



**APPROVED**

**By Olivia Yu at 9:18 am, Aug 07, 2018**

**NMOCD approves of the  
proposed remediation plan  
for 1RP-5091.**

Electronic Correspondence

August 6, 2018

Ms. Olivia Yu  
Environmental Specialist, District I  
Oil Conservation Division, EMNRD  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)

Mr. Ryan Mann  
Remediation Specialist  
Field Operation Division  
New Mexico State Land Office  
[rmann@slo.state.nm.us](mailto:rmann@slo.state.nm.us)

Re: Corrective Action Plan Modification 1RP-5091  
Former DCP Pump Station Historical Release  
Legal: Unit F, Sec 4, T22S R36E, Lea County, NM  
Latitude/Longitude: 32.422898/ -103.274162  
Etech Proj. Number: 876-9521-000  
Depth to Groundwater: 200-275 feet - Chevron/Texaco Lea County Depth to Groundwater Map  
- OSE NM Water Rights Reporting System

Release Type: Produced Water	
Contaminants of Concern (COCs)	Threshold Levels
TPH	5000 mg/kg
Benzene	10 mg/kg
BTEX	50 mg/kg
Chlorides	600 mg/kg

Dear Olivia and Ryan:

Etech Environmental & Safety Solutions, Inc. (Etech) is submitting the following corrective action plan on the aforementioned site for your review and approval.

#### **Background**

On February 21, 2018, a Phase I Environmental Site Assessment (ESA) inspection was conducted by a third party at the 8.33 acre former DCP pump station site. Of particular interest was a possibly impacted area which had been identified from historical aerial photos and is located approximately one hundred and forty (140) feet south of the former pump station's concrete pad. The possibly impacted area measures approximately seventy (70) feet in length and fifty (50) feet in width and covers an area of approximately three thousand five hundred (3,500) square feet.

Concurrent with the Phase I ESA inspection, three (3) soil samples were collected by hand auger from two (2) locations of the possibly impacted area (See Attachment B - Annotated Aerial Imagery). Hand auger refusal occurred at a depths of three (3) and three and a half (3.5) feet below ground surface (bgs)

where a hard layer of competent caliche was encountered. The soil samples were submitted to Cardinal Laboratories (Cardinal) and analyzed for TPH, benzene, BTEX, chloride, and pH. The laboratory results determined that the TPH levels ranged from 6,770 mg/kg to 39,573 mg/kg. Benzene levels ranged from no analytical detection to 0.318 mg/kg. BTEX levels ranged from no analytical detection to 14.2 mg/kg. Chloride levels ranged from no analytical detection to 32 mg/kg. (See Attachment B - Annotated Aerial Imagery and Table 1 Summary of Delineation Sampling Analytical Results below).

On July 2, 2018, Etech conducted additional delineation sampling at the site. Basin Environmental excavated two test trenches labeled Test Trench 1 and Test Trench 2 utilizing an excavator. Three (3) soil samples were collected from the Test Trench 1 location and four (4) soil samples were collected from the Test Trench 2 location. The soil samples were submitted to Permian Basin Environmental Laboratory (PBELAB) and analyzed for chloride, TPH, benzene, and BTEX. The laboratory results determined that the chloride levels ranged from no analytical detection to 59.1 mg/kg and were below the regulatory guideline of 600 mg/kg. TPH levels ranged from no analytical detection to 34,400 mg/kg. BTEX levels ranged from no analytical detection to 0.152 mg/kg. Benzene levels indicated no analytical detection for all soil samples. (See Attachment B - Annotated Aerial Imagery and Table 1 Summary of Delineation Sampling Analytical Results below).

**Table 1**  
**Summary of Delineation Sampling Analytical Results**

Sample ID	Depth	Date	C6-C12	>C12- C28	>C28- C35	Total TPH (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	Chlorides (mg/kg)
S-1*	6"	2/21/18	ND	14,200	6,730	<b>20,930</b>	ND	ND	ND
S-1*	3.5'	2/21/18	ND	5,240	1,530	<b>6,770</b>	ND	ND	32
S-2*	3'	2/21/18	243	29,400	9,930	<b>39,573</b>	0.318	14.2	32
Test Trench 1	4.5'	7/02/18	ND	16,400	3,790	<b>20,100</b>	ND	ND	NA
Test Trench 1	5.5'	7/02/18	1,140	27,400	5,870	<b>34,400</b>	ND	0.152	11.9
Test Trench 1	6.5'	7/02/18	ND	85.4	42.4	128	ND	ND	NA
Test Trench 2**	0-6"	7/02/18	NA	NA	NA	NA	NA	NA	ND
Test Trench 2	4.0'	7/02/18	ND	118	ND	118	ND	ND	NA
Test Trench 2	5.5'	7/02/18	ND	1,560	390	1,950	ND	ND	59.1
Test Trench 2	6.5'	7/02/18	ND	ND	ND	ND	ND	ND	NA

\*denotes collected by third party

ND denotes no analytical detection

**Bold** denotes analytical results above regulatory guidelines

NA denotes not analyzed

\*\*denotes collected by hand auger

### Depth to Groundwater Data

Depth to groundwater data was obtained from the Chevron/Texaco Lea County Depth to Groundwater Map and the New Mexico Office of the State Engineer (OSE) New Mexico Water Rights Reporting System.

The Former DCP Pump Station location lies between the 250 foot and 275 foot ground water contour lines as depicted on the Chevron/Texaco Lea County Depth to Groundwater Map. This correlates well with the water depths displayed in the OSE Water Column/ Average Depth to Water Table.

Attachment D contains an image of the pertinent area of the Chevron/ Texaco Lea County Depth to Groundwater Map with the location of the Former DCP Pump Station denoted, and the OSE Water Column/ Average Depth to Water Table.

## Site Ranking Score and Recommended Remediation Action Levels

The New Mexico Oil Conservation Division publication entitled “Guidelines for Remediation of Leaks, Spills and Releases” (August 13, 1993) provides ranking criteria for the setting of recommended remediation action levels for release sites in New Mexico. Per these criteria the following ranking was calculated:

### Criteria Value Ranking

Depth to Groundwater greater than 100 feet = 0

Wellhead Protection Area Greater than 1,000 feet from a water source and greater than 200 feet from a private domestic water source = 0

Distance to Surface Water Body Greater than 1,000 feet = 0

Total Ranking = 0

The recommended remediation action levels for a site that displays a total ranking of zero (0) to nine (9) are:

TPH – 5000 mg/kg

Benzene – 10 mg/kg

BTEX – 50 mg/kg

Chloride – 600 mg/kg

### **Scope of Work**

The corrective action for this site will be excavation and disposal of impacted soils to a depths of six and a half (6.5) feet and four (4) feet bgs. TPH, benzene, and BTEX are the only identified constituents of concern since chloride concentrations were no analytical detection to 59.1 mg/kg as indicated by delineation sampling. Therefore, only TPH, benzene, and BTEX are being analyzed during remediation, and the corrective action goal for this project is five thousand (5,000) mg/kg for TPH, ten (10) mg/kg for benzene, and fifty (50) mg/kg for BTEX. The particulars for the remediation to be conducted at the site will involve the actions summarized as follows:

1. The site will be excavated to a depth of six and a half (6.5) feet bgs at the Test Trench 1 area and four (4) feet bgs at the Test Trench 2 area. The impacted soil will be disposed of at an OCD and SLO approved disposal facility.
2. Six (6) sidewall confirmation soil samples and two (2) bottom hole confirmation soil samples will be collected (See Attachment B - Annotated Aerial Imagery for proposed locations).
3. In addition, further delineation will be conducted at the Test Trench 1 location to obtain a second vertical soil sample whose analysis indicates constituent of concern concentrations below regulatory guidelines.
4. Soil samples will be collected and evaluated for visual and olfactory indications of the presence or absence of hydrocarbon impact. Once a sample indicates the absence of hydrocarbon impact, it will be containerized and submitted for laboratory analysis for TPH, benzene, and BTEX.
5. If laboratory results indicate that all constituent of concern concentrations are below regulatory guidelines, then the excavation will be backfilled with top soil of the kind removed and seeded with NMSLO Sandy Loam (SL) seed mix or NMSLO Sandy (S) seed mix (See Attachment E - NMSLO Seed Mixes). The seeded area will be monitored for growth and the operator will repeat seeding until a successful vegetative cover is achieved

#### Notifications and Special Conditions

1. The OCD and SLO will be notified prior to the commencement of on-site operations.
2. The OCD and SLO will be notified prior to each sampling event to allow the opportunity to witness the sampling events. Splits will be made available if requested.
3. A report documenting the results of the delineation activities will be submitted to the OCD and SLO.

Thank you for your assistance on this matter. Should you have any questions, require additional information, or have any additional stipulations for this site, please contact me at (432) 563-2200 (office) or via email at [geoff@etechnv.com](mailto:geoff@etechnv.com).

Respectfully:

A handwritten signature in black ink, appearing to read "Geoff Leking". The signature is written in a cursive, flowing style.

Geoff Leking,  
Project Manager  
Etech Environmental & Safety Solutions, Inc.



**Attachment A**  
**Initial C-141**

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised April 3, 2017

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	Goodnight Midstream	Contact	Ralph Tijerina
Address	5910 N. Central Expy. Suite 850 Dallas, Tx 75206	Telephone No.	214-444-7001
Facility Name	Former DCP Operating Company, LP (DCP) Pump Station	Facility Type	Pump Station

Surface Owner	State	Mineral Owner	State	API No.	30-025-08769 (non related closest well)
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	04	22S	36E	1900	North	1490	West	Lea

Latitude 32.422898 Longitude -103.274162 NAD83

**NATURE OF RELEASE**

Type of Release	Crude oil	Volume of Release	Unk	Volume Recovered	Unk
Source of Release	Unk	Date and Hour of Occurrence	Historical	Date and Hour of Discovery	Historical
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
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.\*

**RECEIVED**

**By Olivia Yu at 1:24 pm, Jun 13, 2018**

Describe Cause of Problem and Remedial Action Taken.\*

In the early 1960s a pump station was operated on the subject property. At an unknown time a release(s) from an unknown source occurred approximately one hundred forty (140) feet south of the pump station's concrete pad.

Describe Area Affected and Cleanup Action Taken.\*

The release(s) affected an area approximately seventy (70) feet long by fifty (50) feet wide in the pasture south of the pump station. Initial delineation soil samples were collected by a third party utilizing an hand auger on February 21, 2018. Initial soil sampling indicates impact exists to depths of three (3) and three and a half (3.5) feet below ground surface (bgs) where hand auger refusal was observed. A delineation work plan for further delineation of the impact is attached.

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: <u>Ralph Tijerina</u>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <u>Ralph Tijerina</u>		Approved by Environmental Specialist: <u>[Signature]</u>	
Title: <u>EHS Director</u>		Approval Date: <u>6/13/2018</u>	Expiration Date: <u></u>
E-mail Address: <u>rtijerina@goodnightmidstream.com</u>		Conditions of Approval: <u>see attached directive</u>	
Date: <u>6/12/18</u>	Phone: <u>2144447001</u>	Attached <input checked="" type="checkbox"/>	

\* Attach Additional Sheets If Necessary

FOY1816448404

1RP-5091

nOY1816448589

pOY1816448635

**Attachment B**  
**Annotated Aerial Imagery**



## Former DCP Pump Station Historical Release

Assessment Results			
Sample I. D.	Depth (ft.)	TPH (mg/kg)	Chlorides (mg/kg)
S-1	0.5	<b>20,930</b>	ND
S-1	3.5	<b>6,770</b>	32
S-2	3.0	<b>39,573</b>	32
TT 1	4.5	<b>20,100</b>	NA
TT 1	5.5	<b>34,400</b>	11.9
TT 1	6.5	128	NA
TT 2	0.5	NA	ND
TT 2	4.0	118	NA
TT 2	5.5	1,950	59.1
TT 2	6.5	ND	NA

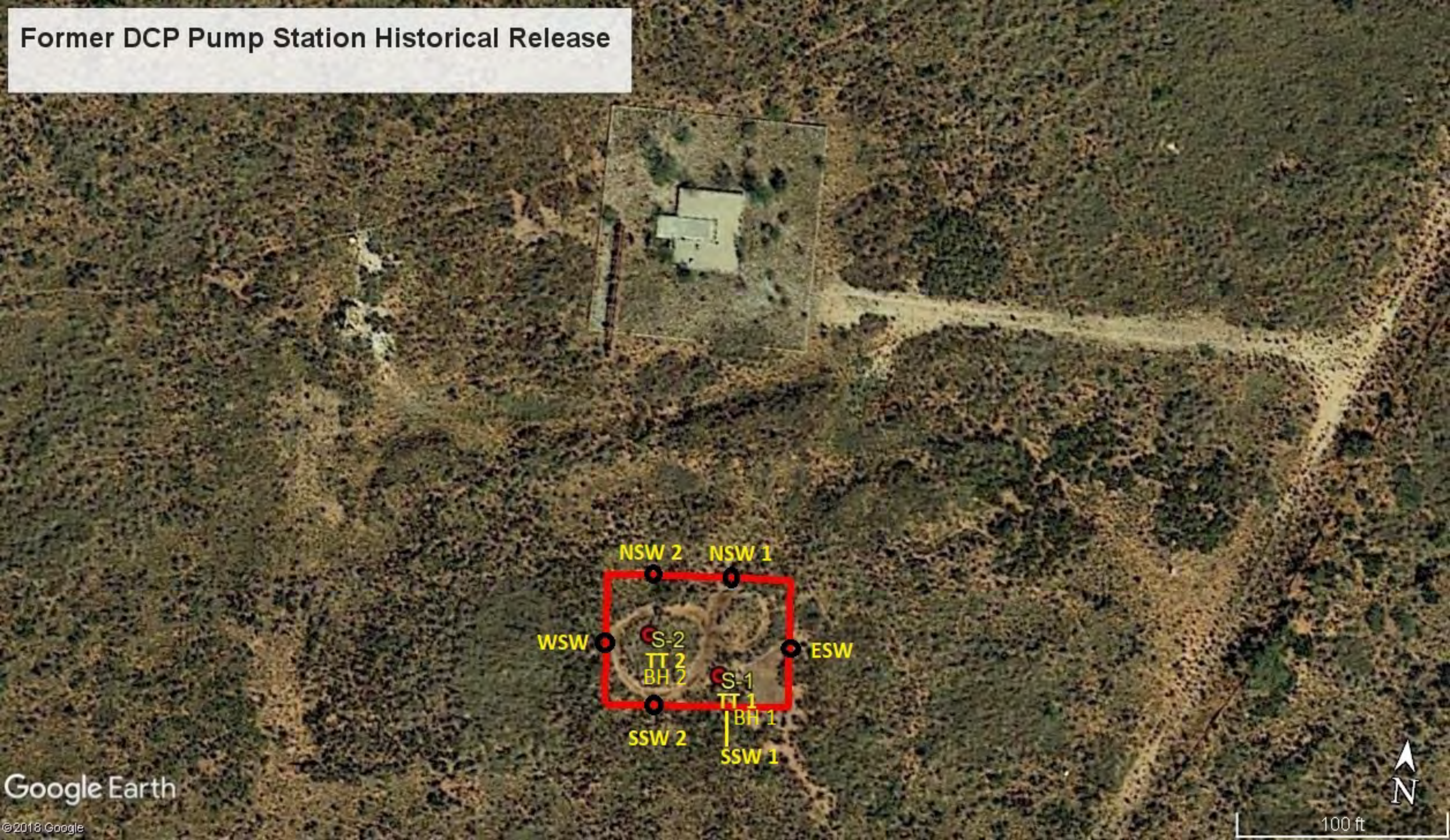
**Bold** denotes analytical results above regulatory guidelines  
 ND denotes no analytical detection  
 NA denotes not analyzed



100 ft



Former DCP Pump Station Historical Release





**Attachment C**  
**Photograph Log**



View of release looking northwest.



View of auger hole S-1.





View of Test Trench 1 after excavation looking south.



View of Test Trench 2 after excavation looking south.



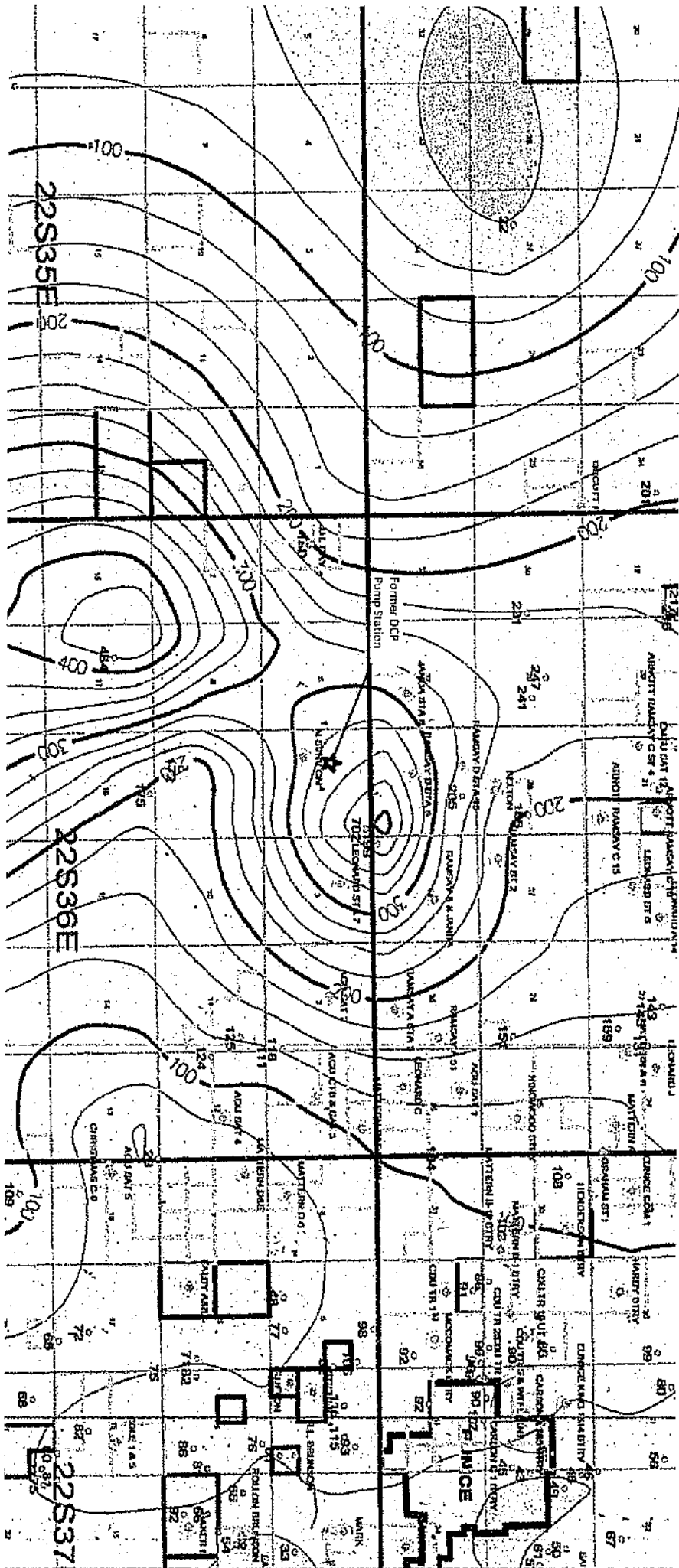


View of Test Trench 1 after backfilling looking west.



View of Test Trench 2 after backfilling looking west.

**Attachment D**  
**Depth to Groundwater Data**







# 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		County	Q Q Q						X	Y	Distance	Depth Well	Depth Water	Water Column	
	Sub-Code	basin		64	16	4	Sec	Tws	Rng							
<a href="#">CP 00727</a>	CP	LE	1	3	2	05	22S	36E	661130	3588673*		1143	267	212	55	
<a href="#">CP 00727 CLW475753</a>	O	CP	LE	1	3	2	05	22S	36E	661130	3588673*		1143	228		
<a href="#">L 11013</a>	C	L	LE			3	10	22S	36E	663892	3586402*		2748	222		
<a href="#">CP 01318 POD2</a>	CP	LE	3	3	3	10	22S	36E	663672	3586106		2879	260	180	80	
<a href="#">CP 00469</a>	CP	LE	1	2	3	06	22S	36E	659127	3588245*		3167	220	195	25	
<a href="#">CP 01469 POD1</a>	CP	LE	2	2	2	18	22S	36E	660234	3585869		3426	200	140	60	
<a href="#">CP 00070</a>	CP	LE	2	2	3	16	22S	36E	662604	3585071*		3567	220	170	50	
<a href="#">CP 00070 CLW472929</a>	O	CP	LE	2	2	3	16	22S	36E	662604	3585071*		3567	220	170	50
<a href="#">CP 00764 POD1</a>	CP	LE	2	1	4	16	22S	36E	663006	3585079*		3619	4700	4000	700	
<a href="#">CP 00539</a>	CP	LE	4	3	2	30	21S	36E	659663	3591676*		4016	270	240	30	
<a href="#">CP 00760 POD1</a>	CP	LE	1	4	4	35	21S	36E	666347	3589567*		4182	5000			
<a href="#">CP 00761 POD1</a>	CP	LE	4	3	1	01	22S	36E	666964	3588569*		4692	5000			

Average Depth to Water: **663 feet**

Minimum Depth: **140 feet**

Maximum Depth: **4000 feet**

Record Count: 12

### Basin/County Search:

County: Lea

### UTMNAD83 Radius Search (in meters):

Easting (X): 662272.3

Northing (Y): 3588623.13

Radius: 4838.7

\*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 E**  
**NMSLO Seed Mixes**

# NMSLO Seed Mix

# Sandy Loam (SL)

## SANDY LOAM (SL) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
<b>Grasses:</b>			
Galleta grass	Viva, VNS, So.	2.5	F
Little bluestem	Cimmaron, Pastura	2.5	F
Blue grama	Hachita, Lovington	2.0	D
Sideoats grama	Vaughn, El Reno	2.0	F
Sand dropseed	VNS, Southern	1.0	S
<b>Forbs:</b>			
Indian blanketflower	VNS, Southern	1.0	D
Parry penstemon	VNS, Southern	1.0	D
Blue flax	Appar	1.0	D
Desert globemallow	VNS, Southern	1.0	D
<b>Shrubs:</b>			
Fourwing saltbush	VNS, Southern	2.0	D
Common winterfat	VNS, Southern	1.0	F
Apache plume	VNS, Southern	0.75	F
Total PLS/acre		17.75	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box

- VNS, Southern – No Variety Stated, seed should be from a southern latitude collection of this species.
- Double above seed rates for broadcast or hydroseeding.
- If Parry penstemon is not available, substitute firecracker penstemon.
- If desert globemallow is not available, substitute scarlet globemallow or Nelson globemallow.
- If a species is not available, provide a suggested substitute to the New Mexico Land Office for approval. Increasing all other species proportionately may be acceptable.



# NMSLO Seed Mix

## Sandy (S)

### SANDY (S) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
<b>Grasses:</b>			
Sand bluestem	Elida, VNS, So.	2.0	F
Little bluestem	Cimarron, Pastura	3.0	F
Black grama	VNS, Southern	1.0	D
Sand dropseed	VNS, Southern	4.0	S
Plains bristlegrass	VNS, Southern	2.0	D
<b>Forbs:</b>			
Firewheel (Gaillardia)	VNS, Southern	1.0	D
Annual Sunflower	VNS, Southern	1.0	D
<b>Shrubs:</b>			
Fourwing Saltbush	VNS, Southern	1.0	F
Total PLS/acre		16.0	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box  
VNS = Variety Not Stated, PLS = Pure Live Seed

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute; alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at <http://plants.usda.gov>.



**Attachment F**  
**Analytical Results**





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

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February 22, 2018

ALAN KANE

KANE ENVIROMENTAL

8816 BIG VIEW DRIVE

AUSTIN, TX 78730

RE: 8.33 ACRE SITE

Enclosed are the results of analyses for samples received by the laboratory on 02/21/18 13:03.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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:**KANE ENVIROMENTAL  
8816 BIG VIEW DRIVE  
AUSTIN TX, 78730Project: 8.33 ACRE SITE  
Project Number: 18-091  
Project Manager: ALAN KANE  
Fax To:Reported:  
22-Feb-18 13:55

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1 3-3.5'	H800521-01	Soil	21-Feb-18 11:20	21-Feb-18 13:03
S-1 0-6"	H800521-02	Soil	21-Feb-18 11:10	21-Feb-18 13:03
S-2 2.5-3'	H800521-03	Soil	21-Feb-18 11:45	21-Feb-18 13:03

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 or 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 damage 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:

KANE ENVIROMENTAL  
8816 BIG VIEW DRIVE  
AUSTIN TX, 78730

Project: 8.33 ACRE SITE  
Project Number: 18-091  
Project Manager: ALAN KANE  
Fax To:

Reported:  
22-Feb-18 13:55

### S-1 3-3.5' H800521-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Cardinal Laboratories

#### Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	8022201	AC	22-Feb-18	4500-Cl-B	
pH*	7.83		0.100	pH Units	1	8022202	AC	22-Feb-18	9045	

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			119 %	72-148		8022104	MS	22-Feb-18	8021B	

#### Petroleum Hydrocarbons by GC FID

**S-06**

GRO C6-C10*	<100		100	mg/kg	10	8022105	MS	22-Feb-18	8015B	
DRO >C10-C28*	5240		100	mg/kg	10	8022105	MS	22-Feb-18	8015B	
EXT DRO >C28-C36	1530		100	mg/kg	10	8022105	MS	22-Feb-18	8015B	
Surrogate: 1-Chlorooctane			84.1 %	41-142		8022105	MS	22-Feb-18	8015B	
Surrogate: 1-Chlorooctadecane			160 %	37.6-147		8022105	MS	22-Feb-18	8015B	

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 or 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 damage 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:

KANE ENVIROMENTAL  
8816 BIG VIEW DRIVE  
AUSTIN TX, 78730

Project: 8.33 ACRE SITE  
Project Number: 18-091  
Project Manager: ALAN KANE  
Fax To:

Reported:  
22-Feb-18 13:55

**S-1 0-6"**

**H800521-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Cardinal Laboratories

#### Inorganic Compounds

Chloride	<16.0		16.0	mg/kg	4	8022201	AC	22-Feb-18	4500-Cl-B	
pH*	<b>5.45</b>		0.100	pH Units	1	8022202	AC	22-Feb-18	9045	

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8022104	MS	22-Feb-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8022104	MS	22-Feb-18	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 110 % 72-148 8022104 MS 22-Feb-18 8021B

#### Petroleum Hydrocarbons by GC FID

**S-06**

GRO C6-C10*	<200		200	mg/kg	20	8022105	MS	22-Feb-18	8015B	
DRO >C10-C28*	<b>14200</b>		200	mg/kg	20	8022105	MS	22-Feb-18	8015B	
EXT DRO >C28-C36	<b>6730</b>		200	mg/kg	20	8022105	MS	22-Feb-18	8015B	

Surrogate: 1-Chlorooctane 76.1 % 41-142 8022105 MS 22-Feb-18 8015B

Surrogate: 1-Chlorooctadecane 401 % 37.6-147 8022105 MS 22-Feb-18 8015B

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

KANE ENVIROMENTAL  
8816 BIG VIEW DRIVE  
AUSTIN TX, 78730

Project: 8.33 ACRE SITE  
Project Number: 18-091  
Project Manager: ALAN KANE  
Fax To:

Reported:  
22-Feb-18 13:55

### S-2 2.5-3' H800521-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Cardinal Laboratories

#### Inorganic Compounds

Chloride	32.0		16.0	mg/kg	4	8022201	AC	22-Feb-18	4500-Cl-B	
pH*	6.00		0.100	pH Units	1	8022202	AC	22-Feb-18	9045	

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	0.318		0.100	mg/kg	100	8022104	MS	22-Feb-18	8021B	
Toluene*	0.796		0.100	mg/kg	100	8022104	MS	22-Feb-18	8021B	
Ethylbenzene*	3.83		0.100	mg/kg	100	8022104	MS	22-Feb-18	8021B	
Total Xylenes*	9.29		0.300	mg/kg	100	8022104	MS	22-Feb-18	8021B	
Total BTEX	14.2		0.600	mg/kg	100	8022104	MS	22-Feb-18	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 114 % 72-148 8022104 MS 22-Feb-18 8021B

#### Petroleum Hydrocarbons by GC FID

S-06

GRO C6-C10*	243		200	mg/kg	20	8022105	MS	22-Feb-18	8015B	
DRO >C10-C28*	29400		200	mg/kg	20	8022105	MS	22-Feb-18	8015B	
EXT DRO >C28-C36	9930		200	mg/kg	20	8022105	MS	22-Feb-18	8015B	

Surrogate: 1-Chlorooctane 74.9 % 41-142 8022105 MS 22-Feb-18 8015B

Surrogate: 1-Chlorooctadecane 469 % 37.6-147 8022105 MS 22-Feb-18 8015B

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

KANE ENVIROMENTAL  
8816 BIG VIEW DRIVE  
AUSTIN TX, 78730

Project: 8.33 ACRE SITE  
Project Number: 18-091  
Project Manager: ALAN KANE  
Fax To:

Reported:  
22-Feb-18 13:55

### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8022201 - 1:4 DI Water</b>										
<b>Blank (8022201-BLK1)</b>					Prepared & Analyzed: 22-Feb-18					
Chloride	ND	16.0	mg/kg							
<b>LCS (8022201-BS1)</b>					Prepared & Analyzed: 22-Feb-18					
Chloride	416	16.0	mg/kg	400		104	80-120			
<b>LCS Dup (8022201-BSD1)</b>					Prepared & Analyzed: 22-Feb-18					
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	
<b>Batch 8022202 - 1:1 DI</b>										
<b>LCS (8022202-BS1)</b>					Prepared & Analyzed: 22-Feb-18					
pH	7.22		pH Units	7.00		103	90-110			
<b>Duplicate (8022202-DUP1)</b>					Prepared & Analyzed: 22-Feb-18					
pH	7.94	0.100	pH Units		7.83			1.40	20	

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

KANE ENVIROMENTAL  
8816 BIG VIEW DRIVE  
AUSTIN TX, 78730

Project: 8.33 ACRE SITE  
Project Number: 18-091  
Project Manager: ALAN KANE  
Fax To:

Reported:  
22-Feb-18 13:55

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 8022104 - Volatiles

##### Blank (8022104-BLK1)

Prepared & Analyzed: 22-Feb-18

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.113		mg/kg	0.100		113	72-148			

##### LCS (8022104-BS1)

Prepared & Analyzed: 22-Feb-18

Benzene	1.91	0.050	mg/kg	2.00		95.7	79.5-124			
Toluene	1.91	0.050	mg/kg	2.00		95.6	75.5-127			
Ethylbenzene	1.83	0.050	mg/kg	2.00		91.4	77.7-125			
Total Xylenes	5.67	0.150	mg/kg	6.00		94.5	70.9-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.104		mg/kg	0.100		104	72-148			

##### LCS Dup (8022104-BSD1)

Prepared & Analyzed: 22-Feb-18

Benzene	1.91	0.050	mg/kg	2.00		95.4	79.5-124	0.316	6.5	
Toluene	1.88	0.050	mg/kg	2.00		94.1	75.5-127	1.57	7.02	
Ethylbenzene	1.85	0.050	mg/kg	2.00		92.7	77.7-125	1.43	7.83	
Total Xylenes	5.69	0.150	mg/kg	6.00		94.9	70.9-124	0.440	7.78	
Surrogate: 4-Bromofluorobenzene (PID)	0.106		mg/kg	0.100		106	72-148			

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

KANE ENVIROMENTAL  
8816 BIG VIEW DRIVE  
AUSTIN TX, 78730

Project: 8.33 ACRE SITE  
Project Number: 18-091  
Project Manager: ALAN KANE  
Fax To:

Reported:  
22-Feb-18 13:55

### Petroleum Hydrocarbons by GC FID - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 8022105 - General Prep - Organics

##### Blank (8022105-BLK1)

Prepared & Analyzed: 21-Feb-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	49.1		mg/kg	50.0		98.2	41-142			
Surrogate: 1-Chlorooctadecane	48.6		mg/kg	50.0		97.2	37.6-147			

##### LCS (8022105-BS1)

Prepared & Analyzed: 21-Feb-18

GRO C6-C10	201	10.0	mg/kg	200		101	76.5-133			
DRO >C10-C28	196	10.0	mg/kg	200		98.2	72.9-138			
Total TPH C6-C28	398	10.0	mg/kg	400		99.4	78-132			
Surrogate: 1-Chlorooctane	50.2		mg/kg	50.0		100	41-142			
Surrogate: 1-Chlorooctadecane	52.0		mg/kg	50.0		104	37.6-147			

##### LCS Dup (8022105-BSD1)

Prepared & Analyzed: 21-Feb-18

GRO C6-C10	207	10.0	mg/kg	200		103	76.5-133	2.67	20.6	
DRO >C10-C28	202	10.0	mg/kg	200		101	72.9-138	2.99	20.6	
Total TPH C6-C28	409	10.0	mg/kg	400		102	78-132	2.83	18	
Surrogate: 1-Chlorooctane	51.9		mg/kg	50.0		104	41-142			
Surrogate: 1-Chlorooctadecane	53.9		mg/kg	50.0		108	37.6-147			

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



### 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.
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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Celey D. Keene, Lab Director/Quality Manager



LUSH!!

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

Company Name: Kane Environmental Engineering  
Project Manager: Ralph Harvey  
Address: 125 Pecan Valley Dr.  
City: Bullard State: TX zip: 75757  
Phone #: 903-235-9359 Fax #:  
Project #: 18-091 Project Owner:  
Project Name: 8.33 Acre site  
Project Location: SW of Dentrice, NM  
Sampler Name: Ralph Harvey  
P.O. #: 18-091  
Company: Kane  
Attn: Alan Kane  
Address: 8816 Big View  
City: Austin  
State: TX zip: 78730  
Phone #: 281-370-6580  
Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H800521

5-1 3-3 1/2  
5-1 0-6 1/2  
5-2 2 1/2 - 3

(G) RAB OR (C) OMP.  
# CONTAINERS  
GROUNDWATER  
WASTEWATER  
SOIL  
OIL  
SLUDGE  
OTHER:  
ACID/BASE:  
ICE / COOL  
OTHER:

DATE TIME  
2/21 11:20  
2/21 11:10  
2/21 11:45

TPH GRO, DRO, ORO  
BTEX  
pH  
chlorides

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Relinquished By:

Date: 2/21

Received By:

Phone Result:

Yes No Add'l Phone #:

Fax Result:

Yes No Add'l Fax #:

REMARKS:

Relinquished By:

Date: 1/3/03

Received By:

Phone Result:

Yes No Add'l Phone #:

Fax Result:

Yes No Add'l Fax #:

REMARKS:

Delivered By: (Circle One)

#75

Sample Condition

CHECKED BY:

Phone Result:

Yes No Add'l Phone #:

Fax Result:

Yes No Add'l Fax #:

REMARKS:

Sampler - UPS - Bus - Other:

3.60 / 3.850

Cool Intact

CHECKED BY:

Phone Result:

Yes No Add'l Phone #:

Fax Result:

Yes No Add'l Fax #:

REMARKS:

+ Cardinal cannot accept verbal change. Please refer to change order 17477R-003-960-77

**PERMIAN BASIN  
ENVIRONMENTAL LAB, LP  
1400 Rankin Hwy  
Midland, TX 79701**



# Analytical Report

**Prepared for:**

Shane Estep  
E Tech Environmental & Safety Solutions, Inc.  
13000 West County Road 100  
Odessa, TX 79765

Project: Goodnight Midstream Former DCP Pump Station

Project Number: 876-9521

Location: Lea Co., NM

Lab Order Number: 8G03005



**NELAP/TCEQ # T104704516-17-8**

Report Date: 07/05/18

E Tech Environmental & Safety Solutions, Inc.  
13000 West County Road 100  
Odessa TX, 79765

Project: Goodnight Midstream Former DCP Pump Statio  
Project Number: 876-9521  
Project Manager: Shane Estep

Fax: (432) 563-2213

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Test Trench 1 (4.5')	8G03005-01	Soil	07/02/18 12:00	07-03-2018 09:45
Test Trench 1 (5.5')	8G03005-02	Soil	07/02/18 12:05	07-03-2018 09:45
Test Trench 1 (6.5')	8G03005-03	Soil	07/02/18 12:15	07-03-2018 09:45
Test Trench 2 (0"-6")	8G03005-04	Soil	07/02/18 12:45	07-03-2018 09:45
Test Trench 2 (4.0')	8G03005-05	Soil	07/02/18 12:50	07-03-2018 09:45
Test Trench 2 (5.5')	8G03005-06	Soil	07/02/18 13:00	07-03-2018 09:45
Test Trench 2 (6.5')	8G03005-07	Soil	07/02/18 13:10	07-03-2018 09:45



E Tech Environmental & Safety Solutions, Inc.  
13000 West County Road 100  
Odessa TX, 79765

Project: Goodnight Midstream Former DCP Pump Statio  
Project Number: 876-9521  
Project Manager: Shane Estep

Fax: (432) 563-2213

**Test Trench 1 (4.5')**  
**8G03005-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.0211	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
Toluene	ND	0.211	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
Ethylbenzene	ND	0.105	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
Xylene (p/m)	ND	0.421	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
Xylene (o)	ND	0.211	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
Surrogate: 4-Bromofluorobenzene		82.7 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B
Surrogate: 1,4-Difluorobenzene		95.2 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	5.0	0.1	%	1	P8G0506	07/05/18	07/05/18	ASTM D2216
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	526	mg/kg dry	20	P8G0306	07/03/18	07/03/18	TPH 8015M
>C12-C28	16400	526	mg/kg dry	20	P8G0306	07/03/18	07/03/18	TPH 8015M
>C28-C35	3790	526	mg/kg dry	20	P8G0306	07/03/18	07/03/18	TPH 8015M
Surrogate: 1-Chlorooctane		113 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M
Surrogate: o-Terphenyl		125 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	20100	526	mg/kg dry	20	[CALC]	07/03/18	07/03/18	calc

E Tech Environmental & Safety Solutions, Inc.  
13000 West County Road 100  
Odessa TX, 79765

Project: Goodnight Midstream Former DCP Pump Station  
Project Number: 876-9521  
Project Manager: Shane Estep

Fax: (432) 563-2213

**Test Trench 1 (5.5')**  
**8G03005-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.0213	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
Toluene	ND	0.213	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
<b>Ethylbenzene</b>	<b>0.152</b>	0.106	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
Xylene (p/m)	ND	0.426	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
Xylene (o)	ND	0.213	mg/kg dry	20	P8G0501	07/04/18	07/04/18	EPA 8021B
<i>Surrogate: 1,4-Difluorobenzene</i>		101 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B
<i>Surrogate: 4-Bromofluorobenzene</i>		78.8 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>11.9</b>	1.06	mg/kg dry	1	P8G0308	07/03/18	07/03/18	EPA 300.0
<b>% Moisture</b>	<b>6.0</b>	0.1	%	1	P8G0506	07/05/18	07/05/18	ASTM D2216

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

<b>C6-C12</b>	<b>1140</b>	532	mg/kg dry	20	P8G0306	07/03/18	07/03/18	TPH 8015M
<b>&gt;C12-C28</b>	<b>27400</b>	532	mg/kg dry	20	P8G0306	07/03/18	07/03/18	TPH 8015M
<b>&gt;C28-C35</b>	<b>5870</b>	532	mg/kg dry	20	P8G0306	07/03/18	07/03/18	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		113 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M
<i>Surrogate: o-Terphenyl</i>		112 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>34400</b>	532	mg/kg dry	20	[CALC]	07/03/18	07/03/18	calc

E Tech Environmental & Safety Solutions, Inc.  
13000 West County Road 100  
Odessa TX, 79765

Project: Goodnight Midstream Former DCP Pump Station  
Project Number: 876-9521  
Project Manager: Shane Estep

Fax: (432) 563-2213

**Test Trench 1 (6.5')**  
**8G03005-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00106	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Toluene	ND	0.0106	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Ethylbenzene	ND	0.00532	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Xylene (p/m)	ND	0.0213	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Xylene (o)	ND	0.0106	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		108 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		101 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	6.0	0.1	%	1	P8G0506	07/05/18	07/05/18	ASTM D2216	
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.6	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
>C12-C28	85.4	26.6	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
>C28-C35	42.4	26.6	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
Surrogate: 1-Chlorooctane		114 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M	
Surrogate: o-Terphenyl		126 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	128	26.6	mg/kg dry	1	[CALC]	07/03/18	07/03/18	calc	

E Tech Environmental & Safety Solutions, Inc.  
13000 West County Road 100  
Odessa TX, 79765

Project: Goodnight Midstream Former DCP Pump Statio  
Project Number: 876-9521  
Project Manager: Shane Estep

Fax: (432) 563-2213

**Test Trench 2 (0''-6'')**

**8G03005-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	ND	1.00	mg/kg dry	1	P8G0308	07/03/18	07/03/18	EPA 300.0	
% Moisture	ND	0.1	%	1	P8G0506	07/05/18	07/05/18	ASTM D2216	



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Project Manager: Shane Estep

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**Test Trench 2 (4.0')**  
**8G03005-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00110	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Toluene	ND	0.0110	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Ethylbenzene	ND	0.00549	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Xylene (p/m)	ND	0.0220	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Xylene (o)	ND	0.0110	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		101 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		107 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	9.0	0.1	%	1	P8G0506	07/05/18	07/05/18	ASTM D2216	
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	27.5	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
>C12-C28	118	27.5	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
Surrogate: 1-Chlorooctane		105 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M	
Surrogate: o-Terphenyl		116 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	118	27.5	mg/kg dry	1	[CALC]	07/03/18	07/03/18	calc	

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Project Manager: Shane Estep

Fax: (432) 563-2213

**Test Trench 2 (5.5')**  
**8G03005-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00112	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Toluene	ND	0.0112	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Ethylbenzene	ND	0.00562	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Xylene (p/m)	ND	0.0225	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Xylene (o)	ND	0.0112	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.2 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	59.1	1.12	mg/kg dry	1	P8G0308	07/03/18	07/03/18	EPA 300.0	
% Moisture	11.0	0.1	%	1	P8G0506	07/05/18	07/05/18	ASTM D2216	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	140	mg/kg dry	5	P8G0306	07/03/18	07/03/18	TPH 8015M	
>C12-C28	1560	140	mg/kg dry	5	P8G0306	07/03/18	07/03/18	TPH 8015M	
>C28-C35	390	140	mg/kg dry	5	P8G0306	07/03/18	07/03/18	TPH 8015M	
Surrogate: 1-Chlorooctane		114 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M	
Surrogate: o-Terphenyl		129 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	1950	140	mg/kg dry	5	[CALC]	07/03/18	07/03/18	calc	

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Project Manager: Shane Estep

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**Test Trench 2 (6.5')**  
**8G03005-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00114	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Toluene	ND	0.0114	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Ethylbenzene	ND	0.00568	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Xylene (p/m)	ND	0.0227	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Xylene (o)	ND	0.0114	mg/kg dry	1	P8G0501	07/04/18	07/04/18	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		109 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		98.7 %	75-125		P8G0501	07/04/18	07/04/18	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

% Moisture	12.0	0.1	%	1	P8G0506	07/05/18	07/05/18	ASTM D2216	
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	28.4	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P8G0306	07/03/18	07/03/18	TPH 8015M	
Surrogate: 1-Chlorooctane		123 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M	
Surrogate: o-Terphenyl		139 %	70-130		P8G0306	07/03/18	07/03/18	TPH 8015M	S-GC
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	07/03/18	07/03/18	calc	

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Project Number: 876-9521  
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**Organics by GC - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P8G0501 - General Preparation (GC)**

**Blank (P8G0501-BLK1)**

Prepared & Analyzed: 07/04/18

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.0100	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.0200	"							
Xylene (o)	ND	0.0100	"							
Surrogate: 1,4-Difluorobenzene	0.0575		"	0.0600		95.8	75-125			
Surrogate: 4-Bromofluorobenzene	0.0618		"	0.0600		103	75-125			

**LCS (P8G0501-BS1)**

Prepared & Analyzed: 07/04/18

Benzene	0.114	0.00100	mg/kg wet	0.100		114	70-130			
Toluene	0.101	0.0100	"	0.100		101	70-130			
Ethylbenzene	0.110	0.00500	"	0.100		110	70-130			
Xylene (p/m)	0.232	0.0200	"				70-130			
Xylene (o)	0.107	0.0100	"				70-130			
Surrogate: 4-Bromofluorobenzene	0.0632		"	0.0600		105	75-125			
Surrogate: 1,4-Difluorobenzene	0.0627		"	0.0600		104	75-125			

**LCS Dup (P8G0501-BS1)**

Prepared & Analyzed: 07/04/18

Benzene	0.101	0.00100	mg/kg wet	0.100		101	70-130	11.8	20	
Toluene	0.0889	0.0100	"	0.100		88.9	70-130	12.7	20	
Ethylbenzene	0.0961	0.00500	"	0.100		96.1	70-130	13.4	20	
Xylene (p/m)	0.214	0.0200	"				70-130		20	
Xylene (o)	0.0953	0.0100	"				70-130		20	
Surrogate: 1,4-Difluorobenzene	0.0608		"	0.0600		101	75-125			
Surrogate: 4-Bromofluorobenzene	0.0581		"	0.0600		96.8	75-125			

**Matrix Spike (P8G0501-MS1)**

Source: 8G03005-03

Prepared & Analyzed: 07/04/18

Benzene	0.0968	0.00106	mg/kg dry	0.106	ND	91.0	80-120			
Toluene	0.0851	0.0106	"	0.106	ND	80.0	80-120			
Ethylbenzene	0.0887	0.00532	"	0.106	ND	83.4	80-120			
Xylene (p/m)	0.205	0.0213	"		ND		80-120			
Xylene (o)	0.0878	0.0106	"		ND		80-120			
Surrogate: 4-Bromofluorobenzene	0.0941		"	0.0638		147	75-125			S-GC
Surrogate: 1,4-Difluorobenzene	0.0693		"	0.0638		109	75-125			



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Fax: (432) 563-2213

**Organics by GC - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P8G0501 - General Preparation (GC)**

**Matrix Spike Dup (P8G0501-MSD1)**

**Source: 8G03005-03**

Prepared & Analyzed: 07/04/18

Benzene	0.0939	0.00106	mg/kg dry	0.106	ND	88.2	80-120	3.09	20	
Toluene	0.0828	0.0106	"	0.106	ND	77.8	80-120	2.76	20	QM-07
Ethylbenzene	0.0852	0.00532	"	0.106	ND	80.1	80-120	4.07	20	
Xylene (p/m)	0.187	0.0213	"		ND		80-120		20	
Xylene (o)	0.0839	0.0106	"		ND		80-120		20	
Surrogate: 4-Bromofluorobenzene	0.0714		"	0.0638		112	75-125			
Surrogate: 1,4-Difluorobenzene	0.0724		"	0.0638		113	75-125			

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Odessa TX, 79765

Project: Goodnight Midstream Former DCP Pump Station  
Project Number: 876-9521  
Project Manager: Shane Estep

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**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P8G0308 - \*\*\* DEFAULT PREP \*\*\***

**Blank (P8G0308-BLK1)**

Prepared & Analyzed: 07/03/18

Chloride	ND	1.00	mg/kg wet							
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**LCS (P8G0308-BS1)**

Prepared & Analyzed: 07/03/18

Chloride	391	1.00	mg/kg wet	400		97.7	80-120			
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**LCS Dup (P8G0308-BSD1)**

Prepared & Analyzed: 07/03/18

Chloride	393	1.00	mg/kg wet	400		98.2	80-120	0.569	20	
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**Duplicate (P8G0308-DUP1)**

Source: 8F28001-01

Prepared & Analyzed: 07/03/18

Chloride	1900	5.21	mg/kg dry		1900			0.00552	20	
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**Duplicate (P8G0308-DUP2)**

Source: 8G02016-32

Prepared & Analyzed: 07/03/18

Chloride	31.1	1.04	mg/kg dry		31.5			1.30	20	
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**Matrix Spike (P8G0308-MS1)**

Source: 8F28001-01

Prepared & Analyzed: 07/03/18

Chloride	2930	5.21	mg/kg dry	1040	1900	98.2	80-120			
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**Batch P8G0506 - \*\*\* DEFAULT PREP \*\*\***

**Blank (P8G0506-BLK1)**

Prepared & Analyzed: 07/05/18

% Moisture	ND	0.1	%							
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### Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:



Date:

7/5/2018

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.







Electronic Correspondence

August 6, 2018

Ms. Olivia Yu  
Environmental Specialist, District I  
Oil Conservation Division, EMNRD  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)

Mr. Ryan Mann  
Remediation Specialist  
Field Operation Division  
New Mexico State Land Office  
[rmann@slo.state.nm.us](mailto:rmann@slo.state.nm.us)

Re: Corrective Action Plan Modification 1RP-5091  
Former DCP Pump Station Historical Release  
Legal: Unit F, Sec 4, T22S R36E, Lea County, NM  
Latitude/Longitude: 32.422898/ -103.274162  
Etech Proj. Number: 876-9521-000  
Depth to Groundwater: 200-275 feet - Chevron/Texaco Lea County Depth to Groundwater Map  
- OSE NM Water Rights Reporting System

Release Type: Produced Water	
Contaminants of Concern (COCs)	Threshold Levels
TPH	5000 mg/kg
Benzene	10 mg/kg
BTEX	50 mg/kg
Chlorides	600 mg/kg

Dear Olivia and Ryan:

Etech Environmental & Safety Solutions, Inc. (Etech) is submitting the following corrective action plan on the aforementioned site for your review and approval.

#### **Background**

On February 21, 2018, a Phase I Environmental Site Assessment (ESA) inspection was conducted by a third party at the 8.33 acre former DCP pump station site. Of particular interest was a possibly impacted area which had been identified from historical aerial photos and is located approximately one hundred and forty (140) feet south of the former pump station's concrete pad. The possibly impacted area measures approximately seventy (70) feet in length and fifty (50) feet in width and covers an area of approximately three thousand five hundred (3,500) square feet.

Concurrent with the Phase I ESA inspection, three (3) soil samples were collected by hand auger from two (2) locations of the possibly impacted area (See Attachment B - Annotated Aerial Imagery). Hand auger refusal occurred at a depths of three (3) and three and a half (3.5) feet below ground surface (bgs)

where a hard layer of competent caliche was encountered. The soil samples were submitted to Cardinal Laboratories (Cardinal) and analyzed for TPH, benzene, BTEX, chloride, and pH. The laboratory results determined that the TPH levels ranged from 6,770 mg/kg to 39,573 mg/kg. Benzene levels ranged from no analytical detection to 0.318 mg/kg. BTEX levels ranged from no analytical detection to 14.2 mg/kg. Chloride levels ranged from no analytical detection to 32 mg/kg. (See Attachment B - Annotated Aerial Imagery and Table 1 Summary of Delineation Sampling Analytical Results below).

On July 2, 2018, Etech conducted additional delineation sampling at the site. Basin Environmental excavated two test trenches labeled Test Trench 1 and Test Trench 2 utilizing an excavator. Three (3) soil samples were collected from the Test Trench 1 location and four (4) soil samples were collected from the Test Trench 2 location. The soil samples were submitted to Permian Basin Environmental Laboratory (PBELAB) and analyzed for chloride, TPH, benzene, and BTEX. The laboratory results determined that the chloride levels ranged from no analytical detection to 59.1 mg/kg and were below the regulatory guideline of 600 mg/kg. TPH levels ranged from no analytical detection to 34,400 mg/kg. BTEX levels ranged from no analytical detection to 0.152 mg/kg. Benzene levels indicated no analytical detection for all soil samples. (See Attachment B - Annotated Aerial Imagery and Table 1 Summary of Delineation Sampling Analytical Results below).

**Table 1**  
**Summary of Delineation Sampling Analytical Results**

Sample ID	Depth	Date	C6-C12	>C12- C28	>C28- C35	Total TPH (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)	Chlorides (mg/kg)
S-1*	6"	2/21/18	ND	14,200	6,730	<b>20,930</b>	ND	ND	ND
S-1*	3.5'	2/21/18	ND	5,240	1,530	<b>6,770</b>	ND	ND	32
S-2*	3'	2/21/18	243	29,400	9,930	<b>39,573</b>	0.318	14.2	32
Test Trench 1	4.5'	7/02/18	ND	16,400	3,790	<b>20,100</b>	ND	ND	NA
Test Trench 1	5.5'	7/02/18	1,140	27,400	5,870	<b>34,400</b>	ND	0.152	11.9
Test Trench 1	6.5'	7/02/18	ND	85.4	42.4	128	ND	ND	NA
Test Trench 2**	0-6"	7/02/18	NA	NA	NA	NA	NA	NA	ND
Test Trench 2	4.0'	7/02/18	ND	118	ND	118	ND	ND	NA
Test Trench 2	5.5'	7/02/18	ND	1,560	390	1,950	ND	ND	59.1
Test Trench 2	6.5'	7/02/18	ND	ND	ND	ND	ND	ND	NA

\*denotes collected by third party

ND denotes no analytical detection

**Bold** denotes analytical results above regulatory guidelines

NA denotes not analyzed

\*\*denotes collected by hand auger

### Depth to Groundwater Data

Depth to groundwater data was obtained from the Chevron/Texaco Lea County Depth to Groundwater Map and the New Mexico Office of the State Engineer (OSE) New Mexico Water Rights Reporting System.

The Former DCP Pump Station location lies between the 250 foot and 275 foot ground water contour lines as depicted on the Chevron/Texaco Lea County Depth to Groundwater Map. This correlates well with the water depths displayed in the OSE Water Column/ Average Depth to Water Table.

Attachment D contains an image of the pertinent area of the Chevron/ Texaco Lea County Depth to Groundwater Map with the location of the Former DCP Pump Station denoted, and the OSE Water Column/ Average Depth to Water Table.

## Site Ranking Score and Recommended Remediation Action Levels

The New Mexico Oil Conservation Division publication entitled “Guidelines for Remediation of Leaks, Spills and Releases” (August 13, 1993) provides ranking criteria for the setting of recommended remediation action levels for release sites in New Mexico. Per these criteria the following ranking was calculated:

### Criteria Value Ranking

Depth to Groundwater greater than 100 feet = 0

Wellhead Protection Area Greater than 1,000 feet from a water source and greater than 200 feet from a private domestic water source = 0

Distance to Surface Water Body Greater than 1,000 feet = 0

Total Ranking = 0

The recommended remediation action levels for a site that displays a total ranking of zero (0) to nine (9) are:

TPH – 5000 mg/kg

Benzene – 10 mg/kg

BTEX – 50 mg/kg

Chloride – 600 mg/kg

### **Scope of Work**

The corrective action for this site will be excavation and disposal of impacted soils to a depths of six and a half (6.5) feet and four (4) feet bgs. TPH, benzene, and BTEX are the only identified constituents of concern since chloride concentrations were no analytical detection to 59.1 mg/kg as indicated by delineation sampling. Therefore, only TPH, benzene, and BTEX are being analyzed during remediation, and the corrective action goal for this project is five thousand (5,000) mg/kg for TPH, ten (10) mg/kg for benzene, and fifty (50) mg/kg for BTEX. The particulars for the remediation to be conducted at the site will involve the actions summarized as follows:

1. The site will be excavated to a depth of six and a half (6.5) feet bgs at the Test Trench 1 area and four (4) feet bgs at the Test Trench 2 area. The impacted soil will be disposed of at an OCD and SLO approved disposal facility.
2. Six (6) sidewall confirmation soil samples and two (2) bottom hole confirmation soil samples will be collected (See Attachment B - Annotated Aerial Imagery for proposed locations).
3. In addition, further delineation will be conducted at the Test Trench 1 location to obtain a second vertical soil sample whose analysis indicates constituent of concern concentrations below regulatory guidelines.
4. Soil samples will be collected and evaluated for visual and olfactory indications of the presence or absence of hydrocarbon impact. Once a sample indicates the absence of hydrocarbon impact, it will be containerized and submitted for laboratory analysis for TPH, benzene, and BTEX.
5. If laboratory results indicate that all constituent of concern concentrations are below regulatory guidelines, then the excavation will be backfilled with top soil of the kind removed and seeded with NMSLO Sandy Loam (SL) seed mix or NMSLO Sandy (S) seed mix (See Attachment E - NMSLO Seed Mixes). The seeded area will be monitored for growth and the operator will repeat seeding until a successful vegetative cover is achieved

#### Notifications and Special Conditions

1. The OCD and SLO will be notified prior to the commencement of on-site operations.
2. The OCD and SLO will be notified prior to each sampling event to allow the opportunity to witness the sampling events. Splits will be made available if requested.
3. A report documenting the results of the delineation activities will be submitted to the OCD and SLO.

Thank you for your assistance on this matter. Should you have any questions, require additional information, or have any additional stipulations for this site, please contact me at (432) 563-2200 (office) or via email at [geoff@etechnv.com](mailto:geoff@etechnv.com).

Respectfully:

A handwritten signature in black ink, appearing to read "Geoff Leking". The signature is written in a cursive, flowing style.

Geoff Leking,  
Project Manager  
Etech Environmental & Safety Solutions, Inc.



**Attachment B**  
**Annotated Aerial Imagery**

**Attachment C**  
**Well Record & Log**

**Attachment C**  
**Photograph Log**



View of release looking northwest.



View of auger hole S-1.





View of Test Trench 1 after excavation looking south.



View of Test Trench 2 after excavation looking south.





View of Test Trench 1 after backfilling looking west.



View of Test Trench 2 after backfilling looking west.





View of boring Auger Hole 1.



View of boring Auger Hole 2.





View of boring Auger Hole 3 (center foreground).



View of boring Auger Hole 4.





View of front of tank battery looking west after remediation activities.



View of well pad east of the tank battery looking west after remediation activities.





View of pasture south of tank battery looking southwest after remediation activities.



View of pasture west of tank battery looking northwest after remediation activities.





View of well pad north of tank battery looking south after remediation activities.



View of Bottom Hole 1 sample location.





View of Bottom Hole 2 sample location.



View of Bottom Hole 3 sample location.





View of Bottom Hole 4 sample location.



View of Test Trench 1 after excavation.





View of Test Trench 2 after excavation.



View of Test Trench 3 after excavation.





View of Test Trench 4 during excavation.



View of Test Trench 5 after excavation.





View of Test Trench 6 after excavation.



View of Test Trench 1 after backfill.





View of Test Trench 2 after backfill.



View of Test Trench 3 after backfill.





View of Test Trench 4 after backfill.



View of Test Trench 5 after backfill.





View of Test Trench 6 after backfill.



View of air rotary drill rig preparing to perform Boring 1.





View of performance of Boring 1.



View of Boring 1 at completion.





View of Boring 1 after plugging and abandonment.



View of pasture south of pad looking southeast. Sample locations Bottom Hole 2A, Sidewall 10, and Sidewall 11 visible.





View of pasture south of pad looking southeast. Sample locations Sidewall 11 and Sidewall 12 visible.



View of pasture west of pad looking north. Sample locations Bottom Hole 3A, Sidewall 1, and Sidewall 2 visible.





View of pad looking north. Sample locations Bottom Hole 5A, Sidewall 3, and Sidewall 4 visible.



View of pad looking northeast. Sample locations Bottom Hole 6A, Sidewall 4, and Sidewall 5 visible.





View of pad looking north. Sample location Sidewall 6 is in foreground. Sample locations Bottom Hole 7, Sidewall 7, Sidewall 8, Sidewall 9, Bottom Hole 5A, and Sidewall 3 are in background.



View of pad looking north. Close up view of sample locations Bottom Hole 7, Sidewall 7, Sidewall 8, and Sidewall 9.





View of pad looking south. Sample locations Bottom Hole 5A, Sidewall 4, and Sidewall 9 are in the foreground.



View of pad looking south. Sample locations Bottom Hole 7A, Sidewall 7, Sidewall 9, and Bottom Hole 5A (far left of photo with top of pin flag out of view) are in the foreground.











**Attachment D**  
**Depth to Groundwater Data**



**Attachment E**  
**NMSLO Seed Mixes**

**Attachment F**  
**Analytical Results**