SITE INFORMATION

Report Type: Work Plan 1RP-5001

General Site Information:						
Site:	**Jefe BSJ Fed Com #1H**					
Company:	**EOG Resources, Inc.**					
Section, Township and Range	**Unit O**	**Sec. 32**	**T 25S**	**R 32E**		
Lease Number:	**API No. 30-025-40722**					
County:	**Lea County**					
GPS:	**32.0806° N**			**103.6959° W**		
Surface Owner:	State					
Mineral Owner:						
Directions:	From the intersection of HWY 128 and CR 1, travel south on CR 1 for 10.4 miles, turn west onto lease road for 1.85 mi, turn north for 0.9 mi, turn east and continue for 0.75 mi to location.					

Release Data:	
Date Released:	3/21/2018
Type Release:	Produced Water
Source of Contamination:	Water Line
Fluid Released:	75 bbls
Fluids Recovered:	35 bbls

Official Communication:			
Name:	Zane Kurtz		Ike Tavarez
Company:	EOG Resources		Tetra Tech
Address:	5509 Champions Drive		4000 N. Big Spring
			Ste 401
City:	Midland, TX 79706		Midland, Texas
Phone number:	(432) 425-2023		(432) 687-8110
Fax:			
Email:	zane_kurtz@eogresources.com		Ike.Tavarez@tetratech.com

Ranking Criteria		
Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	
>100 ft.	***0***	*300' +*
WellHead Protection:	***Ranking Score***	***Site Data***
Water Source <1,000 ft., Private <200 ft.	*20*	
Water Source >1,000 ft., Private >200 ft.	***0***	*0*
Surface Body of Water:	***Ranking Score***	***Site Data***
<200 ft.	*20*	
200 ft - 1,000 ft.	10	
>1,000 ft.	***0***	*0*
Total Ranking Score:	***0***	

Acceptable Soil RRAL (mg/kg)		
Benzene	***Total BTEX***	***TPH***
10	50	5,000

TETRA TECH

APPROVED
By Olivia Yu at 2:10 pm, Jun 06, 2018

NMOCD approves of the vertical delineation conducted for 1RP-5001 and the proposed additional delineation for the areas represented by T4 & T5. See email correspondence for conditions regarding the proposed remediation.

May 24, 2018

Ms. Olivia Yu
Environmental Engineer Specialist
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Work Plan for the EOG Resources, Jefe BSJ Fed Com #1H, Unit O, Section 32, Township 25 South, Range 32 East, Lea County, New Mexico.
1RP-5001.

Ms. Yu:

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources, Inc. (EOG) to investigate and assess a release that occurred at the Jefe BSJ Fed Com #1H, Unit O, Section 32, Township 25 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.0806 º, W 103.6959º. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the release was discovered on March 21, 2018, and released approximately seventy-five (75) barrels of produced water due to a ruptured water line. Vacuum trucks were dispatched to remove all freestanding fluids, recovering approximately thirty-five (35) barrels of produced water. The release occurred in the pasture and impacted an area measuring approximately 30’ x 155’ and 65’ x 225’. The initial C-141 form is included in Appendix A.

Groundwater

No wells are listed within Section 32 in the New Mexico Office of the State Engineers (NMOSE) database, the USGS National Water Information System, or the Geology and Groundwater Conditions in Southern Lea County, NM (Report 6). However, the NMOSE database lists one well in Section 6, Township 26 South, Range 32 East, located approximately 1.65 miles southwest of the site, with a reported depth to groundwater of 350’ below surface. According to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in the area is greater than 300’ below surface. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene

Tetra Tech
4000 North Big Spring, Suite 401, Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

(collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Analytical Results

On March 29, 2018, Tetra Tech personnel were onsite to evaluate and sample the release area with a backhoe. A total of six (6) sample trenches (T-1 through T-6) were installed in the spill footprint to total depths ranging from 2.0' and 10.0' below surface. Selected samples were analyzed for total petroleum hydrocarbons (TPH) by method 8015 extended, BTEX by method 8021, and chlorides by EPA method 300.0. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix D. The sampling results are summarized in Table 1. The trench locations are shown in Figure 3.

Benzene and Total BTEX

Referring to Table 1, all of the trenches did not show any benzene or total BTEX concentrations above the RRALs, with the exception of T-4. Trench (T-4) showed a benzene concentration of 12.6 mg/kg and a total BTEX concentration of 597 mg/kg at 0-1' below surface. The benzene and total BTEX concentrations in the area then declined with depth to below the RRALs at 2.0' below surface.

TPH

The areas of trenches (T-1 and T-4) did not showed TPH concentrations above the RRAL. The areas of T-2, T-3, T-5, and T-6 showed TPH impact to the shallow soils (0-1'), with TPH highs of 5,710 mg/kg, 10,900 mg/kg, 180,000 mg/kg, and 5,870 mg/kg, respectively. The TPH concentrations declined below the RRAL at 2.0' below surface.

Chloride

The areas of trenches (T-1, T-2, T-3, and T-6) showed elevated chloride concentrations to the shallow soils with concentrations of 4,960 mg/kg, 13,200 mg/kg, 16,600 mg/kg, and 3,960 mg/kg at 0-1' below surface, respectively. The chlorides in these areas then declined with depth to below the 600 mg/kg threshold at depths ranging from 2.0' and 6.0' below surface. However, the areas of trenches (T-4 and T-5) showed bottom trench concentrations of 1,900 mg/kg and 1,930 mg/kg at 4.0' below surface. Deeper samples were not collected due to a dense formation in the area and the chloride impact was not vertically defined.

Work Plan

Based on the laboratory results, EOG proposes to remove the impacted soils as shown on Figure 4 and highlighted (green) on Table 1. To remove the impacted soils above the RRALs, the areas of trenches (T-1 and T-3) will be excavated to approximately 1.0' to 2.0' below surface, the area of trench (T-2) will be excavated to approximately 6.0', and the areas of trenches (T-4, T-5, and T-6) will be excavated to approximately 4.0' below surface.

During the excavation activities, the chloride concentrations in the areas of trenches (T-4 and T-5) will be vertically defined. Based on the data, the areas will either be excavated to the appropriate depth or capped with a 40-mil liner to prevent vertical migration. However, if the chloride impact is not vertically defined during the excavation, the areas will be capped at 4.0' and then assessed with a drilling rig to define extents.

The proposed excavation depths may not be reached due to wall cave ins and safety concerns for onsite personnel. In addition, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safely concerns for onsite personnel. As such, EOG will excavate the impacted soils to the maximum extent practicable.

Revegetation Plan

The backfilled areas will be seeded in June 2018 in order to coincide with the rainy season in Southeastern New Mexico to aid in revegetation. Based on the soils at the site, the NMSLO Loamy (L) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The NMSLO seed mixture details and corresponding pounds pure live seed per acre are included in Appendix C.

Conclusion

Upon completion, a final report detailing the remediation activities will be submitted to the NMOCD. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call at (432) 682-4559.

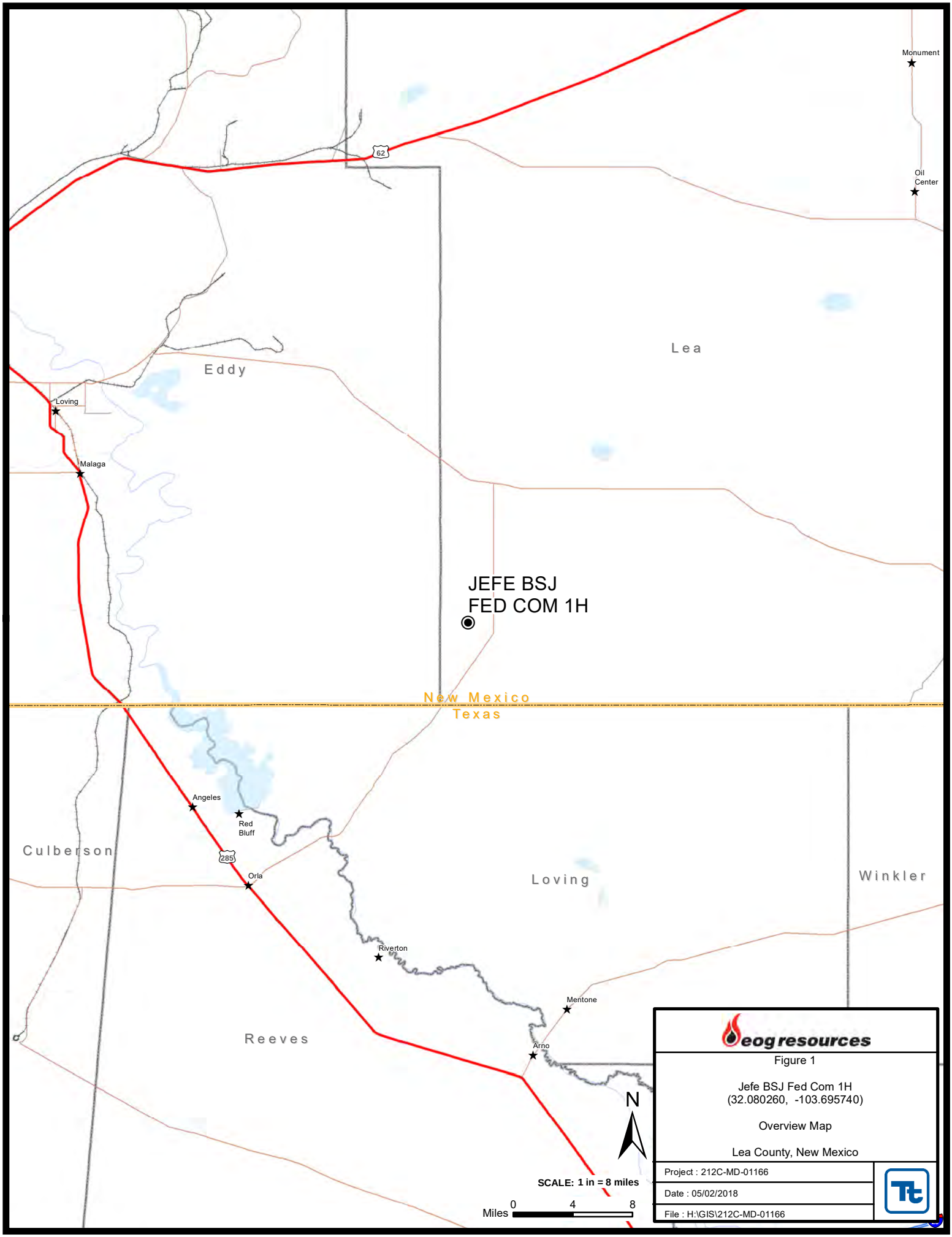
Respectfully submitted,
TETRA TECH

Clair Gonzales,
Project Manager

Ike Tavarez,
Senior Project Manager, P.G.

cc: Ryan Mann – NMSLO
Jamone Hohensee - EOG

Figures



eog resources

Figure 1

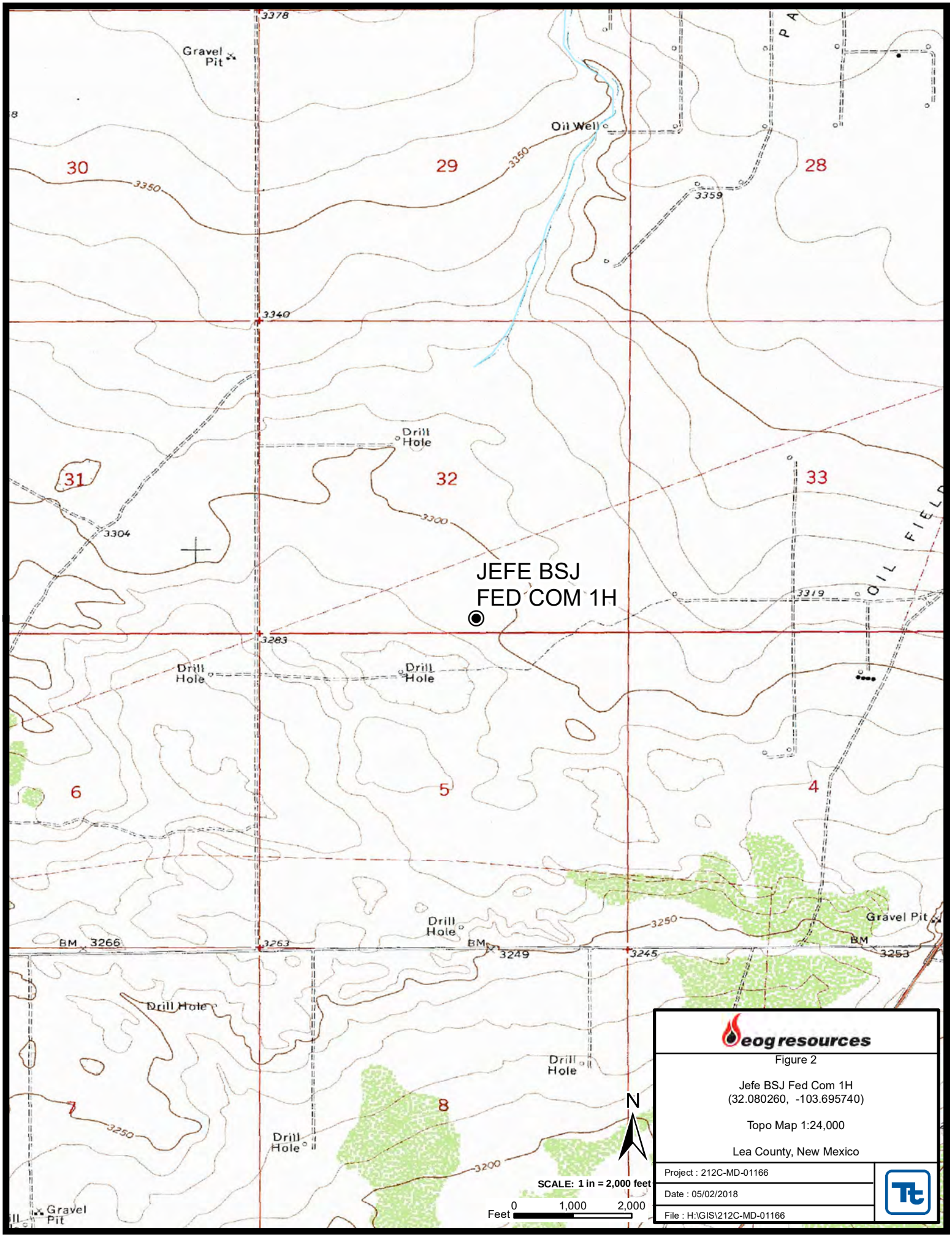
Jefe BSJ Fed Com 1H
(32.080260, -103.695740)

Overview Map

Lea County, New Mexico

Project : 212C-MD-01166	
Date : 05/02/2018	
File : H:\GIS\212C-MD-01166	

Mapped By: Isabel Marmolejo



eog resources

Figure 2

Jefe BSJ Fed Com 1H
(32.080260, -103.695740)

Topo Map 1:24,000

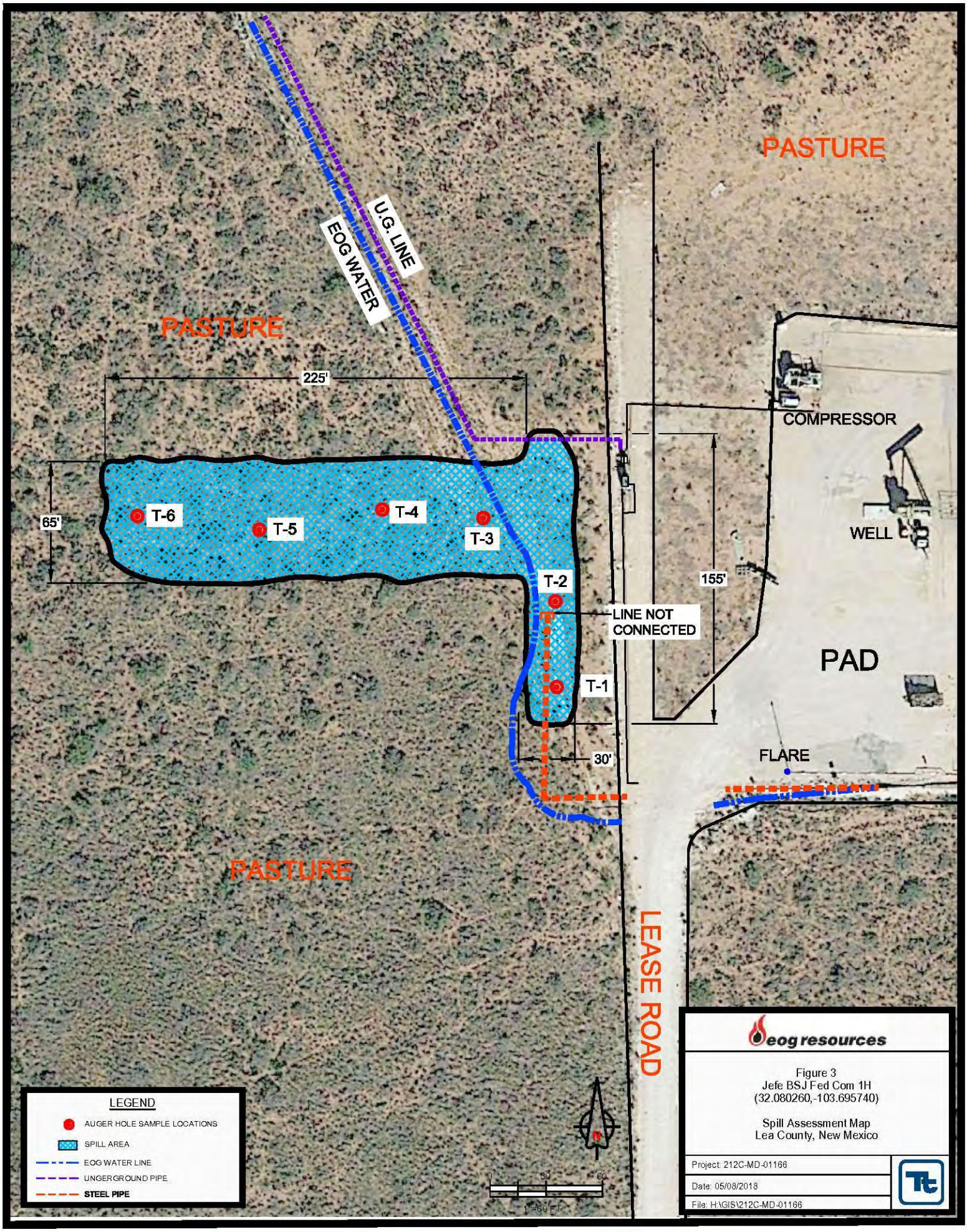
Lea County, New Mexico

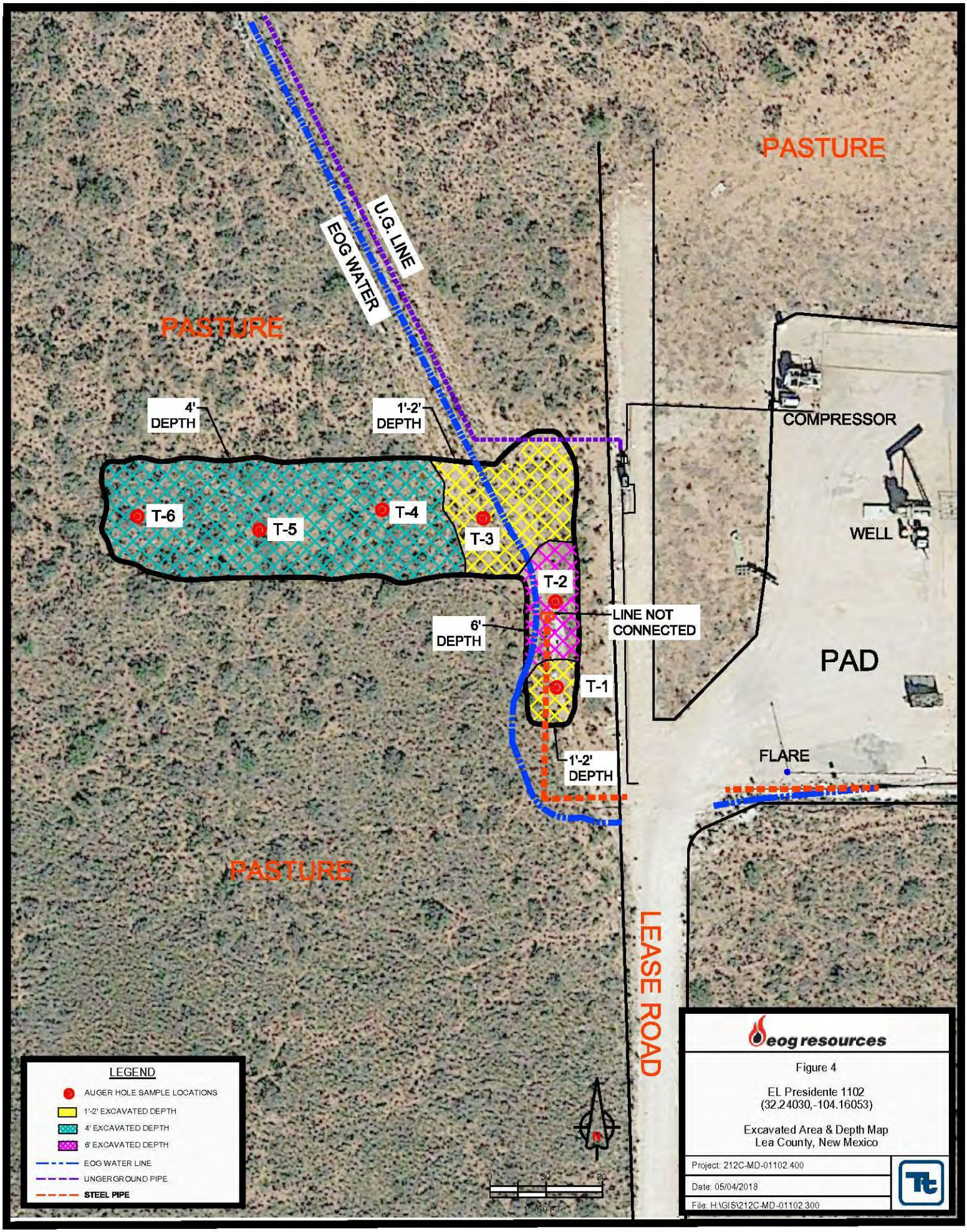
Project : 212C-MD-01166

Date : 05/02/2018

File : H:\GIS\212C-MD-01166

Mapped By: Isabel Marmolejo


PASTURE
U.G. LINE
EOG WATER
PASTURE
225'
65'
T-6
T-5
T-4
T-3
T-2
T-1
COMPRESSOR
WELL
155'
LINE NOT CONNECTED
PAD
FLARE
30'
PASTURE
LEASE ROAD
LEGEND
AUGER HOLE SAMPLE LOCATIONS
SPILL AREA
EOG WATER LINE
UNDERGROUND PIPE
STEEL PIPE
N
0
30
60
1"=60 FT
eog resources
Figure 3
Jefe BSJ Fed Com 1H
(32.080260,-103.695740)
Spill Assessment Map
Lea County, New Mexico
Project: 212C-MD-01166
Date: 05/08/2018
File: H:\GIS\212C-MD-01166


PASTURE
U.G. LINE
EOG WATER
PASTURE
4' DEPTH
1'-2' DEPTH
COMPRESSOR
WELL
T-6
T-5
T-4
T-3
T-2
LINE NOT CONNECTED
6' DEPTH
PAD
T-1
FLARE
1'-2' DEPTH
PASTURE
LEASE ROAD
LEGEND
AUGER HOLE SAMPLE LOCATIONS
1'-2' EXCAVATED DEPTH
4' EXCAVATED DEPTH
6' EXCAVATED DEPTH
EOG WATER LINE
UNGERGROUND PIPE
STEEL PIPE
N
0
30
60
1"=60 FT
eog resources
Figure 4
EL Presidente 1102
(32.24030,-104.16053)
Excavated Area & Depth Map
Lea County, New Mexico
Project: 212C-MD-01102.400
Date: 05/04/2018
File: H:\GIS\212C-MD-01102.300

Tables

Table 1
EOG Resources
Jefe BSJ Fed. Com. 1H
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (in)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
T-1	3/29/2018	0-1	-	X		<15.0	34.3	<15.0	34.3	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	**4,960**
	"	2	-	X		<15.0	53.5	<15.0	53.5	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	454
T-2	3/29/2018	0-1	-	X		124	4,390	1,200	**5,710**	0.00714	0.0172	<0.00200	0.0133	0.0377	**13,200**
	"	2	-	X		<14.9	<14.9	<14.9	<14.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	168
	"	4	-	X		-	-	-	-	-	-	-	-	-	**1,080**
	"	6	-	X		-	-	-	-	-	-	-	-	-	**1,040**
	"	8	-	X		-	-	-	-	-	-	-	-	-	346
	"	10	-	X		-	-	-	-	-	-	-	-	-	61
T-3	3/29/2018	0-1	-	X		84.2	8,690	2,170	**10,900**	0.00279	0.0116	0.00230	0.0191	0.0358	**16,600**
	"	2	-	X		<15.0	25.9	<15.0	88.5	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**2,110**
	"	4	-	X		-	-	-	-	-	-	-	-	-	289
	"	6	-	X		-	-	-	-	-	-	-	-	-	82.0
	"	8	-	X		-	-	-	-	-	-	-	-	-	114
T-4	3/29/2018	0-1	-	X		51.4	929	141	1,120	<0.00200	0.00354	<0.00200	0.0642	0.0677	**3,430**
	"	2	-	X		<15.0	21.8	<15.0	21.8	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	**1,810**
	"	4	-	X		-	-	-	-	-	-	-	-	-	**1,900**
T-5	3/29/2018	0-1	-	X		56,300	106,000	18,000	**180,000**	**12.6**	186	43.6	355	**597**	**20,100**
	"	2	-	X		<15.0	22.4	<15.0	22.4	<0.00200	0.00337	<0.00200	0.00672	0.0101	**6,720**
	"	4	-	X		-	-	-	-	-	-	-	-	-	**1,930**
T-6	3/29/2018	0-1	-	X		158	4,670	1,040	**5,870**	<0.00200	0.00388	0.00920	0.106	0.119	**3,960**
	"	2	-	X		<15.0	72.9	<15.0	72.9	<0.00199	<0.00199	<0.00199	0.00685	0.00685	**3,850**
	"	4	-	X		-	-	-	-	-	-	-	-	-	**2,000**
	"	6	-	X		-	-	-	-	-	-	-	-	-	26.7

(-) Not Analyzed

Proposed Excavation Depths

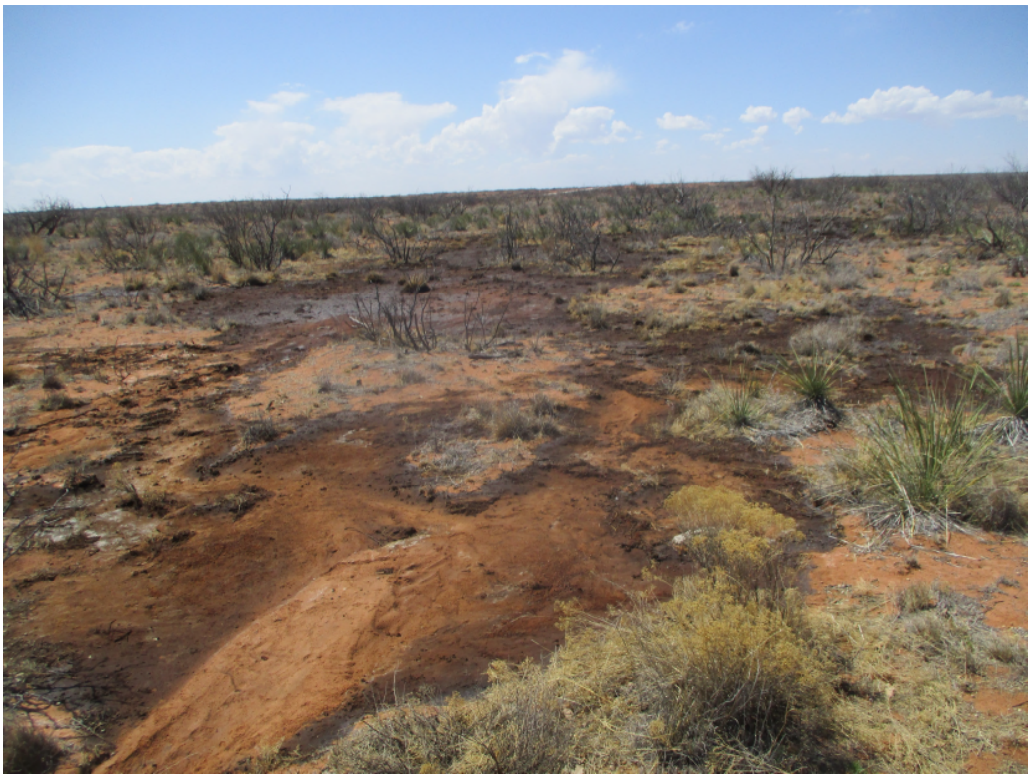
Photos

EOG Resources
El Jefe BSJ Fed Com #1H
Lea County, New Mexico

View North – Area of AH-1 and AH-2

View South – Area of AH-3

EOG Resources
El Jefe BSJ Fed Com #1H
Lea County, New Mexico



View West – Area of AH-4

View West – Area of AH-5

EOG Resources
El Jefe BSJ Fed Com #1H
Lea County, New Mexico

View East – Area of AH-6

Appendix A

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 EOG Resources, Inc	Contact Jamon Hohensee
Address 5509 Champions Drive, Midland, Texas 79706	Telephone No. 432-556-8074
Facility Name: Jefe BSJ Fed Com 1H	Facility Type: Production facility

Surface Owner State	Mineral Owner State	API No. 30-025-40722

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	32	25S	32E					Lea

Latitude 32.0806 Longitude -103.6959

NATURE OF RELEASE

Type of Release PW flowline break	Volume of Release 75bbls	Volume Recovered 35bbls
Source of Release PW flowline	3/21/18 3:30PM	3/21/18
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 11:17 am, Mar 28, 2018

Describe Cause of Problem and Remedial Action Taken.*
On 3/21/18 a produced water line burst and released approx. 75bbl to the area 40ft west of the pad location. 35bbls of fluid was recovered. 3`d party consultant will go out and delineate spill area and collect samples. Samples will be analyzed and a work plan will be submitted to go out and excavate impacted soil and properly remove and dispose of impacted soil. Then area will be backfilled with clean material to normal grade.

Describe Area Affected and Cleanup Action Taken.*
Site is desert scrub with no water identified. Vacuum trucks removed free standing liquids at location.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Jamon Hohensee	Approved by Environmental Specialist:
Title: Environmental Representative	Approval Date: 3/28/2018 Expiration Date:
E-mail Address: jamon_hohensee@eogresources.com	Conditions of Approval: see attached directive Attached ☒
Date: 3/27/18 Phone:4325568074	

* Attach Additional Sheets If Necessary

1RP-5001 nOY1808740822 pOY1808741062

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
EOG - Jefe BSJ Fed Com 1H
Lea County, New Mexico

24 South 31 East

6	5	4 Maljamar	3	2 192	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 390 290	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

26 South 31 East

6	5	4	3	2	1 335 287
7	8 295 275	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 32 East

6	5	4	3	2	1
7	8	9	10 20	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33 290	34	35	36

25 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

26 South 32 East

6 350	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 333 180	22	23	24
30	29	28	27	26	25
31 295	32	33	34	35	36

24 South 33 East

6	5	4	3	2	1
7	8	9	10 24.6	11	12
18	17	16	15	14	13
19	20	21	22	23 208	24 16.9
30	29	28	27	26	25
31	32	33 93.2	34	35	36

25 South 33 East

6	5	4	3 172	2	1
7	8	9	10	11 140	12 200
18	17	16	15	14	13
19	20 200	21 120	22	23	24
30	29	28	27 125	26	25
31 257	32	33	34	35	36

26 South 33 East

6	5	4	3 175	2	1
7	8	9	10	11 145	12 200
18	17	16	15	14 135	13
19	20	21 120	22	23	24
30	29	28	27 125	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

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	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02271	R	CUB	LE		2	3	21	26S	32E	624449	3544111*	150	125	25
C 02271 POD2		CUB	LE	3	2	3	21	26S	32E	624348	3544010*	270	250	20
C 02274		CUB	LE	2	1	2	31	26S	32E	621742	3541730*	300	295	5
C 02323		C	LE	3	2	3	21	26S	32E	624348	3544010*	405	405	0
C 03537 POD1		CUB	LE	3	2	3	21	26S	32E	624250	3543985	850		
C 03595 POD1		CUB	LE	4	2	3	21	26S	32E	624423	3544045	280	180	100
C 03829 POD1		CUB	LE	3	3	1	06	26S	32E	620628	3549186	646	350	296

Average Depth to Water: **267 feet**

Minimum Depth: **125 feet**

Maximum Depth: **405 feet**

Record Count: 7

PLSS Search:

Township: 26S **Range:** 32E

***UTM location was derived from PLSS - see Help**

4/24/18 12:57 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Appendix C

Lea County, New Mexico

PT—Pyote loamy fine sand

Map Unit Setting

National map unit symbol: dmqp
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Pyote and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 25 inches: loamy fine sand
Bt - 25 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Minor Components

Maljamar
Percent of map unit: 8 percent
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Palomas
Percent of map unit: 7 percent
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 14, Sep 10, 2017

NMSLO Seed Mix — Loamy (L)

LOAMY (L) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Black grama	VNS, Southern	1.0	D
Blue grama	Lovington	1.0	D
Sideoats grama	Vaughn, El Reno	4.0	F
Sand dropseed	VNS, Southern	2.0	S
Alkali sacaton	VNS, Southern	1.0	
Little bluestem	Cimarron, Pastura	1.5	F
Forbs:			
Firewheel (*Gaillardia*)	VNS, Southern	1.0	D
Shrubs:			
Fourwing saltbush	Marana, Santa Rita	1.0	D
Common winterfat	VNS, Southern	0.5	F
	Total PLS/acre	18.0	

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.

Appendix D

Analytical Report 581006

for

Tetra Tech- Midland

Project Manager: Ike Tavarez

El Jefe BSJ Fed. Comm 1H

212C-MD-01166

13-APR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

13-APR-18

Project Manager: **Ike Tavarez**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **581006**
El Jefe BSJ Fed. Comm 1H
Project Address: Lea County, New Mexico

Ike Tavarez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 581006. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 581006 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 581006

Tetra Tech- Midland, Midland, TX

El Jefe BSJ Fed. Comm 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 (0-1')	S	03-29-18 00:00		581006-001
T-1 (2')	S	03-29-18 00:00		581006-002
T-2 (0-1')	S	03-29-18 00:00		581006-003
T-2 (2')	S	03-29-18 00:00		581006-004
T-2 (4')	S	03-29-18 00:00		581006-005
T-2 (6')	S	03-29-18 00:00		581006-006
T-2 (8')	S	03-29-18 00:00		581006-007
T-2 (10')	S	03-29-18 00:00		581006-008
T-3 (0-1')	S	03-29-18 00:00		581006-009
T-3 (2')	S	03-29-18 00:00		581006-010
T-3 (4')	S	03-29-18 00:00		581006-011
T-3 (6')	S	03-29-18 00:00		581006-012
T-3 (8')	S	03-29-18 00:00		581006-013
T-4 (0-1')	S	03-29-18 00:00		581006-014
T-4 (2')	S	03-29-18 00:00		581006-015
T-4 (4')	S	03-29-18 00:00		581006-016
T-5 (0-1')	S	03-29-18 00:00		581006-017
T-5 (2')	S	03-29-18 00:00		581006-018
T-5 (4')	S	03-29-18 00:00		581006-019
T-6 (0-1')	S	03-29-18 00:00		581006-020
T-6 (2')	S	03-29-18 00:00		581006-021
T-6 (4')	S	03-29-18 00:00		581006-022
T-6 (6')	S	03-29-18 00:00		581006-023

Sample receipt non conformances and comments:

Client took Sample 017 & 018 off hold 04/09/18 JKR

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3045521 Inorganic Anions by EPA 300/300.1
Lab Sample ID 581006-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 581006-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3045540 TPH By SW8015 Mod
Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) RPD was outside laboratory control limits.
Samples in the analytical batch are: 581006-001, -002, -003, -004, -009, -010, -014, -015, -020, -021

Batch: LBA-3045673 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3045718 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3046232 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3046412 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 581006

Tetra Tech- Midland, Midland, TX

Project Name: El Jefe BSJ Fed. Comm 1H

Project Id: 212C-MD-01166
Contact: Ike Tavarez
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Apr-02-18 11:31 am
Report Date: 13-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	581006-001		581006-002		581006-003		581006-004		581006-005		581006-006	
	Field Id:	T-1 (0-1')		T-1 (2')		T-2 (0-1')		T-2 (2')		T-2 (4')		T-2 (6')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00	
BTEX by EPA 8021B	***Extracted:***	Apr-03-18 17:00		Apr-04-18 12:00		Apr-04-18 12:00		Apr-04-18 12:00					
	Analyzed:	Apr-03-18 22:33		Apr-04-18 20:38		Apr-04-18 20:57		Apr-04-18 21:16					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00199	0.00199	0.00714	0.00200	<0.00200	0.00200				
Toluene		<0.00201	0.00201	<0.00199	0.00199	0.0172	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	0.00949	0.00399	<0.00401	0.00401				
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	0.00383	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	0.0133	0.00200	<0.00200	0.00200				
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	0.0377	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30	
	Analyzed:	Apr-03-18 05:33		Apr-03-18 05:17		Apr-03-18 05:38		Apr-03-18 05:44		Apr-03-18 05:49		Apr-03-18 06:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4960	49.5	454	4.98	13200	99.0	168	4.96	1080	4.98	1040	4.97
TPH By SW8015 Mod	***Extracted:***	Apr-03-18 09:00		Apr-03-18 09:00		Apr-03-18 09:00		Apr-03-18 09:00					
	Analyzed:	Apr-03-18 13:55		Apr-03-18 14:20		Apr-03-18 14:45		Apr-03-18 15:08					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	124	15.0	<14.9	14.9				
Diesel Range Organics (DRO)		34.3	15.0	53.5	15.0	4390	15.0	<14.9	14.9				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	1200	15.0	<14.9	14.9				
Total TPH		34.3	15.0	53.5	15.0	5710	15.0	<14.9	14.9				

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 581006

Tetra Tech- Midland, Midland, TX

Project Name: El Jefe BSJ Fed. Comm 1H

Project Id: 212C-MD-01166
Contact: Ike Tavarez
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Apr-02-18 11:31 am
Report Date: 13-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	581006-007		581006-008		581006-009		581006-010		581006-011		581006-012	
	Field Id:	T-2 (8')		T-2 (10')		T-3 (0-1')		T-3 (2')		T-3 (4')		T-3 (6')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00	
BTEX by EPA 8021B	***Extracted:***					Apr-04-18 12:00		Apr-04-18 12:00					
	Analyzed:					Apr-04-18 21:36		Apr-04-18 21:55					
	Units/RL:					mg/kg	RL	mg/kg	RL				
Benzene						0.00279	0.00201	<0.00199	0.00199				
Toluene						0.0116	0.00201	<0.00199	0.00199				
Ethylbenzene						0.00230	0.00201	<0.00199	0.00199				
m,p-Xylenes						0.0142	0.00402	<0.00398	0.00398				
o-Xylene						0.00486	0.00201	<0.00199	0.00199				
Total Xylenes						0.0191	0.00201	<0.00199	0.00199				
Total BTEX						0.0358	0.00201	<0.00199	0.00199				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30	
	Analyzed:	Apr-03-18 06:10		Apr-03-18 06:15		Apr-03-18 06:21		Apr-03-18 06:26		Apr-03-18 06:31		Apr-03-18 06:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		346	4.99	60.6	4.99	16600	250	2110	24.9	289	4.96	82.0	5.00
TPH By SW8015 Mod	***Extracted:***					Apr-03-18 09:00		Apr-03-18 09:00					
	Analyzed:					Apr-04-18 08:35		Apr-03-18 16:43					
	Units/RL:					mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)						84.2	74.7	<15.0	15.0				
Diesel Range Organics (DRO)						8690	74.7	25.9	15.0				
Oil Range Hydrocarbons (ORO)						2170	74.7	<15.0	15.0				
Total TPH						10900	74.7	88.5	15.0				

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 581006

Tetra Tech- Midland, Midland, TX

Project Name: El Jefe BSJ Fed. Comm 1H

Project Id: 212C-MD-01166
Contact: Ike Tavarez
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Apr-02-18 11:31 am
Report Date: 13-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	581006-013		581006-014		581006-015		581006-016		581006-017		581006-018	
	Field Id:	T-3 (8')		T-4 (0-1')		T-4 (2')		T-4 (4')		T-5 (0-1')		T-5 (2')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00	
BTEX by EPA 8021B	***Extracted:***			Apr-04-18 12:00		Apr-04-18 12:00				Apr-11-18 08:15		Apr-10-18 08:00	
	Analyzed:			Apr-04-18 22:14		Apr-04-18 22:33				Apr-11-18 12:35		Apr-10-18 15:50	
	Units/RL:			mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL
Benzene				<0.00200	0.00200	<0.00202	0.00202			12.6	0.996	<0.00200	0.00200
Toluene				0.00354	0.00200	<0.00202	0.00202			186	0.996	0.00337	0.00200
Ethylbenzene				<0.00200	0.00200	<0.00202	0.00202			43.6	0.996	<0.00200	0.00200
m,p-Xylenes				0.0218	0.00399	<0.00403	0.00403			257	1.99	0.00438	0.00400
o-Xylene				0.0424	0.00200	<0.00202	0.00202			97.7	0.996	0.00234	0.00200
Total Xylenes				0.0642	0.00200	<0.00202	0.00202			355	0.996	0.00672	0.00200
Total BTEX				0.0677	0.00200	<0.00202	0.00202			597	0.996	0.0101	0.00200
Inorganic Anions by EPA 300/300.1	***Extracted:***	Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30	
	Analyzed:	Apr-03-18 06:53		Apr-03-18 07:08		Apr-03-18 07:14		Apr-03-18 07:19		Apr-03-18 07:24		Apr-03-18 07:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		114	4.98	3430	24.9	1810	24.8	1900	24.9	20100	249	6720	49.9
TPH By SW8015 Mod	***Extracted:***			Apr-03-18 09:00		Apr-03-18 09:00				Apr-09-18 12:00		Apr-09-18 12:00	
	Analyzed:			Apr-03-18 17:07		Apr-03-18 17:29				Apr-09-18 18:41		Apr-09-18 18:20	
	Units/RL:			mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)				51.4	15.0	<15.0	15.0			56300	748	<15.0	15.0
Diesel Range Organics (DRO)				929	15.0	21.8	15.0			106000	748	22.4	15.0
Oil Range Hydrocarbons (ORO)				141	15.0	<15.0	15.0			18000	748	<15.0	15.0
Total TPH				1120	15.0	21.8	15.0			180000	748	22.4	15.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 581006

Tetra Tech- Midland, Midland, TX

Project Name: El Jefe BSJ Fed. Comm 1H

Project Id: 212C-MD-01166
Contact: Ike Tavarez
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Apr-02-18 11:31 am
Report Date: 13-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	581006-019		581006-020		581006-021		581006-022		581006-023			
	Field Id:	T-5 (4')		T-6 (0-1')		T-6 (2')		T-6 (4')		T-6 (6')			
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL			
	Sampled:	Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00			
BTEX by EPA 8021B	***Extracted:***			Apr-04-18 12:00		Apr-04-18 12:00							
	Analyzed:			Apr-04-18 22:53		Apr-04-18 23:12							
	Units/RL:			mg/kg	RL	mg/kg	RL						
Benzene				<0.00200	0.00200	<0.00199	0.00199						
Toluene				0.00388	0.00200	<0.00199	0.00199						
Ethylbenzene				0.00920	0.00200	<0.00199	0.00199						
m,p-Xylenes				0.0721	0.00401	0.00447	0.00398						
o-Xylene				0.0336	0.00200	0.00238	0.00199						
Total Xylenes				0.106	0.00200	0.00685	0.00199						
Total BTEX				0.119	0.00200	0.00685	0.00199						
Inorganic Anions by EPA 300/300.1	***Extracted:***	Apr-02-18 17:30		Apr-02-18 17:30		Apr-03-18 15:05		Apr-03-18 15:05		Apr-03-18 15:05			
	Analyzed:	Apr-03-18 07:35		Apr-03-18 07:40		Apr-03-18 15:46		Apr-03-18 15:51		Apr-03-18 15:30			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1930	24.9	3960	25.0	3850	25.0	2000	25.0	26.7	4.95		
TPH By SW8015 Mod	***Extracted:***			Apr-03-18 09:00		Apr-03-18 09:00							
	Analyzed:			Apr-03-18 17:53		Apr-03-18 18:14							
	Units/RL:			mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)				158	15.0	<15.0	15.0						
Diesel Range Organics (DRO)				4670	15.0	72.9	15.0						
Oil Range Hydrocarbons (ORO)				1040	15.0	<15.0	15.0						
Total TPH				5870	15.0	72.9	15.0						

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045540 **Sample:** 581006-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 13:55

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.4	99.7	92	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

Lab Batch #: 3045540 **Sample:** 581006-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 14:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	99.9	92	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

Lab Batch #: 3045540 **Sample:** 581006-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 14:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.1	99.8	89	70-135	
o-Terphenyl	42.6	49.9	85	70-135	

Lab Batch #: 3045540 **Sample:** 581006-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 15:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.0	99.6	89	70-135	
o-Terphenyl	45.2	49.8	91	70-135	

Lab Batch #: 3045540 **Sample:** 581006-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 16:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.9	90	70-135	
o-Terphenyl	46.7	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045540 **Sample:** 581006-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 17:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.7	108	70-135	
o-Terphenyl	53.5	49.9	107	70-135	

Lab Batch #: 3045540 **Sample:** 581006-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 17:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.8	108	70-135	
o-Terphenyl	55.7	49.9	112	70-135	

Lab Batch #: 3045540 **Sample:** 581006-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 17:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	99.7	100	70-135	
o-Terphenyl	48.3	49.9	97	70-135	

Lab Batch #: 3045540 **Sample:** 581006-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 18:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.9	93	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 3045673 **Sample:** 581006-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 22:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045540 **Sample:** 581006-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 08:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	99.6	92	70-135	
o-Terphenyl	50.4	49.8	101	70-135	

Lab Batch #: 3045718 **Sample:** 581006-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 20:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	70-130	
4-Bromofluorobenzene	0.0278	0.0300	93	70-130	

Lab Batch #: 3045718 **Sample:** 581006-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 20:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0253	0.0300	84	70-130	

Lab Batch #: 3045718 **Sample:** 581006-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 21:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3045718 **Sample:** 581006-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 21:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	70-130	
4-Bromofluorobenzene	0.0235	0.0300	78	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045718 **Sample:** 581006-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 21:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	70-130	
4-Bromofluorobenzene	0.0279	0.0300	93	70-130	

Lab Batch #: 3045718 **Sample:** 581006-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 22:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	70-130	
4-Bromofluorobenzene	0.0325	0.0300	108	70-130	

Lab Batch #: 3045718 **Sample:** 581006-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 22:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

Lab Batch #: 3045718 **Sample:** 581006-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 22:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0250	0.0300	83	70-130	
4-Bromofluorobenzene	0.0386	0.0300	129	70-130	

Lab Batch #: 3045718 **Sample:** 581006-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 23:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0257	0.0300	86	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3046091 **Sample:** 581006-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/09/18 18:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 3046091 **Sample:** 581006-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/09/18 18:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	99.7	122	70-135	
o-Terphenyl	49.4	49.9	99	70-135	

Lab Batch #: 3046232 **Sample:** 581006-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/10/18 15:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0235	0.0300	78	70-130	
4-Bromofluorobenzene	0.0256	0.0300	85	70-130	

Lab Batch #: 3046412 **Sample:** 581006-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/18 12:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0232	0.0300	77	70-130	
4-Bromofluorobenzene	0.0219	0.0300	73	70-130	

Lab Batch #: 3045540 **Sample:** 7641929-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 09:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.3	100	88	70-135	
o-Terphenyl	46.5	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045673 **Sample:** 7642030-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 22:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3045718 **Sample:** 7642055-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 22:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3046091 **Sample:** 7642268-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/09/18 09:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	100	96	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 3046232 **Sample:** 7642361-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/10/18 10:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0252	0.0300	84	70-130	
4-Bromofluorobenzene	0.0243	0.0300	81	70-130	

Lab Batch #: 3046412 **Sample:** 7642454-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/18 10:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0224	0.0300	75	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045540 **Sample:** 7641929-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 09:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 3045673 **Sample:** 7642030-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 20:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3045718 **Sample:** 7642055-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 20:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3046091 **Sample:** 7642268-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/09/18 09:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 3046232 **Sample:** 7642361-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/10/18 08:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3046412 **Sample:** 7642454-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/18 08:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0289	0.0300	96	70-130	

Lab Batch #: 3045540 **Sample:** 7641929-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 10:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	62.1	50.0	124	70-135	

Lab Batch #: 3045673 **Sample:** 7642030-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 20:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

Lab Batch #: 3045718 **Sample:** 7642055-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 20:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

Lab Batch #: 3046091 **Sample:** 7642268-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/09/18 09:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.3	100	97	70-135	
o-Terphenyl	46.6	50.0	93	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3046232 **Sample:** 7642361-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/10/18 08:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3046412 **Sample:** 7642454-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/18 08:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

Lab Batch #: 3045540 **Sample:** 580999-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 11:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.9	104	70-135	
o-Terphenyl	46.0	50.0	92	70-135	

Lab Batch #: 3045673 **Sample:** 581006-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 20:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

Lab Batch #: 3045718 **Sample:** 581267-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 14:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0291	0.0300	97	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3046091 **Sample:** 581762-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/09/18 10:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.5	99.7	95	70-135	
o-Terphenyl	42.8	49.9	86	70-135	

Lab Batch #: 3046232 **Sample:** 581763-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/10/18 08:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

Lab Batch #: 3046412 **Sample:** 581765-012 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/18 09:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0293	0.0300	98	70-130	

Lab Batch #: 3045540 **Sample:** 580999-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 12:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.3	99.9	93	70-135	
o-Terphenyl	42.6	50.0	85	70-135	

Lab Batch #: 3045673 **Sample:** 581006-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 21:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0360	0.0300	120	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045718 **Sample:** 581267-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 15:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3046091 **Sample:** 581762-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/09/18 11:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	47.1	49.9	94	70-135	

Lab Batch #: 3046232 **Sample:** 581763-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/10/18 09:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

Lab Batch #: 3046412 **Sample:** 581765-012 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/18 09:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0293	0.0300	98	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order #: 581006 **Project ID:** 212C-MD-01166

Analyst: ALJ **Date Prepared:** 04/03/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045673 **Sample:** 7642030-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00202	0.101	0.116	115	0.101	0.121	120	4	70-130	35	
Toluene	<0.00202	0.101	0.108	107	0.101	0.114	113	5	70-130	35	
Ethylbenzene	<0.00202	0.101	0.102	101	0.101	0.109	108	7	70-130	35	
m,p-Xylenes	<0.00403	0.202	0.212	105	0.202	0.224	111	6	70-130	35	
o-Xylene	<0.00202	0.101	0.107	106	0.101	0.113	112	5	70-130	35	

Analyst: ALJ **Date Prepared:** 04/04/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045718 **Sample:** 7642055-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.0998	0.115	115	0.100	0.120	120	4	70-130	35	
Toluene	<0.00200	0.0998	0.107	107	0.100	0.113	113	5	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.101	101	0.100	0.109	109	8	70-130	35	
m,p-Xylenes	<0.00399	0.200	0.210	105	0.201	0.223	111	6	70-130	35	
o-Xylene	<0.00200	0.0998	0.106	106	0.100	0.113	113	6	70-130	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order #: 581006 **Project ID:** 212C-MD-01166

Analyst: ALJ **Date Prepared:** 04/10/2018 **Date Analyzed:** 04/10/2018

Lab Batch ID: 3046232 **Sample:** 7642361-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00198	0.0990	0.118	119	0.0994	0.116	117	2	70-130	35	
Toluene	<0.00198	0.0990	0.115	116	0.0994	0.111	112	4	70-130	35	
Ethylbenzene	<0.00198	0.0990	0.115	116	0.0994	0.112	113	3	70-130	35	
m,p-Xylenes	<0.00396	0.198	0.240	121	0.199	0.230	116	4	70-130	35	
o-Xylene	<0.00198	0.0990	0.119	120	0.0994	0.115	116	3	70-130	35	

Analyst: ALJ **Date Prepared:** 04/11/2018 **Date Analyzed:** 04/11/2018

Lab Batch ID: 3046412 **Sample:** 7642454-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00201	0.101	0.118	117	0.101	0.118	117	0	70-130	35	
Toluene	<0.00201	0.101	0.115	114	0.101	0.114	113	1	70-130	35	
Ethylbenzene	<0.00201	0.101	0.116	115	0.101	0.114	113	2	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.237	118	0.202	0.232	115	2	70-130	35	
o-Xylene	<0.00201	0.101	0.118	117	0.101	0.116	115	2	70-130	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order #: 581006 **Project ID:** 212C-MD-01166

Analyst: OJS **Date Prepared:** 04/02/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045521 **Sample:** 7641896-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	273	109	250	267	107	2	90-110	20	

Analyst: OJS **Date Prepared:** 04/03/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045644 **Sample:** 7641963-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	256	102	250	246	98	4	90-110	20	

Analyst: ARM **Date Prepared:** 04/03/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045540 **Sample:** 7641929-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	901	90	1000	1150	115	24	70-135	20	F
Diesel Range Organics (DRO)	<15.0	1000	942	94	1000	1190	119	23	70-135	20	F

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order #: 581006 **Project ID:** 212C-MD-01166

Analyst: ARM **Date Prepared:** 04/09/2018 **Date Analyzed:** 04/09/2018

Lab Batch ID: 3046091 **Sample:** 7642268-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1060	106	1000	995	100	6	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	1160	116	1000	1130	113	3	70-135	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order # : 581006 **Project ID:** 212C-MD-01166

Lab Batch ID: 3045673 **QC- Sample ID:** 581006-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/03/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00199	0.0994	0.109	110	0.0998	0.0915	92	17	70-130	35	
Toluene	<0.00199	0.0994	0.101	102	0.0998	0.0887	89	13	70-130	35	
Ethylbenzene	<0.00199	0.0994	0.0917	92	0.0998	0.0813	81	12	70-130	35	
m,p-Xylenes	<0.00398	0.199	0.188	94	0.200	0.162	81	15	70-130	35	
o-Xylene	<0.00199	0.0994	0.0993	100	0.0998	0.0875	88	13	70-130	35	

Lab Batch ID: 3045718 **QC- Sample ID:** 581267-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/04/2018 **Date Prepared:** 04/04/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00201	0.100	0.0839	84	0.0998	0.0996	100	17	70-130	35	
Toluene	<0.00201	0.100	0.0779	78	0.0998	0.0943	94	19	70-130	35	
Ethylbenzene	<0.00201	0.100	0.0720	72	0.0998	0.0882	88	20	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.151	75	0.200	0.181	91	18	70-130	35	
o-Xylene	<0.00201	0.100	0.0755	76	0.0998	0.0920	92	20	70-130	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order # : 581006 **Project ID:** 212C-MD-01166

Lab Batch ID: 3046232 **QC- Sample ID:** 581763-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/10/2018 **Date Prepared:** 04/10/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0887	89	0.101	0.107	106	19	70-130	35	
Toluene	<0.00200	0.100	0.0819	82	0.101	0.101	100	21	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0764	76	0.101	0.100	99	27	70-130	35	
m,p-Xylenes	<0.00401	0.200	0.157	79	0.202	0.205	101	27	70-130	35	
o-Xylene	<0.00200	0.100	0.0787	79	0.101	0.103	102	27	70-130	35	

Lab Batch ID: 3046412 **QC- Sample ID:** 581765-012 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/11/2018 **Date Prepared:** 04/11/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0867	87	0.0998	0.0956	96	10	70-130	35	
Toluene	<0.00200	0.100	0.0809	81	0.0998	0.0896	90	10	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0805	81	0.0998	0.0868	87	8	70-130	35	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.200	0.177	89	7	70-130	35	
o-Xylene	<0.00200	0.100	0.0810	81	0.0998	0.0888	89	9	70-130	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order # : 581006 **Project ID:** 212C-MD-01166

Lab Batch ID: 3045521 **QC- Sample ID:** 581006-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/02/2018 **Analyst:** OJS

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	454	249	715	105	249	722	108	1	90-110	20	

Lab Batch ID: 3045521 **QC- Sample ID:** 581006-011 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/02/2018 **Analyst:** OJS

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	289	248	553	106	248	571	114	3	90-110	20	X

Lab Batch ID: 3045644 **QC- Sample ID:** 581006-023 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/03/2018 **Analyst:** OJS

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	26.7	248	272	99	248	270	98	1	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order # : 581006 **Project ID:** 212C-MD-01166

Lab Batch ID: 3045644 **QC- Sample ID:** 581057-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/03/2018 **Analyst:** OJS

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	370	248	603	94	248	607	96	1	90-110	20	

Lab Batch ID: 3045540 **QC- Sample ID:** 580999-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/03/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	1020	102	999	926	93	10	70-135	20	
Diesel Range Organics (DRO)	<15.0	999	1100	110	999	1040	104	6	70-135	20	

Lab Batch ID: 3046091 **QC- Sample ID:** 581762-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/09/2018 **Date Prepared:** 04/09/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	810	81	998	831	83	3	70-135	20	
Diesel Range Organics (DRO)	30.4	997	848	82	998	922	89	8	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

581006

Client Name: EOG	**Site Manager:** Ike Tavarez
Project Name: El Jefe BSJ Fed. Comm 1H	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-01166
Invoice to: Tetra Tech, Inc.	
Receiving Laboratory: Xenco Midland Tx	**Sampler Signature:** Mike Carmona

Comments: Run deeper samples if TPH exceeds 5,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2017 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	T-1 (0-1')	3/29/2018			X				X			1	N	X		X												X							
	T-1 (2')	3/29/2018			X				X			1	N	X		X												X							
	T-2 (0-1')	3/29/2018			X				X			1	N	X		X												X							
	T-2 (2')	3/29/2018			X				X			1	N	X		X												X							
	T-2 (4')	3/29/2018			X				X			1	N															X							
	T-2 (6')	3/29/2018			X				X			1	N															X							
	T-2 (8')	3/29/2018			X				X			1	N															X							
	T-2 (10')	3/29/2018			X				X			1	N															X							
	T-3 (0-1')	3/29/2018			X				X			1	N	X		X												X							
	T-3 (2')	3/29/2018			X				X			1	N	X		X												X							

Relinquished by: Mike Carmona	Date: 4-2-18	Time: 1130	Received by: [signature] Date: 4/2/18 Time: 11:31
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature

(Circle) HAND DELIVERED

REMARKS:

- [X] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

ORIGINAL COPY

Temp: 4.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.1

Final 1.000

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Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste 401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

581006

Client Name:	EOG	**Site Manager:**	Ike Tavarez
Project Name:	El Jefe BSJ Fed. Comm 1H		
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-01166
Invoice to:	Tetra Tech, Inc.		
Receiving Laboratory:	Xenco Midland Tx	**Sampler Signature:**	Mike Carmona

Comments: Run deeper samples if TPH exceeds 5,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2017)	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE	None	# CONTAINERS	FILTERED (Y/N)
	T-3 (4')	3/29/2018			X			X		1	N
	T-3 (6')	3/29/2018			X			X		1	N
	T-3 (8')	3/29/2018			X			X		1	N
	T-4 (0-1')	3/29/2018			X			X		1	N
	T-4 (2')	3/29/2018			X			X		1	N
	T-4 (4')	3/29/2018			X			X		1	N
	T-5 (0-1')	3/29/2018			X			X		1	N
	T-5 (2')	3/29/2018			X			X		1	N
	T-5 (4')	3/29/2018			X			X		1	N
	T-6 (0-1')	3/29/2018			X			X		1	N

ANALYSIS REQUEST
(Circle or Specify Method No.)

SAMPLE IDENTIFICATION	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
T-3 (4')															X				
T-3 (6')															X				
T-3 (8')															X				
T-4 (0-1')	X		X												X				
T-4 (2')	X		X												X				
T-4 (4')															X				
T-5 (0-1')															X				
T-5 (2')															X				
T-5 (4')															X				
T-6 (0-1')	X		X												X				

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Carmona	4-2-18	1130	[illegible]	4/2/18	11:31

LAB USE ONLY
Sample Temperature

REMARKS:
☒ STANDARD
☐ RUSH: Same Day 24 hr 48 hr 72 hr
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Temp: 4.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.1

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

581006

Client Name: EOG	Site Manager: Ike Tavarez
Project Name: El Jefe BSJ Fed. Comm 1H	
Project Location: (county, state) Lea County, New Mexico	Project #: 212C-MD-01166
Invoice to: Tetra Tech, Inc.	
Receiving Laboratory: Xenco Midland Tx	Sampler Signature: Mike Carmona
Comments: Run deeper samples if TPH exceeds 5,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2017 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	T-6 (2')	3/29/2018			X				X			1	N	X		X												X							
	T-6 (4')	3/29/2018			X				X			1	N															X							
	T-6 (6')	3/29/2018			X				X			1	N															X							

Final 1.000

Page 31 of 32

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Carmona	4-2-18	1130	[signature]	4/8/18	11:31
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature

REMARKS:

- [x] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Temp: 4.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 04/02/2018 11:31:00 AM

Work Order #: 581006

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 04/02/2018

Checklist reviewed by: Jessica Kramer Date: 04/02/2018