Environmental & Safety Solutions, Inc.

Electronic Correspondence

October 19, 2017

Re: Delineation and Remediation Scope of Work Report
Linn Operating HE West B #30 Spill 090217
Legal: T17S R31E, Eddy County, NM
Latitude/Longitude: 32.848037/ -103.876020
Etech Project Number: 253-8683
Depth to Groundwater: 300 feet – New Mexico Office of the State Engineer

Release Type: Crude Oil

Contaminants of Concern (COCs)	Threshold Levels
TPH	5000 mg/kg
Benzene	10 mg/kg
BTEX	50 mg/kg
Chlorides	600 mg/kg

Etech Environmental & Safety Solutions, Inc. (Etech) is submitting the following delineation and remediation scope of work report on the aforementioned site for review and approval.

Background

On September 11, 13 & 14, 2017, Etech responded to a reportable release at the HE West B #30 flowline site located in Eddy County, New Mexico that is operated by Linn Operating Incorporated (Linn). According to Linn's spill report, the release was caused by a failure in the poly flowline from the HE West B #30 site. There was approximately eighty (80) barrels of produced water released with no recovery. The release impacted approximately 5,400 square feet of surface area within the pasture surrounding the flowline. Contaminated soil was excavated and placed on plastic by a third party contractor.

Delineation Activities

Delineation activities were conducted at the impacted area on September 11, 13 & 14, 2017 by Etech. Soil samples from the impacted area were collected by hand auger from five (5) soil sample locations labeled Auger Hole 1 through Auger Hole 5 (See Attachment A, Annotated Aerial Imagery). Soil samples were collected at various depths ranging from one (1) foot to a maximum of sixteen (16) feet below ground surface (bgs) in Auger Hole 5. Soil samples were submitted to Permian Basin Environmental Laboratory (PBELAB) and analyzed for chlorides, TPH, benzene, and BTEX. The laboratory results determined that the chloride concentrations ranged from no analytical detection to 14270 mg/kg (See Table 1 Summary of Delineation Sampling Analytical Results below), TPH and BTEX levels were all non-detect for all samples collected.

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)**
Auger Hole 1	1’	9/11/17	ND	1330	1610	2940	ND	ND	**7290**
Auger Hole 1	2’	9/11/17	ND	ND	ND	ND	ND	ND	**8820**
Auger Hole 1	3’	9/11/17	ND	ND	ND	ND	ND	ND	**8970**
Auger Hole 1	6’	9/11/17	-	-	-	-	-	-	**6960**
Auger Hole 1	9’	9/11/17	-	-	-	-	-	-	**8030**
Auger Hole 1	12’	9/11/17	-	-	-	-	-	-	**1900**
Auger Hole 1	14’	9/11/17	-	-	-	-	-	-	**1770**
Auger Hole 2	1’	9/13/17	ND	ND	ND	ND	ND	ND	**6980**
Auger Hole 2	2’	9/13/17	ND	ND	ND	ND	ND	ND	**3080**
Auger Hole 2	3’	9/13/17	ND	ND	ND	ND	ND	ND	274
Auger Hole 2	8’	9/13/17	-	-	-	-	-	-	459
Auger Hole 2	13’	9/13/17	-	-	-	-	-	-	348
Auger Hole 3	1’	9/13/17	ND	ND	ND	ND	ND	ND	**17200**
Auger Hole 3	2’	9/13/17	ND	ND	ND	ND	ND	ND	**12900**
Auger Hole 3	3’	9/13/17	ND	ND	ND	ND	ND	ND	**1960**
Auger Hole 3	4’	9/13/17	-	-	-	-	-	-	227
Auger Hole 3	9’	9/13/17	-	-	-	-	-	-	76.6
Auger Hole 3	14’	9/13/17	-	-	-	-	-	-	130
Auger Hole 4	1’	9/13/17	ND	ND	ND	ND	ND	ND	**10200**
Auger Hole 4	2’	9/13/17	ND	ND	ND	ND	ND	ND	**5340**
Auger Hole 4	3’	9/13/17	ND	ND	ND	ND	ND	ND	**2280**
Auger Hole 4	4’	9/13/17	-	-	-	-	-	-	**902**
Auger Hole 4	5’	9/13/17	-	-	-	-	-	-	**739**
Auger Hole 4	10’	9/13/17	-	-	-	-	-	-	407
Auger Hole 5	1’	9/13/17	ND	ND	ND	ND	ND	0.0012	**15200**
Auger Hole 5	2’	9/13/17	ND	ND	ND	ND	ND	ND	**15000**
Auger Hole 5	3’	9/13/17	ND	ND	ND	ND	ND	ND	**8730**
Auger Hole 5	6’	9/13/17	-	-	-	-	-	-	187
Auger Hole 5	11’	9/13/17	-	-	-	-	-	-	104
Auger Hole 5	16’	9/13/17	-	-	-	-	-	-	94.3

Bold values indicate above regulatory threshold levels

Depth to Groundwater Data

Depth to groundwater data was obtained from the New Mexico Office of the State Engineer (OSE) and indicates that the data point to the site displays a depth to ground water of 300 feet bgs

Attachment C contains a diagram displaying the location of the HE West #30 release site and depth to groundwater data.

Scope of Work for Remediation of the Release

After finding the release the initial remediation activities conducted at the site included the excavation and stockpiling on plastic of the top 1 foot of impacted soil associated with the release area. This remediation activity was conducted prior to the above referenced delineation activities.

Based on the delineation of the site it was determined there is no soil impacted with hydrocarbons above OCD regulatory standards remaining within the impacted area. A review of the chloride data indicated the chloride impacts extended to an approximate depth of fourteen (14) feet within the area of auger hole 1 immediately around the release point. No more delineation could be completed within this area after refusal of the hand auger without the use of a direct push rig. Prior to closure of the site the area within auger hole 1 will be delineated for documentation of the chloride impact depths.

Based on the findings of the site delineation and the initial remediation activities it has been determined an additional 3 feet of impacted soil within the affected surface area would need to be excavated. Any remaining impacted soil would be left in place and a plastic liner placed in the bottom of the excavation prior to backfilling with clean soil. The liner will prevent any additional downward migration of the chlorides from future rainfall events.

After completing the additional remediation activities and before the installation of the plastic liner, samples will be collected from the bottom and side walls of the excavations to document the removal of the impacted soil. A final report will be generated and submitted to the OCD regional office to document the remediation and closure of the release.

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 shane@etechenv.com.

Respectfully:

Shane Estep
Geologist
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 Linn Operating Inc.	Contact Dennis Potter
Address 2130 W. Bender Blvd. Hobbs NM, 88240	Telephone No. office: 575-738-1739 ext. 2964 / cell: 505-206-7673
Facility Name H.E. West B #30	Facility Type injection line

Surface Owner Federal	Mineral Owner	API No.30-015-10705

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	09	17S	31E	1980	SOUTH	1980	WEST	EDDY

Latitude 32.8479 **Longitude** -103.8759 NAD83

NATURE OF RELEASE

Type of Release PRODUCED WATER	Volume of Release 80 BBLS	Volume Recovered 0
Source of Release FIBERGLAS PIPELINE	Date and Hour of Occurrence 09/02/2017 7:30 am	Date and Hour of Discovery 09/02/2017 8:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher / Crystal Weaver – OCD Shelly Tucker - BLM	
By Whom? Dennis Potter	Date and Hour 09/05/2017 8:25 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
2" lateral injection line ruptured approx.. 150 yards north west of injection well. Was unable to get vacuum truck to leak. Called out backhoe on 09/05/17 to remove contaminated soil on the surface.

Describe Area Affected and Cleanup Action Taken.*
Area impacted was approx.. 20' wide and 60' long. Contaminated soil was removed by backhoe.

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.

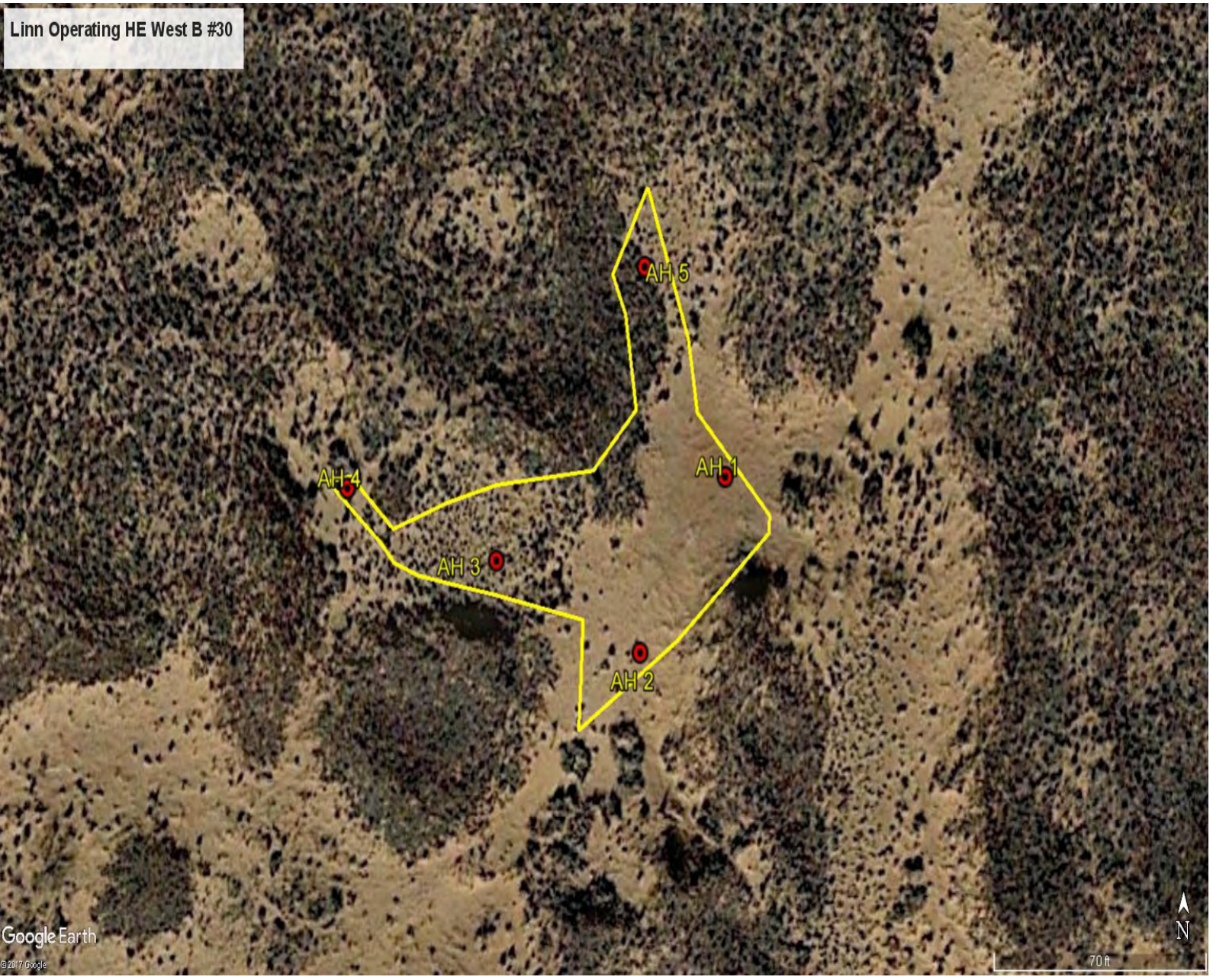
Signature: Dennis J. Potter	OIL CONSERVATION DIVISION
Printed Name: Dennis J. Potter	Approved by Environmental Specialist:
Title: Production Foreman	Approval Date: / Expiration Date:
E-mail Address: dpotter@linnenergy.com	Conditions of Approval: / Attached ☐
Date: 09/05/2017 Phone: 505-206-7673	

* Attach Additional Sheets If Necessary

Attachment A
Annotated Aerial Imagery

ETECH Environmental & Safety Solutions, Inc.

Delineation & Assessment Report ©	Lease Name:	Linn Operating HE West B #30	Case No.:	2RP-4375
	Date Assessed:	9/11/17, 9/13/17, and 9/14/17		

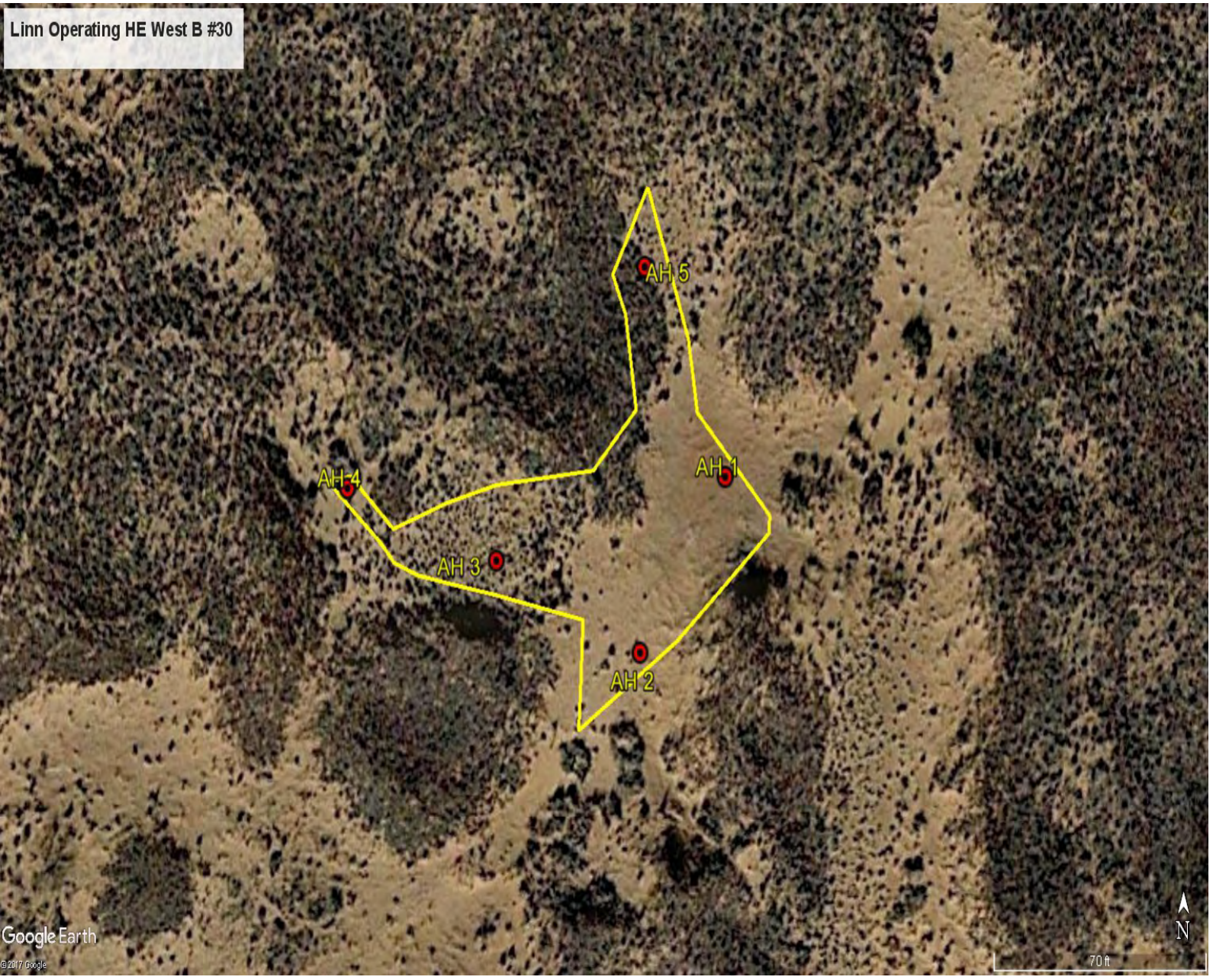


Assessment Results

Sample I.D.	Depth (ft.)	Chloride (mg/kg)
AH 1	1	4,870
AH 1	2	7,980
AH 1	3	7,980
AH 1	4	7,980
AH 1	5	6,130
AH 1	6	5,250
AH 1	9	7,310
AH 1	12	1,280
AH 1	13	950
AH 1	14	<320
AH 1	19	<320
AH 2	1	4,870
AH 2	2	2,880
AH 2	3	320
AH 2	5	320
AH 2	8	450
AH 2	13	510
AH 3	1	13,160
AH 3	2	10,290
AH 3	3	1,150
AH 3	4	<320
AH 3	9	<320
AH 3	14	<320
AH 4	2	4,520
AH 4	3	2,270
AH 4	4	720
AH 4	5	<320
AH 4	10	330
AH 5	2	14,270
AH 5	3	9,160
AH 5	6	<320

ETECH Environmental & Safety Solutions, Inc.

Delineation & Assessment Report ©	Lease Name:	Linn Operating HE West B #30	Case No.:	2RP-4375
	Date Assessed:	9/11/17, 9/13/17, and 9/14/17		



Assessment Results

Sample I.D.	Depth (ft.)	Chloride (mg/kg)
AH 5	11	<320
AH 5	16	<320

Attachment B
Photograph Log

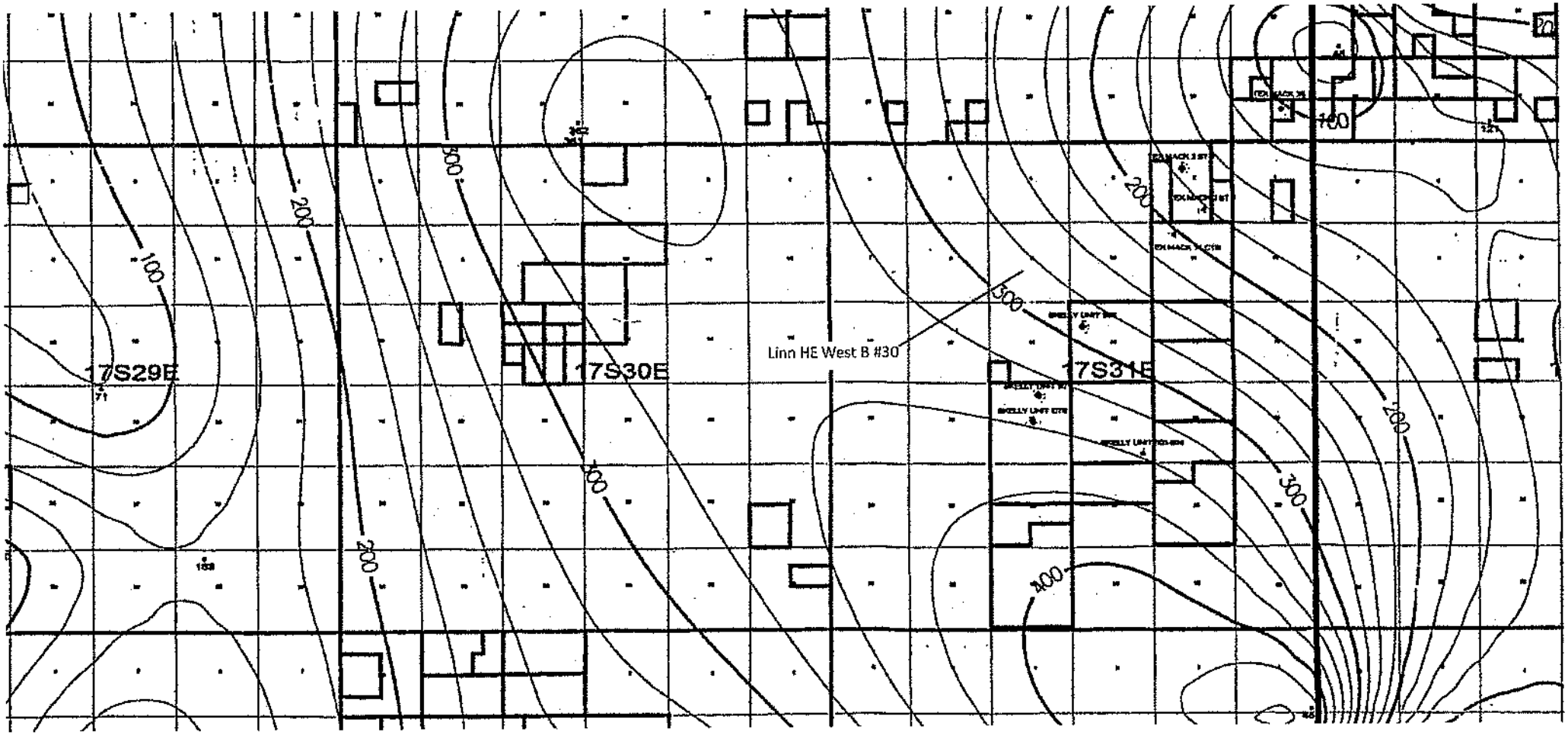
View of release location lease sign.


View of release and runoff area.

View of initial remediation activities.

View of flowline and release area after initial remediation activities.

Attachment
Depth to Groundwater Data


17S29E
17S30E
17S31E
Linn HE West B #30
100
200
300
400
500

Attachment D
Analytical Results

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

PBELAB

Analytical Report

Prepared for:

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

Project: Linn Operating HE West B #30
Project Number: 253-8683-000
Location: Eddy Co., NM

Lab Order Number: 7I13007

NELAP/TCEQ # T104704516-16-7

Report Date: 09/25/17

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

Project: Linn Operating HE West B #30
Project Number: 253-8683-000
Project Manager: Shane Estep

Fax: (432) 563-2213

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Auger Hole 1 1'	7I13007-01	Soil	09/11/17 00:00	09-14-2017 09:00
Auger Hole 1 2'	7I13007-02	Soil	09/11/17 00:00	09-14-2017 09:00
Auger Hole 1 3'	7I13007-03	Soil	09/11/17 00:00	09-14-2017 09:00
Auger Hole 1 6'	7I13007-04	Soil	09/11/17 00:00	09-14-2017 09:00
Auger Hole 1 9'	7I13007-05	Soil	09/11/17 00:00	09-14-2017 09:00
Auger Hole 1 12'	7I13007-06	Soil	09/11/17 00:00	09-14-2017 09:00
Auger Hole 1 14'	7I13007-07	Soil	09/11/17 00:00	09-14-2017 09:00

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Odessa TX, 79765

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Project Manager: Shane Estep

Fax: (432) 563-2213

Auger Hole 1 1'

7I13007-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00104	mg/kg dry	1	P7I2114	09/15/17	09/20/17	EPA 8021B	
Toluene	ND	0.00208	mg/kg dry	1	P7I2114	09/15/17	09/20/17	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P7I2114	09/15/17	09/20/17	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P7I2114	09/15/17	09/20/17	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P7I2114	09/15/17	09/20/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*97.6 %*	*75-125*		*P7I2114*	*09/15/17*	*09/20/17*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*97.6 %*	*75-125*		*P7I2114*	*09/15/17*	*09/20/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7290**	26.0	mg/kg dry	25	P7I1804	09/18/17	09/19/17	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P7I1505	09/15/17	09/15/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P7I1509	09/13/17	09/15/17	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P7I1509	09/13/17	09/15/17	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P7I1509	09/13/17	09/15/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*85.1 %*	*70-130*		*P7I1509*	*09/13/17*	*09/15/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.4 %*	*70-130*		*P7I1509*	*09/13/17*	*09/15/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	09/13/17	09/15/17	calc	

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

Project: Linn Operating HE West B #30
Project Number: 253-8683-000
Project Manager: Shane Estep

Fax: (432) 563-2213

Auger Hole 1 2'

7I13007-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0211	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Toluene	ND	0.0421	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Ethylbenzene	ND	0.0211	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Xylene (p/m)	ND	0.0421	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Xylene (o)	ND	0.0211	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*88.9 %*	*75-125*		*P7I2114*	*09/15/17*	*09/20/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*97.0 %*	*75-125*		*P7I2114*	*09/15/17*	*09/20/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8820**	52.6	mg/kg dry	50	P7I1804	09/18/17	09/19/17	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P7I1505	09/15/17	09/15/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P7I2503	09/21/17	09/22/17	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P7I2503	09/21/17	09/22/17	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P7I2503	09/21/17	09/22/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P7I2503*	*09/21/17*	*09/22/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P7I2503*	*09/21/17*	*09/22/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	09/21/17	09/22/17	calc	

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

Project: Linn Operating HE West B #30
Project Number: 253-8683-000
Project Manager: Shane Estep

Fax: (432) 563-2213

Auger Hole 1 3'

7I13007-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.0220	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Toluene	ND	0.0440	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Ethylbenzene	ND	0.0220	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Xylene (p/m)	ND	0.0440	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Xylene (o)	ND	0.0220	mg/kg dry	20	P7I2114	09/15/17	09/20/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*105 %*	*75-125*		*P7I2114*	*09/15/17*	*09/20/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*93.6 %*	*75-125*		*P7I2114*	*09/15/17*	*09/20/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8970**	54.9	mg/kg dry	50	P7I1804	09/18/17	09/19/17	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P7I1505	09/15/17	09/15/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P7I2503	09/21/17	09/22/17	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P7I2503	09/21/17	09/22/17	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P7I2503	09/21/17	09/22/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*112 %*	*70-130*		*P7I2503*	*09/21/17*	*09/22/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*124 %*	*70-130*		*P7I2503*	*09/21/17*	*09/22/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	09/21/17	09/22/17	calc	

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

Project: Linn Operating HE West B #30
Project Number: 253-8683-000
Project Manager: Shane Estep

Fax: (432) 563-2213

Auger Hole 1 6'

7I13007-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6960**	28.7	mg/kg dry	25	P7I1804	09/18/17	09/19/17	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P7I1505	09/15/17	09/15/17	ASTM D2216	

E Tech Environmental & Safety Solutions, Inc.	Project: Linn Operating HE West B #30	Fax: (432) 563-2213
13000 West County Road 100	Project Number: 253-8683-000	
Odessa TX, 79765	Project Manager: Shane Estep	

Auger Hole 1 9'

7I13007-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8030**	26.9	mg/kg dry	25	P7I1804	09/18/17	09/19/17	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P7I1505	09/15/17	09/15/17	ASTM D2216	

E Tech Environmental & Safety Solutions, Inc.	Project: Linn Operating HE West B #30	Fax: (432) 563-2213
13000 West County Road 100	Project Number: 253-8683-000	
Odessa TX, 79765	Project Manager: Shane Estep	

Auger Hole 1 12'

7I13007-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1900**	5.43	mg/kg dry	5	P7I1804	09/18/17	09/19/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I1505	09/15/17	09/15/17	ASTM D2216	

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

Project: Linn Operating HE West B #30
Project Number: 253-8683-000
Project Manager: Shane Estep

Fax: (432) 563-2213

Auger Hole 1 14'

7I13007-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1770**	10.9	mg/kg dry	10	P7I1804	09/18/17	09/19/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I1505	09/15/17	09/15/17	ASTM D2216	

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

Project: Linn Operating HE West B #30
Project Number: 253-8683-000
Project Manager: Shane Estep

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
Batch P7I2114 - General Preparation (GC)										
Blank (P7I2114-BLK1)				Prepared: 09/15/17 Analyzed: 09/20/17						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0641*		*"*	*0.0600*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0639*		*"*	*0.0600*		*107*	*75-125*			
LCS (P7I2114-BS1)				Prepared: 09/15/17 Analyzed: 09/20/17						
Benzene	0.0804	0.00100	mg/kg wet	0.100		80.4	70-130			
Toluene	0.0804	0.00200	"	0.100		80.4	70-130			
Ethylbenzene	0.0875	0.00100	"	0.100		87.5	70-130			
Xylene (p/m)	0.149	0.00200	"				70-130			
Xylene (o)	0.0815	0.00100	"				70-130			
Surrogate: 4-Bromofluorobenzene	*0.0712*		*"*	*0.0600*		*119*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0712*		*"*	*0.0600*		*119*	*75-125*			
Matrix Spike (P7I2114-MS1)	**Source: 7I11002-08**			Prepared: 09/15/17 Analyzed: 09/20/17						
Benzene	0.113	0.00101	mg/kg dry	0.101	ND	112	80-120			
Toluene	0.0526	0.00202	"	0.101	ND	52.1	80-120			QM-05
Ethylbenzene	0.0533	0.00101	"	0.101	ND	52.7	80-120			QM-05
Xylene (p/m)	0.0619	0.00202	"		ND		80-120			
Xylene (o)	0.0973	0.00101	"		ND		80-120			
Surrogate: 4-Bromofluorobenzene	*0.0591*		*"*	*0.0606*		*97.6*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0632*		*"*	*0.0606*		*104*	*75-125*			
Matrix Spike Dup (P7I2114-MSD1)	**Source: 7I11002-08**			Prepared: 09/15/17 Analyzed: 09/20/17						
Benzene	0.101	0.00101	mg/kg dry	0.101	ND	100	80-120	11.0	20	
Toluene	0.0904	0.00202	"	0.101	ND	89.5	80-120	52.9	20	QM-05
Ethylbenzene	0.0915	0.00101	"	0.101	ND	90.6	80-120	52.8	20	QM-05
Xylene (p/m)	0.162	0.00202	"		ND		80-120		20	
Xylene (o)	0.108	0.00101	"		ND		80-120		20	
Surrogate: 4-Bromofluorobenzene	*0.0665*		*"*	*0.0606*		*110*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0707*		*"*	*0.0606*		*117*	*75-125*			

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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
Batch P7I1505 - * DEFAULT PREP *** **										
Blank (P7I1505-BLK1)				Prepared & Analyzed: 09/15/17						
% Moisture	ND	0.1	%							
Duplicate (P7I1505-DUP1)		**Source: 7I13011-02**		Prepared & Analyzed: 09/15/17						
% Moisture	6.0	0.1	%		6.0			0.00	20	
Batch P7I1804 - * DEFAULT PREP *** **										
Blank (P7I1804-BLK1)				Prepared: 09/18/17 Analyzed: 09/19/17						
Chloride	ND	1.00	mg/kg wet							
LCS (P7I1804-BS1)				Prepared: 09/18/17 Analyzed: 09/19/17						
Chloride	480	1.00	mg/kg wet	400		120	80-120			
LCS Dup (P7I1804-BSD1)				Prepared: 09/18/17 Analyzed: 09/19/17						
Chloride	478	1.00	mg/kg wet	400		119	80-120	0.458	20	
Duplicate (P7I1804-DUP1)		**Source: 7I13006-13**		Prepared: 09/18/17 Analyzed: 09/19/17						
Chloride	23900	54.9	mg/kg dry		24000			0.571	20	
Duplicate (P7I1804-DUP2)		**Source: 7I13007-03**		Prepared: 09/18/17 Analyzed: 09/19/17						
Chloride	9230	54.9	mg/kg dry		8970			2.84	20	
Matrix Spike (P7I1804-MS1)		**Source: 7I13006-13**		Prepared: 09/18/17 Analyzed: 09/19/17						
Chloride	29900	54.9	mg/kg dry	5490	24000	108	80-120			

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Notes and Definitions

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
BULK	Samples received in Bulk soil containers
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: 9/25/2017

Brent Barron, Laboratory Director/Technical Director

Etech Environmental & Safety Solutions, Inc.

12800 W. Hwy 80 E
Odessa, Texas 79765

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-2200
Fax: 432-563-2213

Project Manager: ~~Tim McMinn~~ Shane Estep
Company Name: Etech Environmental & Safety Solutions, Inc.
Company Address: PO Box 8469
City/State/Zip: Midland, Texas 79708
Telephone No: 432-563-2200 Fax No: 432-563-2213
Sampler Signature: Geoff Leking
e-mail: ~~Tim@etechenv.com~~ shane@etechenv.com geoff@etechenv.com

Project Name: LINN OPERATING ME WEST B #30
Project #: 253-8683-000
Project Loc: Eddy Co., NM
PO #:
Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 7I1300?

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge / GW = Groundwater S=Soil/Solid / NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 (8015M) 1005 1006	TOTAL: TPH: 418.1 (8015M) 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs.	Standard TAT
1	Auger Hole 1 1'	9.11.17		1	☒								S	☒								☒			☒					☒
2	Auger Hole 1 2'	↓		↓	☒								↓	☒								☒			☒					☒
3	Auger Hole 1 3'				☒									☒								☒			☒					☒
4	Auger Hole 1 6'				☒																				☒					☒
5	Auger Hole 1 9'				☒																				☒					☒
6	Auger Hole 1 12'				☒																				☒					☒
7	Auger Hole 1 14'				☒																				☒					☒
					☐																									
					☐																									
					☐																									

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Geoff Leking			M Estep	9/14/17	810
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by: M Estep	Date 9/14/17	Time 810	Received by ELOT:	Date 9-14-17	Time 1530

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N

by Sampler/Client Rep. ? by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt 2.0 °C

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

PBELAB

Analytical Report

Prepared for:

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

Project: Linn Operating HE West B #32
Project Number: 253-8683
Location: Eddy Co NM

Lab Order Number: 7I19001

NELAP/TCEQ # T104704516-16-7

Report Date: 09/28/17

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

Project: Linn Operating HE West B #32
Project Number: 253-8683
Project Manager: Shane Estep

Fax: (432) 563-2213

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Auger Hole 2 1'	7I19001-01	Soil	09/13/17 10:45	09-19-2017 09:37
Auger Hole 2 2'	7I19001-02	Soil	09/13/17 10:48	09-19-2017 09:37
Auger Hole 2 3'	7I19001-03	Soil	09/13/17 10:50	09-19-2017 09:37
Auger Hole 2 8'	7I19001-04	Soil	09/13/17 12:50	09-19-2017 09:37
Auger Hole 2 13'	7I19001-05	Soil	09/13/17 13:50	09-19-2017 09:37
Auger Hole 3 1'	7I19001-06	Soil	09/13/17 16:50	09-19-2017 09:37
Auger Hole 3 2'	7I19001-07	Soil	09/13/17 16:52	09-19-2017 09:37
Auger Hole 3 3'	7I19001-08	Soil	09/13/17 16:55	09-19-2017 09:37
Auger Hole 3 4'	7I19001-09	Soil	09/13/17 18:10	09-19-2017 09:37
Auger Hole 3 9'	7I19001-10	Soil	09/13/17 18:40	09-19-2017 09:37
Auger Hole 3 14'	7I19001-11	Soil	09/13/17 19:20	09-19-2017 09:37
Auger Hole 4 1'	7I19001-12	Soil	09/13/17 10:40	09-19-2017 09:37
Auger Hole 4 2'	7I19001-13	Soil	09/13/17 10:42	09-19-2017 09:37
Auger Hole 4 3'	7I19001-14	Soil	09/13/17 10:45	09-19-2017 09:37
Auger Hole 4 4'	7I19001-15	Soil	09/13/17 11:00	09-19-2017 09:37
Auger Hole 4 5'	7I19001-16	Soil	09/13/17 11:45	09-19-2017 09:37
Auger Hole 4 10'	7I19001-17	Soil	09/13/17 12:50	09-19-2017 09:37
Auger Hole 5 1'	7I19001-18	Soil	09/13/17 15:10	09-19-2017 09:37
Auger Hole 5 2'	7I19001-19	Soil	09/13/17 15:12	09-19-2017 09:37
Auger Hole 5 3'	7I19001-20	Soil	09/13/17 15:15	09-19-2017 09:37
Auger Hole 5 6'	7I19001-21	Soil	09/13/17 16:10	09-19-2017 09:37
Auger Hole 5 11'	7I19001-22	Soil	09/13/17 17:35	09-19-2017 09:37
Auger Hole 5 16'	7I19001-23	Soil	09/13/17 19:10	09-19-2017 09:37
Auger Hole 5 19'	7I19001-24	Soil	09/13/17 15:15	09-19-2017 09:37

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

Project: Linn Operating HE West B #32
Project Number: 253-8683
Project Manager: Shane Estep

Fax: (432) 563-2213

Auger Hole 2 1'

7I19001-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*87.9 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*77.3 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6980**	27.2	mg/kg dry	25	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	09/19/17	09/20/17	calc	

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Fax: (432) 563-2213

Auger Hole 2 2'

7I19001-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00110	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00220	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*97.0 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*100 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3080**	27.5	mg/kg dry	25	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	09/19/17	09/20/17	calc	

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Auger Hole 2 3'

7I19001-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00103	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00206	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*96.2 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*93.1 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**274**	1.03	mg/kg dry	1	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.3 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	09/19/17	09/20/17	calc	

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

Project: Linn Operating HE West B #32
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Auger Hole 2 8'

7I19001-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**459**	1.08	mg/kg dry	1	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Auger Hole 2 13'

7I19001-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**348**	1.05	mg/kg dry	1	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

E Tech Environmental & Safety Solutions, Inc.
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Odessa TX, 79765

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Project Number: 253-8683
Project Manager: Shane Estep

Fax: (432) 563-2213

Auger Hole 3 1'

7I19001-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
Organics by GC									
Benzene	ND	0.00108	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00215	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*89.9 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*96.4 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**17200**	53.8	mg/kg dry	50	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	09/19/17	09/20/17	calc	

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Project Number: 253-8683
Project Manager: Shane Estep

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Auger Hole 3 2'

7I19001-07 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00213	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*88.5 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*98.5 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12900**	53.2	mg/kg dry	50	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P7I2008	09/19/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P7I2008*	*09/19/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	09/19/17	09/20/17	calc	

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Auger Hole 3 3'

7I19001-08 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*113 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*106 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1960**	5.43	mg/kg dry	5	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.8 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	09/20/17	09/20/17	calc	

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Auger Hole 3 4'

7I19001-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**227**	1.10	mg/kg dry	1	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Odessa TX, 79765	Project Manager: Shane Estep	

Auger Hole 3 9'

7I19001-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**76.6**	1.10	mg/kg dry	1	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Auger Hole 3 14'

7I19001-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**130**	1.09	mg/kg dry	1	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Auger Hole 4 1'

7I19001-12 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00213	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*83.6 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10200**	53.2	mg/kg dry	50	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.2 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	09/20/17	09/20/17	calc	

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Auger Hole 4 2'

7I19001-13 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00108	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00215	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*91.2 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*75.9 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5340**	26.9	mg/kg dry	25	P7I2119	09/21/17	09/26/17	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.6 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	09/20/17	09/20/17	calc	

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Auger Hole 4 3'

7I19001-14 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*95.6 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2280**	10.9	mg/kg dry	10	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.0 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	09/20/17	09/20/17	calc	

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Auger Hole 4 4'

7I19001-15 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**902**	5.56	mg/kg dry	5	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Auger Hole 4 5'

7I19001-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**739**	1.10	mg/kg dry	1	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Auger Hole 4 10'

7I19001-17 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**407**	1.09	mg/kg dry	1	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Auger Hole 5 1'

7I19001-18 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Toluene	ND	0.00213	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Ethylbenzene	**0.00117**	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P7I2201	09/21/17	09/21/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*95.9 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*75-125*		*P7I2201*	*09/21/17*	*09/21/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**15200**	53.2	mg/kg dry	50	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*85.4 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*91.9 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	09/20/17	09/20/17	calc	

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Auger Hole 5 2'

7I19001-19 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00110	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Toluene	ND	0.00220	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*94.4 %*	*75-125*		*P7I2301*	*09/23/17*	*09/23/17*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*94.5 %*	*75-125*		*P7I2301*	*09/23/17*	*09/23/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**15000**	54.9	mg/kg dry	50	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*76.2 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*82.7 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	09/20/17	09/20/17	calc	

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Auger Hole 5 3'

7I19001-20 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00108	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Toluene	ND	0.00215	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P7I2301	09/23/17	09/23/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*75-125*		*P7I2301*	*09/23/17*	*09/23/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*P7I2301*	*09/23/17*	*09/23/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8730**	26.9	mg/kg dry	25	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P7I2115	09/20/17	09/20/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*82.4 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*88.6 %*	*70-130*		*P7I2115*	*09/20/17*	*09/20/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	09/20/17	09/20/17	calc	

E Tech Environmental & Safety Solutions, Inc.	Project: Linn Operating HE West B #32	Fax: (432) 563-2213
13000 West County Road 100	Project Number: 253-8683	
Odessa TX, 79765	Project Manager: Shane Estep	

Auger Hole 5 6'

7I19001-21 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**187**	1.09	mg/kg dry	1	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Odessa TX, 79765	Project Manager: Shane Estep	

Auger Hole 5 11'

7I19001-22 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**104**	1.09	mg/kg dry	1	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Odessa TX, 79765

Project: Linn Operating HE West B #32
Project Number: 253-8683
Project Manager: Shane Estep

Fax: (432) 563-2213

Auger Hole 5 16'

7I19001-23 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**94.3**	1.06	mg/kg dry	1	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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Auger Hole 5 19'

7I19001-24 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1250**	5.38	mg/kg dry	5	P7I2203	09/22/17	09/26/17	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P7I2001	09/20/17	09/20/17	ASTM D2216	

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
Batch P7I2201 - General Preparation (GC)										
Blank (P7I2201-BLK1)				Prepared & Analyzed: 09/21/17						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.0552*		*"*	*0.0600*		*91.9*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0537*		*"*	*0.0600*		*89.5*	*75-125*			
LCS (P7I2201-BS1)				Prepared & Analyzed: 09/21/17						
Benzene	0.101	0.00100	mg/kg wet	0.100		101	70-130			
Toluene	0.0912	0.00200	"	0.100		91.2	70-130			
Ethylbenzene	0.109	0.00100	"	0.100		109	70-130			
Xylene (p/m)	0.187	0.00200	"				70-130			
Xylene (o)	0.102	0.00100	"				70-130			
Surrogate: 1,4-Difluorobenzene	*0.0410*		*"*	*0.0600*		*68.4*	*75-125*			*S-GC1*
Surrogate: 4-Bromofluorobenzene	*0.0415*		*"*	*0.0600*		*69.2*	*75-125*			*S-GC1*
LCS Dup (P7I2201-BSD1)				Prepared & Analyzed: 09/21/17						
Benzene	0.114	0.00100	mg/kg wet	0.100		114	70-130	11.3	20	
Toluene	0.104	0.00200	"	0.100		104	70-130	13.2	20	
Ethylbenzene	0.109	0.00100	"	0.100		109	70-130	0.302	20	
Xylene (p/m)	0.202	0.00200	"				70-130		20	
Xylene (o)	0.110	0.00100	"				70-130		20	
Surrogate: 1,4-Difluorobenzene	*0.0474*		*"*	*0.0600*		*79.1*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0503*		*"*	*0.0600*		*83.8*	*75-125*			
Duplicate (P7I2201-DUP1)	**Source: 7I08011-06**			Prepared & Analyzed: 09/21/17						
Benzene	ND	0.00110	mg/kg dry		ND				20	
Toluene	ND	0.00220	"		ND				20	
Ethylbenzene	ND	0.00110	"		ND				20	
Xylene (p/m)	ND	0.00220	"		ND				20	
Xylene (o)	ND	0.00110	"		ND				20	
Surrogate: 1,4-Difluorobenzene	*0.0782*		*"*	*0.102*		*76.5*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0865*		*"*	*0.102*		*84.6*	*75-125*			

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
Batch P7I2201 - General Preparation (GC)										
Matrix Spike (P7I2201-MS1)		**Source: 7I08011-07**		Prepared: 09/21/17 Analyzed: 09/22/17						
Benzene	0.310	0.00100	mg/kg wet	0.288		107	80-120			
Toluene	0.243	0.00200	"	0.288		84.2	80-120			
Ethylbenzene	0.289	0.00100	"	0.288		100	80-120			
Xylene (p/m)	0.472	0.00200	"				80-120			
Xylene (o)	0.254	0.00100	"				80-120			
Surrogate: 1,4-Difluorobenzene	*0.0801*		*"*	*0.0865*		*92.6*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0858*		*"*	*0.0865*		*99.2*	*75-125*			
Batch P7I2301 - General Preparation (GC)										
Blank (P7I2301-BLK1)				Prepared & Analyzed: 09/23/17						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0472*		*"*	*0.0600*		*78.7*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0528*		*"*	*0.0600*		*88.0*	*75-125*			
LCS (P7I2301-BS1)				Prepared & Analyzed: 09/23/17						
Benzene	0.106	0.00100	mg/kg wet	0.100		106	70-130			
Toluene	0.105	0.00200	"	0.100		105	70-130			
Ethylbenzene	0.103	0.00100	"	0.100		103	70-130			
Xylene (p/m)	0.232	0.00200	"				70-130			
Xylene (o)	0.108	0.00100	"				70-130			
Surrogate: 4-Bromofluorobenzene	*0.0612*		*"*	*0.0600*		*102*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0573*		*"*	*0.0600*		*95.4*	*75-125*			

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
Batch P7I2301 - General Preparation (GC)										
LCS Dup (P7I2301-BSD1)				Prepared & Analyzed: 09/23/17						
Benzene	0.101	0.00100	mg/kg wet	0.100		101	70-130	5.17	20	
Toluene	0.0927	0.00200	"	0.100		92.7	70-130	12.2	20	
Ethylbenzene	0.0990	0.00100	"	0.100		99.0	70-130	4.11	20	
Xylene (p/m)	0.208	0.00200	"				70-130		20	
Xylene (o)	0.101	0.00100	"				70-130		20	
Surrogate: 1,4-Difluorobenzene	*0.0564*		*"*	*0.0600*		*94.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0569*		*"*	*0.0600*		*94.9*	*75-125*			
Matrix Spike (P7I2301-MS1)		**Source: 7I18026-01**		Prepared & Analyzed: 09/23/17						
Benzene	0.182	0.00106	mg/kg dry	0.213	ND	85.6	80-120			
Toluene	0.139	0.00213	"	0.213	ND	65.2	80-120			QM-07
Ethylbenzene	0.126	0.00106	"	0.213	ND	59.2	80-120			QM-07
Xylene (p/m)	0.208	0.00213	"		ND		80-120			
Xylene (o)	0.101	0.00106	"		ND		80-120			
Surrogate: 4-Bromofluorobenzene	*0.0686*		*"*	*0.0638*		*108*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0685*		*"*	*0.0638*		*107*	*75-125*			
Matrix Spike Dup (P7I2301-MSD1)		**Source: 7I18026-01**		Prepared & Analyzed: 09/23/17						
Benzene	0.149	0.00106	mg/kg dry	0.213	ND	69.9	80-120	20.2	20	QM-07, R2
Toluene	0.0968	0.00213	"	0.213	ND	45.5	80-120	35.6	20	QM-07, R2
Ethylbenzene	0.0725	0.00106	"	0.213	ND	34.1	80-120	53.9	20	QM-07, R2
Xylene (p/m)	0.116	0.00213	"		ND		80-120		20	
Xylene (o)	0.0593	0.00106	"		ND		80-120		20	
Surrogate: 1,4-Difluorobenzene	*0.0788*		*"*	*0.0638*		*123*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0685*		*"*	*0.0638*		*107*	*75-125*			

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
Batch P7I2001 - * DEFAULT PREP *** **										
Blank (P7I2001-BLK1)				Prepared & Analyzed: 09/20/17						
% Moisture	ND	0.1	%							
Duplicate (P7I2001-DUP1)		**Source: 7I18027-05**		Prepared & Analyzed: 09/20/17						
% Moisture	8.0	0.1	%		8.0			0.00	20	
Duplicate (P7I2001-DUP2)		**Source: 7I18032-11**		Prepared & Analyzed: 09/20/17						
% Moisture	13.0	0.1	%		6.0			73.7	20	S-GC
Batch P7I2119 - * DEFAULT PREP *** **										
Blank (P7I2119-BLK1)				Prepared: 09/21/17 Analyzed: 09/26/17						
Chloride	ND	1.00	mg/kg wet							
LCS (P7I2119-BS1)				Prepared: 09/21/17 Analyzed: 09/26/17						
Chloride	424	1.00	mg/kg wet	400		106	80-120			
LCS Dup (P7I2119-BSD1)				Prepared: 09/21/17 Analyzed: 09/26/17						
Chloride	415	1.00	mg/kg wet	400		104	80-120	2.01	20	
Duplicate (P7I2119-DUP1)		**Source: 7I18028-01**		Prepared: 09/21/17 Analyzed: 09/26/17						
Chloride	42.9	1.00	mg/kg dry		42.5			0.819	20	
Duplicate (P7I2119-DUP2)		**Source: 7I19001-04**		Prepared: 09/21/17 Analyzed: 09/26/17						
Chloride	465	1.08	mg/kg dry		459			1.26	20	
Matrix Spike (P7I2119-MS1)		**Source: 7I18028-01**		Prepared: 09/21/17 Analyzed: 09/26/17						
Chloride	1210	1.00	mg/kg dry	1000	42.5	117	80-120			

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
Batch P7I2203 - * DEFAULT PREP *** **										
Blank (P7I2203-BLK1)				Prepared: 09/22/17 Analyzed: 09/26/17						
Chloride	ND	1.00	mg/kg wet							
LCS (P7I2203-BS1)				Prepared: 09/22/17 Analyzed: 09/26/17						
Chloride	394	1.00	mg/kg wet	400		98.5	80-120			
LCS Dup (P7I2203-BSD1)				Prepared: 09/22/17 Analyzed: 09/26/17						
Chloride	398	1.00	mg/kg wet	400		99.5	80-120	1.04	20	
Duplicate (P7I2203-DUP1)		**Source: 7I19001-14**		Prepared: 09/22/17 Analyzed: 09/26/17						
Chloride	2280	10.9	mg/kg dry		2280			0.0382	20	
Duplicate (P7I2203-DUP2)		**Source: 7I19001-24**		Prepared: 09/22/17 Analyzed: 09/26/17						
Chloride	1300	5.38	mg/kg dry		1250			3.99	20	
Matrix Spike (P7I2203-MS1)		**Source: 7I19001-14**		Prepared: 09/22/17 Analyzed: 09/26/17						
Chloride	3410	10.9	mg/kg dry	1090	2280	104	80-120			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7I2008 - General Preparation (GC)										
Blank (P7I2008-BLK1)				Prepared & Analyzed: 09/19/17						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*103*		*"*	*100*		*103*	*70-130*			
Surrogate: o-Terphenyl	*54.9*		*"*	*50.0*		*110*	*70-130*			
LCS (P7I2008-BS1)				Prepared & Analyzed: 09/19/17						
C6-C12	976	25.0	mg/kg wet	1000		97.6	75-125			
>C12-C28	947	25.0	"	1000		94.7	75-125			
Surrogate: 1-Chlorooctane	*126*		*"*	*100*		*126*	*70-130*			
Surrogate: o-Terphenyl	*50.9*		*"*	*50.0*		*102*	*70-130*			
LCS Dup (P7I2008-BSD1)				Prepared & Analyzed: 09/19/17						
C6-C12	929	25.0	mg/kg wet	1000		92.9	75-125	4.88	20	
>C12-C28	892	25.0	"	1000		89.2	75-125	5.95	20	
Surrogate: 1-Chlorooctane	*121*		*"*	*100*		*121*	*70-130*			
Surrogate: o-Terphenyl	*48.2*		*"*	*50.0*		*96.3*	*70-130*			
Matrix Spike (P7I2008-MS1)	**Source: 7I19001-01**			Prepared: 09/19/17 Analyzed: 09/20/17						
C6-C12	1050	27.2	mg/kg dry	1090	ND	96.4	75-125			
>C12-C28	994	27.2	"	1090	13.1	90.2	75-125			
Surrogate: 1-Chlorooctane	*128*		*"*	*109*		*118*	*70-130*			
Surrogate: o-Terphenyl	*63.0*		*"*	*54.3*		*116*	*70-130*			
Matrix Spike Dup (P7I2008-MSD1)	**Source: 7I19001-01**			Prepared: 09/19/17 Analyzed: 09/20/17						
C6-C12	1070	27.2	mg/kg dry	1090	ND	98.2	75-125	1.81	20	
>C12-C28	1010	27.2	"	1090	13.1	91.9	75-125	1.89	20	
Surrogate: 1-Chlorooctane	*128*		*"*	*109*		*118*	*70-130*			
Surrogate: o-Terphenyl	*62.7*		*"*	*54.3*		*115*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7I2115 - TX 1005										
Blank (P7I2115-BLK1)				Prepared & Analyzed: 09/20/17						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*98.6*		*"*	*100*		*98.6*	*70-130*			
Surrogate: o-Terphenyl	*52.1*		*"*	*50.0*		*104*	*70-130*			
LCS (P7I2115-BS1)				Prepared & Analyzed: 09/20/17						
C6-C12	859	25.0	mg/kg wet	1000		85.9	75-125			
>C12-C28	843	25.0	"	1000		84.3	75-125			
Surrogate: 1-Chlorooctane	*119*		*"*	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*52.7*		*"*	*50.0*		*105*	*70-130*			
LCS Dup (P7I2115-BSD1)				Prepared & Analyzed: 09/20/17						
C6-C12	888	25.0	mg/kg wet	1000		88.8	75-125	3.36	20	
>C12-C28	872	25.0	"	1000		87.2	75-125	3.34	20	
Surrogate: 1-Chlorooctane	*113*		*"*	*100*		*113*	*70-130*			
Surrogate: o-Terphenyl	*46.5*		*"*	*50.0*		*93.0*	*70-130*			
Duplicate (P7I2115-DUP1)	**Source: 7I19001-08**			Prepared & Analyzed: 09/20/17						
C6-C12	ND	27.2	mg/kg dry		ND				20	
>C12-C28	25.4	27.2	"		ND				20	
Surrogate: 1-Chlorooctane	*104*		*"*	*109*		*95.5*	*70-130*			
Surrogate: o-Terphenyl	*56.9*		*"*	*54.3*		*105*	*70-130*			

Notes and Definitions

S-GC1	Surrogate recovery outside of control limits. A second analysis confirmed the original results..
S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
R2	The RPD exceeded the acceptance limit.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BULK	Samples received in Bulk soil containers
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: 9/28/2017

Brent Barron, Laboratory Director/Technical Director

Etech Environmental & Safety Solutions, Inc.

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

13000 W CR 100 Odessa, Texas 79765 Phone: 432-563-2200 Fax: 432-563-2213

Project Manager: **Shane Estep**
Company Name: Etech Environmental & Safety Solutions, Inc.
Company Address: P.O. Box 8469
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Sampler Signature: Geoff Lakins email: **shane@etechenv.com** **geoff@etechenv.com**

Project Name: **Linn Operating HE West B #30**
Project #: **253-8683** Project Loc: **Eddy Co., NM**
Area: PO#:

Report Format: STANDARD:☒ TRRP:☐ NPDES:☐

(lab use only) ORDER #: 7I19001

LAB # (lab use only)	FIELD CODE	Start Depth	End Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 1005 1006	TOTAL: TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semi volatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT(Pre-Schedule) 24, 48, 72 hrs	STANDARD TAT
1	Auger Hole 2 1'		1'	9/13/2017	10:45	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
2	Auger Hole 2 2'		2'	9/13/2017	10:48	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
3	Auger Hole 2 3'		3'	9/13/2017	10:50	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
4	Auger Hole 2 8'		8'	9/13/2017	12:50	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
5	Auger Hole 2 13'		13'	9/13/2017	13:50	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
6	~~Auger Hole 3 1'~~		~~1'~~	~~9/13/2017~~	~~16:50~~	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
7	Auger Hole 3 2'		2'	9/13/2017	16:52	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
8	Auger Hole 3 3'		3'	9/13/2017	16:55	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
9	Auger Hole 3 4'		4'	9/13/2017	18:10	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
10	Auger Hole 3 9'		9'	9/13/2017	18:40	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
11	Auger Hole 3 14'		14'	9/13/2017	19:20	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☐		☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
12	Auger Hole 4 1'		1'	9/14/2017	10:40	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
13	Auger Hole 4 2'		2'	9/14/2017	10:42	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
14	Auger Hole 4 3'		3'	9/14/2017	10:45	1	☒	☐	☐	☐	☐	☐	☐	☐	S			☒		☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Geoff Lakins			M Estrada	9/19/17	835
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
M Estrada	9/19/17	835		9-19-17	9:00

Laboratory Comments:

Sample Containers Intact?	Y N
VOCs Free of Headspace?	Y N
Custody seals on container(s)	Y N
Custody seals on cooler(s)	Y N
Sample Hand Delivered	Y N
Sar by Sampler/Client Rep. ?	Y N
Sar by Courier? UPS DHL FedEx Lone Star	

Temperature Upon Receipt: 3.0 on ice °C

Etech Environmental & Safety Solutions, Inc.

13000 W CR 100 Odessa, Texas 79765 Phone: 432-563-2200 Fax: 432-563-2213

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: **Shane Estep**
Company Name: Etech Environmental & Safety Solutions, Inc.
Company Address: P.O. Box 8469
City/State/Zip: Midland, Texas 79708
Sampler Signature: Geoff Leking
email: **shane@etechenv.com**
geoff@etechenv.com

Project Name: **Linn Operating HE West B #30**
Project #: **253-8683** Project Loc: **Eddy Co., NM**
Area: PO#:

Report Format: STANDARD: ☒ TRRP: ☐ NPDES: ☐

(lab use only)
ORDER #: 7I19001

Analyze For: TCLP: ☐ ☐ ☐ ☐ TOTAL: ☐ ☐ ☐ ☐

LAB # (lab use only)	FIELD CODE	Start Depth	End Depth	Date Sampled	Time Sampled	No. of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix (DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other)	TPH: 418.1 8015M **1005** 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semi volatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides			RUSH TAT(Pre-Schedule) 24, 48, 72 hrs	STANDARD TAT
15	Auger Hole 4 4'		4'	9/14/2017	11:00	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
16	Auger Hole 4 5'		5'	9/14/2017	11:45	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
17	Auger Hole 4 10'		10'	9/14/2017	12:50	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
18	Auger Hole 5 1'		1'	9/14/2017	15:10	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☒	☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
19	Auger Hole 5 2'		2'	9/14/2017	15:12	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☒	☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
20	Auger Hole 5 3'		3'	9/14/2017	15:15	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☒	☐	☐	☐	☐	☐	☐	☒	☐	☐	☒	☐	☐	☐	☒
21	Auger Hole 5 6'		6'	9/14/2017	16:10	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
22	Auger Hole 5 11'		11'	9/14/2017	17:35	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
23	Auger Hole 5 16'		16'	9/14/2017	19:10	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
24	Auger Hole 5 19'		19'	9/13/2017	15:15	1	☒	☐	☐	☐	☐	☐	☐	☐	S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐	☒
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Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Geoff Leking			M Estep	9/19/17	835
Relinquished by:	Date	Time	Received by:	Date	Time
M Estep	9/19/17	835	[signature]	9-19-17	900

Laboratory Comments:
Sample Containers Intact? (Y) N
VOCs Free of Headspace? (Y) N
Custody seals on container(s) (Y) N
Custody seals on cooler(s) Y N
Sample Hand Delivered (Y) N
Sar by Sampler/Client Rep. ? Y N
Sar by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 3.0 on CF °C