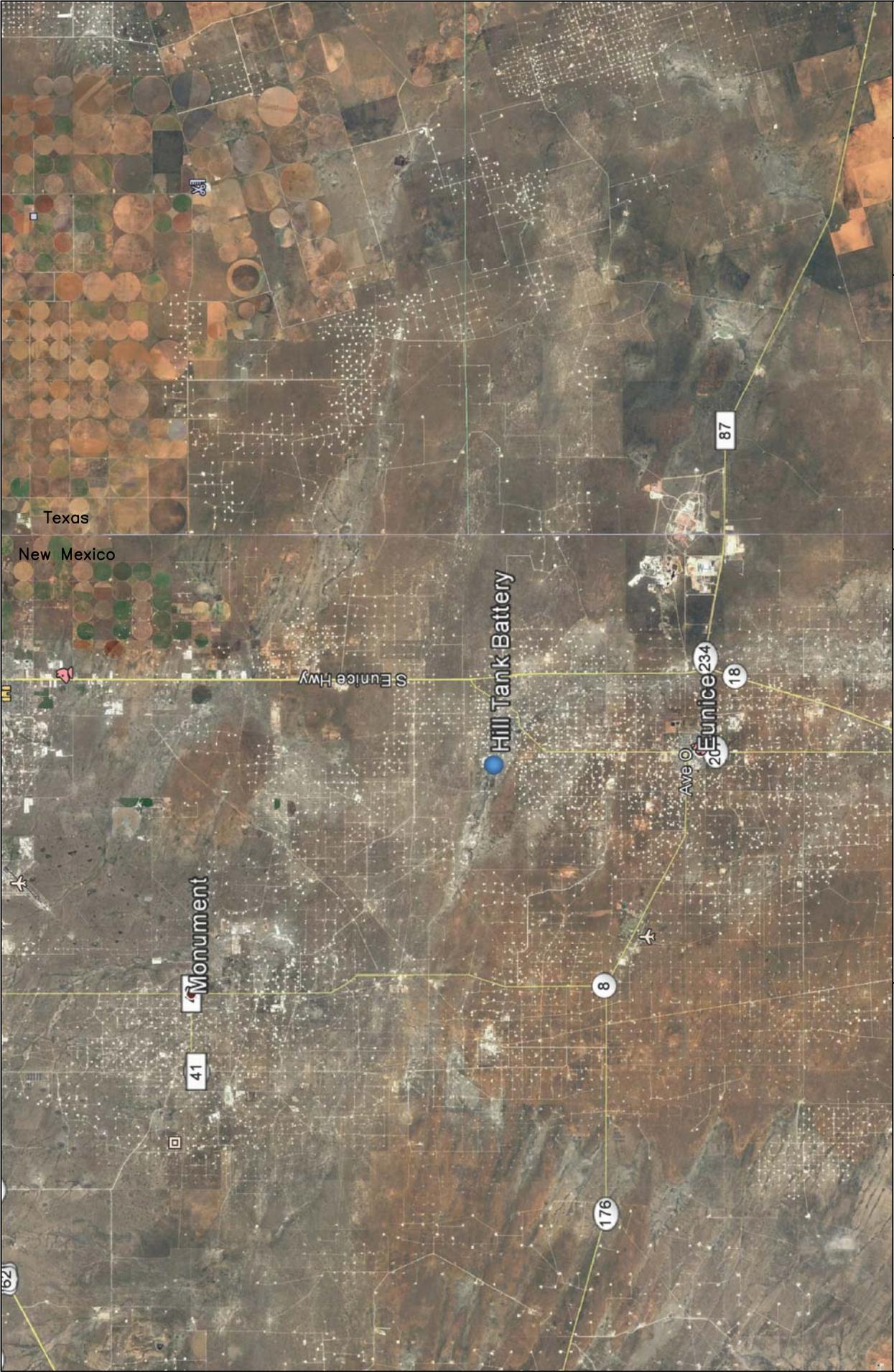
ENVIRONMENTAL PLUS, INC.

Daniel Dominguez  
Environmental Consultant

cc: Chuck Johnston – Vanguard Operating  
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 – Laboratory Analytical Results  
Attachment III – Copy of Initial NMOCD Form C-141, Final C-141

## **FIGURES**



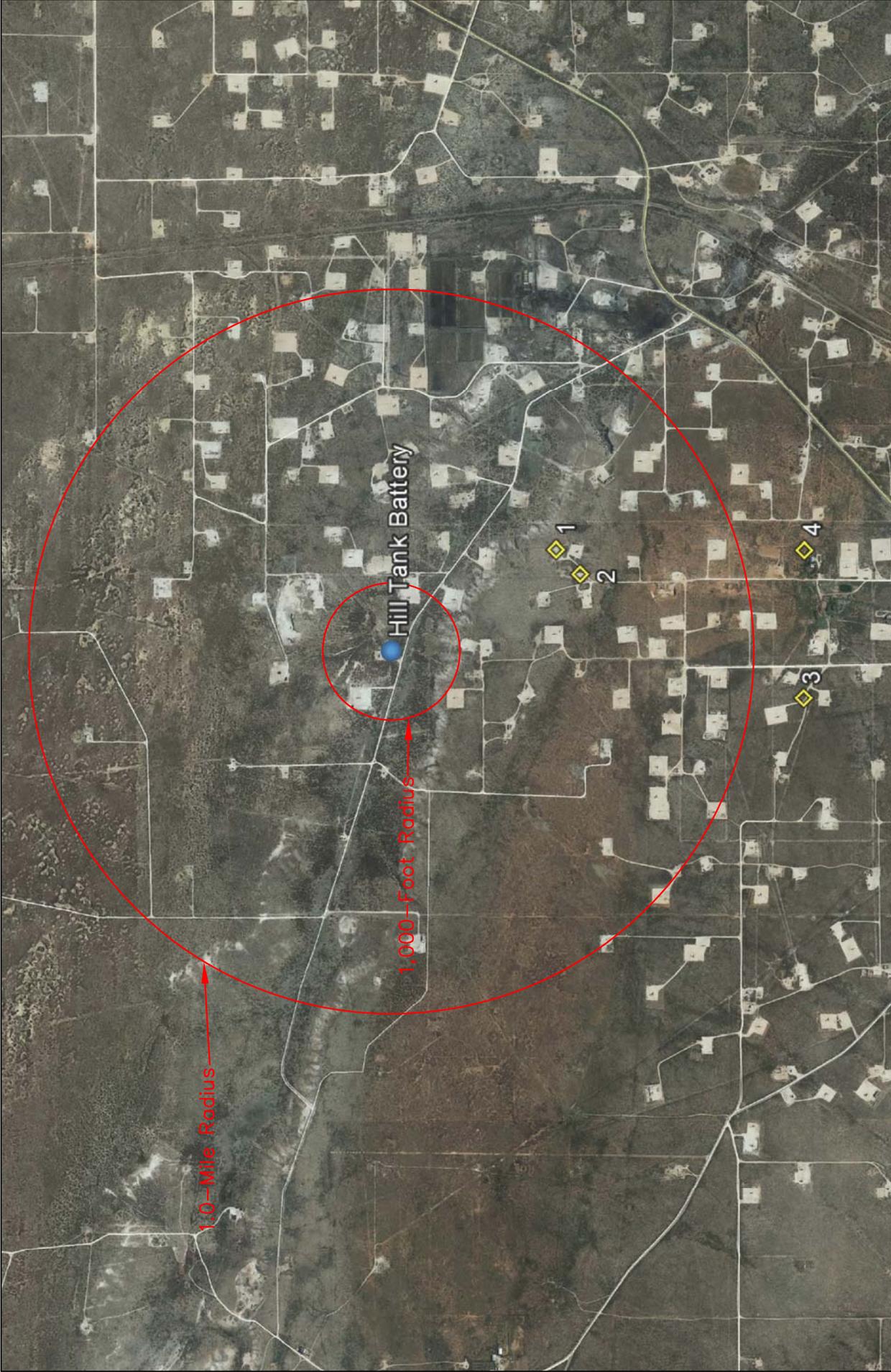
DWG By: D Dominguez  
 December 2016

REVISIONS:  
 6  
 SHEET  
 1 of 1

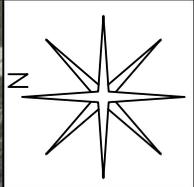
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Lea County, New Mexico  
 NW 1/4 of NE 1/4, Sec. 4, T21S, R37E  
 N 32° 30' 46.70" W 103° 09' 53.66"  
 Elevation: 3,436 feet amsl

Figure 1  
 Area Map  
 Vanguard  
 Hill Tank Battery



<p>DWG By: D Dominguez December 2016</p>	<p>REVISSED:</p> <table border="1"> <tr> <td>4,000</td> <td>SHEET</td> </tr> <tr> <td>1 of 1</td> <td></td> </tr> </table>	4,000	SHEET	1 of 1	
4,000	SHEET				
1 of 1					
<p>0 2,000 4,000 Feet</p>	<p>Lea County, New Mexico NW 1/4 of NE 1/4, Sec. 4, T21S, R37E N 32° 30' 46.70" W 103° 09' 53.66" Elevation: 3,436 feet amsl</p>				
<p>Figure 2 Site Location Map Vanguard Hill Tank Battery</p>					





LEGEND  
 X SP1 Sample Location

REVISED:  
 SHEET  
 1 of 1

DWG By: D Dominguez  
 December 2016

0 40 80  
 Feet

Lea County, New Mexico  
 NW 1/4 of NE 1/4, Sec. 4, T21S, R37E  
 N 32° 30' 46.70" W 103° 09' 53.66"  
 Elevation: 3,436 feet amsl

Figure 3  
 Site/Sample Map  
 Vanguard  
 Hill Tank Battery

## **TABLES**

**TABLE 1**

**Well Data**

**Vanguard - Hill Tank Battery**

Ref #	Well Number	Use	Diversion <sup>A</sup>	Owner	q64	q16	q4	Sec	Twsp	Rng	Easting	Northing	Distance <sup>B</sup>	Date Measured	Surface Elevation <sup>C</sup>	Depth to Water (ft.bgs)
1	CP 00172	IRR	3	INTERFIRST BANK FORT WORTH, NA	2	2	4	4	21S	37E	672799	3598121	784	--	3,474	--
2	CP 00552	STK	3	MILLARD DECK		2	4	4	21S	37E	672700	3598022	825	31-Jul-76	3,477	75
3	CP 00127	IRR	3	INTERFIRST BANK FORT WORTH, NA	3	1	2	9	21S	37E	672212	3597110	1,678	--	3,481	--
4	CP 00165	IRR	3	INTERFIRST BANK FORT WORTH, NA	4	2	2	9	21S	37E	672814	3597117	1,720	--	3,472	--

\* = 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))

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

<sup>B</sup> = In meters

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

IRR = Irrigation

STK = 72-12-1 Livestock watering

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

-- = Data not provided on the NM iwaters website

**TABLE 2**  
**Summary of Soil Sample Field Testing and Laboratory Analytical Results**  
**Vanguard**  
**Hill Tank Battery**

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	07-Oct-16	15.0	160	--	--	--	--	--	--	--	--	--
	1	In-Situ	07-Oct-16	0.0	240	--	--	--	--	--	--	--	--	192
	2	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	--
SP2	Surface	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	--
	1	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	32
	2	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	--
SP3	Surface	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	--
	1	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	80
	2	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	--
SP4	Surface	In-Situ	07-Oct-16	0.0	360	--	--	--	--	--	--	--	--	--
	1	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	64
	2	In-Situ	07-Oct-16	0.0	80	--	--	--	--	--	--	--	--	--
NMOCD Recommended Remedial Action Levels	Comp	In-Situ	12-Dec-16	--	160	--	--	--	--	--	--	--	--	64
	NMOCD Recommended Remedial Action Levels			100		10				50			100	250

-- = 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 – Tank battery struck by lightning



Photograph #2 – Tank battery struck by lightning



Photograph #3 – Tank battery struck by lightning



Photograph #4 – Looking across release area



Photograph #5 – Blending the soil around SP4



Photograph #6 – Blending the soil around SP4



Photograph #7 – Blended soil backfilled



Photograph #8 – Blended soil backfilled

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



October 25, 2016

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

RE: HILL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/20/16 15:26.

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](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:	10/20/2016	Sampling Date:	10/07/2016
Reported:	10/25/2016	Sampling Type:	Soil
Project Name:	HILL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	UL- SEC. 4, T21S, R37E		

**Sample ID: SP 1 (1') (H602357-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>192</b>	16.0	10/24/2016	ND	400	100	400	3.92	

**Sample ID: SP 2 (1') (H602357-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	10/24/2016	ND	400	100	400	3.92	

**Sample ID: SP 3 (1') (H602357-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>80.0</b>	16.0	10/24/2016	ND	400	100	400	3.92	

**Sample ID: SP 4 (1') (H602357-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	10/24/2016	ND	400	100	400	3.92	

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

### 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



December 16, 2016

Daniel Dominguez

Environmental Plus, Inc.

P.O. Box 1558

Eunice, NM 88231

RE: HILL TANK BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/12/16 15:35.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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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,



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:	12/12/2016	Sampling Date:	12/12/2016
Reported:	12/16/2016	Sampling Type:	Soil
Project Name:	HILL TANK BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	UL- SEC. 4, T21S, R37E		

**Sample ID: SP 4 (H602782-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	12/14/2016	ND	416	104	400	3.77	

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

**Notes and Definitions**

- QM-07      The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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 III**  
**Copy of Initial NMOCD Form C-141**  
**Final C-141**

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

State of New Mexico  
Energy Minerals and Natural Resources

**REVIEWED**

By Kristen Lynch at 8:58 am, Sep 27, 2016

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: Vanguard Operating, LLC	Contact : Chuck Johnston
Address: 4001 Penbrook Suite 201 Odessa, TX 79762	Telephone No. 432-202-4771
Facility Name: Hill 001 Tank Battery	Facility Type: Tank Battery

Surface Owner	Mineral Owner	API No. 30-025-06394
---------------	---------------	----------------------

**LOCATION OF RELEASE**

Unit Letter B	Section 04	Township 21 S	Range 37E	Feet from the 3300	North/South Line N	Feet from the 1700	East/West Line East	County Lea
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Latitude 32.5131683 Longitude ,-103.1650925

**NATURE OF RELEASE**

Type of Release: Oil and Produced watern	Volume of Release: 100 bbls water and 15 bbls of oil	Volume Recovered: 100 bbls of produced water, 15 bbls of oil and rain water
Source of Release: Lightning struck tank causing fire and spill	Date and Hour of Occurrence: 9-16-2016	Date and Hour of Discovery 9-16-2016 2:36 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? George with OCD Hobbs	
By Whom? John Terry	Date and Hour: 9-16-2016 7:00 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.\*

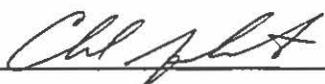
Describe Cause of Problem and Remedial Action Taken.\*

Lightning struck tank causing a fire which damaged all the tanks on site. Produced water and oil remained inside of the lined containment. Wells were shut in until weather permits repairs.

Describe Area Affected and Cleanup Action Taken.\*

Damage was to tank and equipment inside of containment. Tanks will be removed and replaced. Any contaminated soil above the liner will be remediated and the liner replaced if damaged.

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Chuck Johnston	Approved by Environmental Specialist: 	
Title: EHS	Approval Date: 9/27/2016	Expiration Date: N/A
E-mail Address: cjohnston@vnrllc.com	Conditions of Approval: N/A	Attached <input type="checkbox"/> IRP 4450
Date: 9-19-2016 432-202-4771 Phone:		

\* Attach Additional Sheets If Necessary

nKL1627131848  
pKL1627132054

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

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: Vanguard	Contact: Chuck Johnston
Address: 4001 Penbrook, Suite 201, Odessa Texas 79762	Telephone No. 432-202-4771
Facility Name: Hill 001 Tank Battery; IRP #4450	Facility Type: Tank Battery
Surface Owner:	Mineral Owner:
API No. 30-025-06394	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	4	21S	37E	3300	North	1700	East	Lea

Latitude: N 32.5131683° Longitude: W 103.1650925°

**NATURE OF RELEASE**

Type of Release: Oil and Produced Water	Volume of Release: 100 bbls Water and 15 bbls oil	Volume Recovered: 100 bbls produced water, 15 bbls oil and rain water
Source of Release: Lightning struck tank causing fire and spill	Date and Hour of Occurrence: 9-16-2016	Date and Hour of Discovery: 9-16-2016 @ 2:36 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? George with OCD Hobbs	
By Whom? John Terry	Date and Hour: 9-16-2016 @ 7:00 am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse: Not Applicable	
If a Watercourse was Impacted, Describe Fully.* Not Applicable		
Describe Cause of Problem and Remedial Action Taken.* Lightning struck tank causing a fire which damaged all the tanks on site. Produced water and oil remained inside of the lined containment. Wells were shut in until weather permits repairs.		
Describe Area Affected and Cleanup Action Taken.* Damage was to tank and equipment inside of containment. Tanks will be removed and replaced. Any contaminated soil above the liner will be remediated and the liner replaced if damaged. Samples were collected and sent to the lab for testing. Based on laboratory analytical data, NMOCD has approved no further action required at this site.		
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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Chuck Johnston	Approved by Environmental Specialist:	
Title: EHS	Approval Date:	Expiration Date:
E-mail Address: cjohnston@vnrllc.com	Conditions of Approval:	
Date: 1-23-17	Phone: 432-202-4771	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary