

SITE INFORMATION

Report Type: Work Plan

General Site Information:

Site:	Geronimo Tank Battery		
Company:	SM Energy Company		
Section, Township and Range	Section 24, T18S, R31E	Unit Letter - G	
Lease Number:	API 30-01-5524927		
County:	Eddy County		
GPS:	32.73376° N, 103.82129° W		
Surface Owner:	Federal		
Mineral Owner:			
Directions:	From the intersection of Hwy 82 and Shugart Rd (Loco Hills), go south on Shugart Rd exactly 4 miles. Turn to the Southeast on a caliche road and travel southeast for another 4 miles until the road ends. Turn onto the road to the northeast and travel approximately 1.1 miles to the location.		

Release Data:

Date Released:	2/5/2015
Type Release:	Produced Water and Oil
Source of Contamination:	Heater Treater
Fluid Released:	265 water/16 oil
Fluids Recovered:	232 water/13.5oil

Official Communication:

Name:	Tejay Simpson		Ike Tavaréz
Company:	SM Energy Company		Tetra Tech
Address:	6301 Holiday Hill Rd. Bldg 1		4000 N Big Spring
P.O. Box			
City:	Midland, Texas		Midland, Texas
Phone number:	(432) 212-3408		(432) 682-4559
Fax:			
Email:	tsimpson@sm-energy.com		ike.tavarez@tetrattech.com

Ranking Criteria

Depth to Groundwater:	Ranking Score	Site Data
<50 ft	20	
50-99 ft	10	
>100 ft.	0	0
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

May 19, 2015

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

**Re: Work Plan for SM Energy Company
Geronimo Tank Battery
Unit G, Section 24, Township 18 South, Range 31 East
Eddy County, New Mexico**

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by SM Energy Company (SM Energy) to assess a spill that occurred the Geronimo Tank Battery located in Unit G, Section 24, Township 18 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.73376°, W 103.82129°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on February 5 2015. Approximately 256 barrels of produced water/16 barrel oil were released from the heater treater. Approximately 232 barrels of produced water/13.5 barrels of oil were recovered. The heater treater fire tube flange was repaired with new connections. The initial C-141 is enclosed in Appendix A.

Hydrology

The New Mexico Office of the State Engineers (OSE) Website listed two water wells within 2 miles of the site. The closest well (identified by the OSE as CP 00896) did not have any information available. The second closest well (identified by the OSE as CP 00672) had a total depth of 540 feet and a depth to water of 460 feet. The Geology and Ground-Water Resources of Eddy County, New Mexico (Report 3) showed the closest well to be in Section 34 of Township 17 South and Range 31 East. This well is over 4 miles from the site, is reported to be over 271 in depth with a pumping rate of approximately 3.5 gallons per minute. Depth to water for this well is not available. The New Mexico Oil Conservation Division (OCD) regional groundwater gradient map for Eddy County shows the depth to groundwater in this section at approximately 280 feet.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

Fax 432.682.3946

www.tetrattech.com

**Regulatory**

A risk-based evaluation was performed for the Site in accordance with the OCD 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 (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 Results

On March 31, 2015, Tetra Tech personnel installed a total of six (6) auger holes and collected soil samples utilizing a hand auger to assess the spill area. The spill area impacted an area measuring approximately 90' x 115'. Soil samples were submitted for laboratory analysis of TPH by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix B. The sampling results are summarized in Table 1. The auger hole locations are shown on Figure 3.

Referring to Table 1, the soil samples did not have any BTEX or TPH concentrations above the RRAL's. The areas of AH-1 and AH-6 showed elevated chlorides in the shallow soils (0-1') of 3,360 mg/kg and 5,930 mg/kg, respectively. The deeper samples significantly declined with depth at 1-1.5' below surface. Moderate chloride concentrations were detected in the areas of AH-2 (1,440 mg/kg) and AH-3 (1,240 mg/kg). The remaining areas of AH-4 and AH-5 did not show any impact to the soils.

Work Plan

SM Energy proposes to remove the impacted material as highlighted (green) in Table 1 and shown on Figure 4. The areas auger holes (AH-1 and AH-6) will be excavated to a depth of approximately 1.0' below surface. A surficial scrape will be performed in the areas of AH-2 and AH-3. Once completed, all of the excavated material will be hauled to proper disposal. The excavated areas will be backfilled with clean soil.

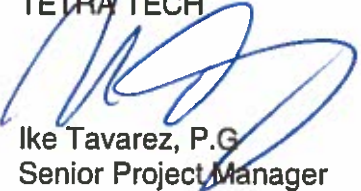
The proposed excavation around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safety concerns. As such, Tetra Tech will excavate the soils to the maximum extent practicable. Any remaining impact not accessible to be removed will be deferred until abandonment.



TETRA TECH

Upon completion, a final report 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 me at (432) 682-4559.

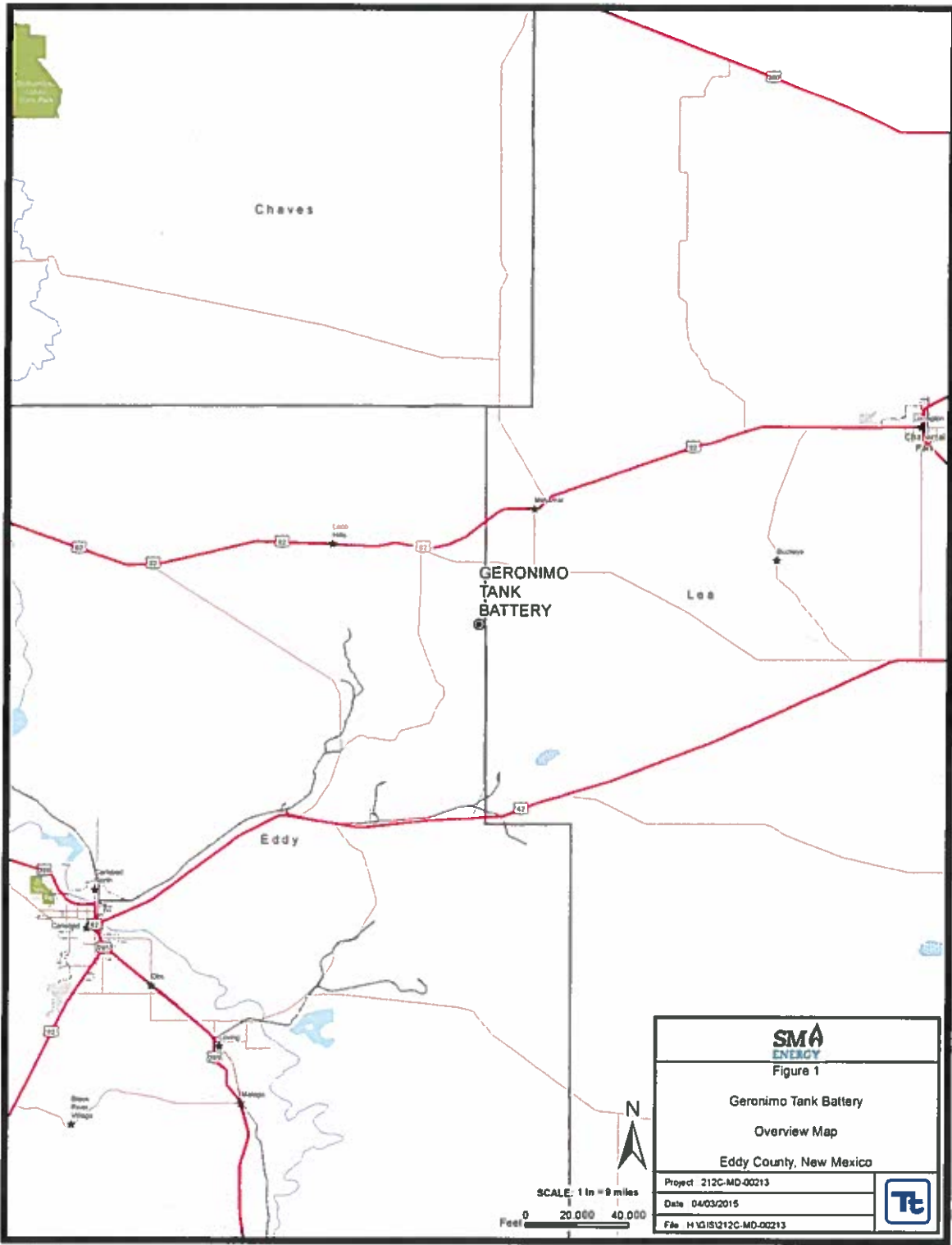
Respectfully submitted,
TETRA TECH

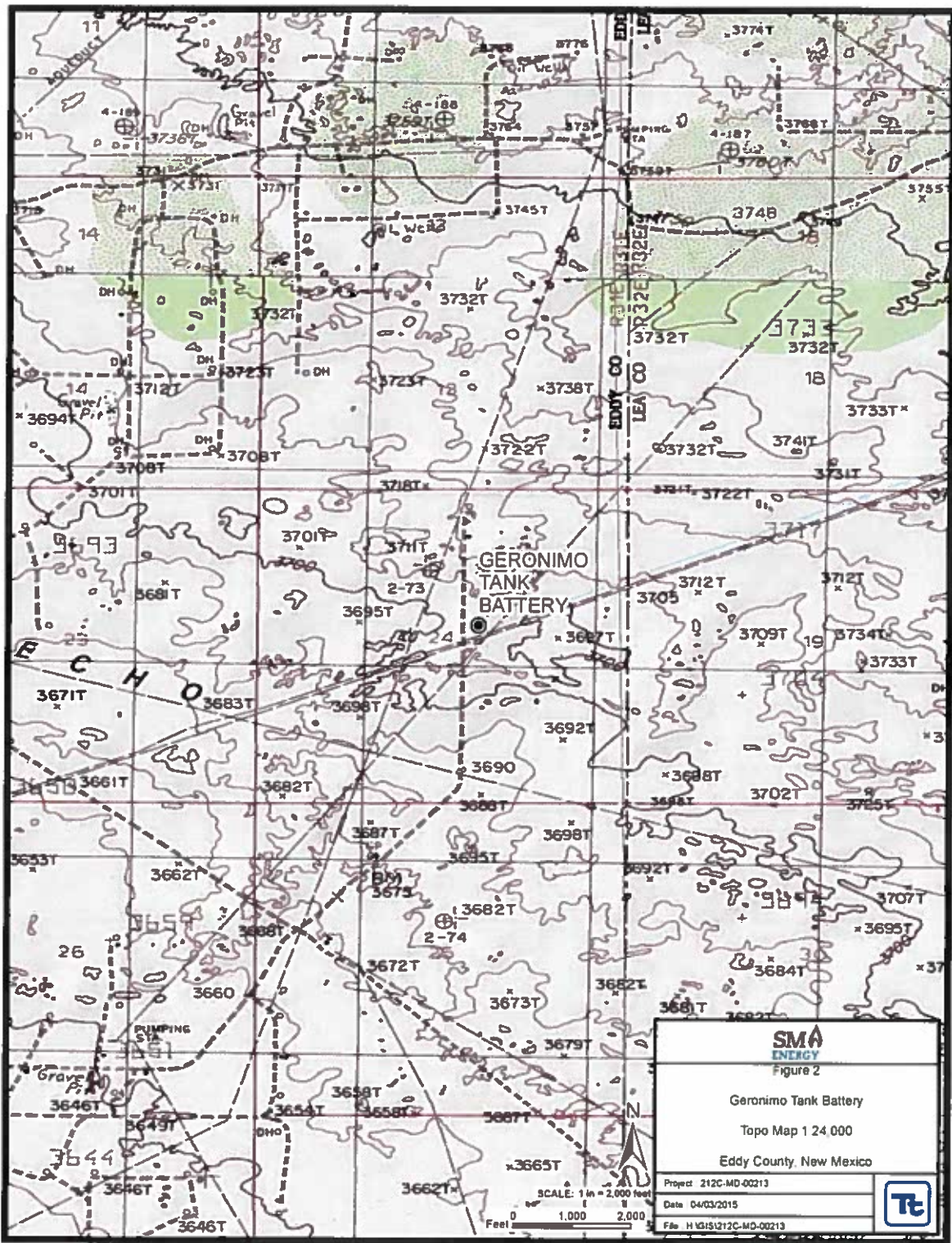


Ike Tavaréz, P.G.
Senior Project Manager

CC: Tejay Simpson – SM Energy Company
BLM – Jim Amos

Figures





PASTURE

PAD

PASTURE

PASTURE

EXPLANATION

● AUGER HOLE SAMPLE LOCATIONS

▨ SPILL AREA

SCALE: 1 IN = 63 FEET

Feet 0 25 50



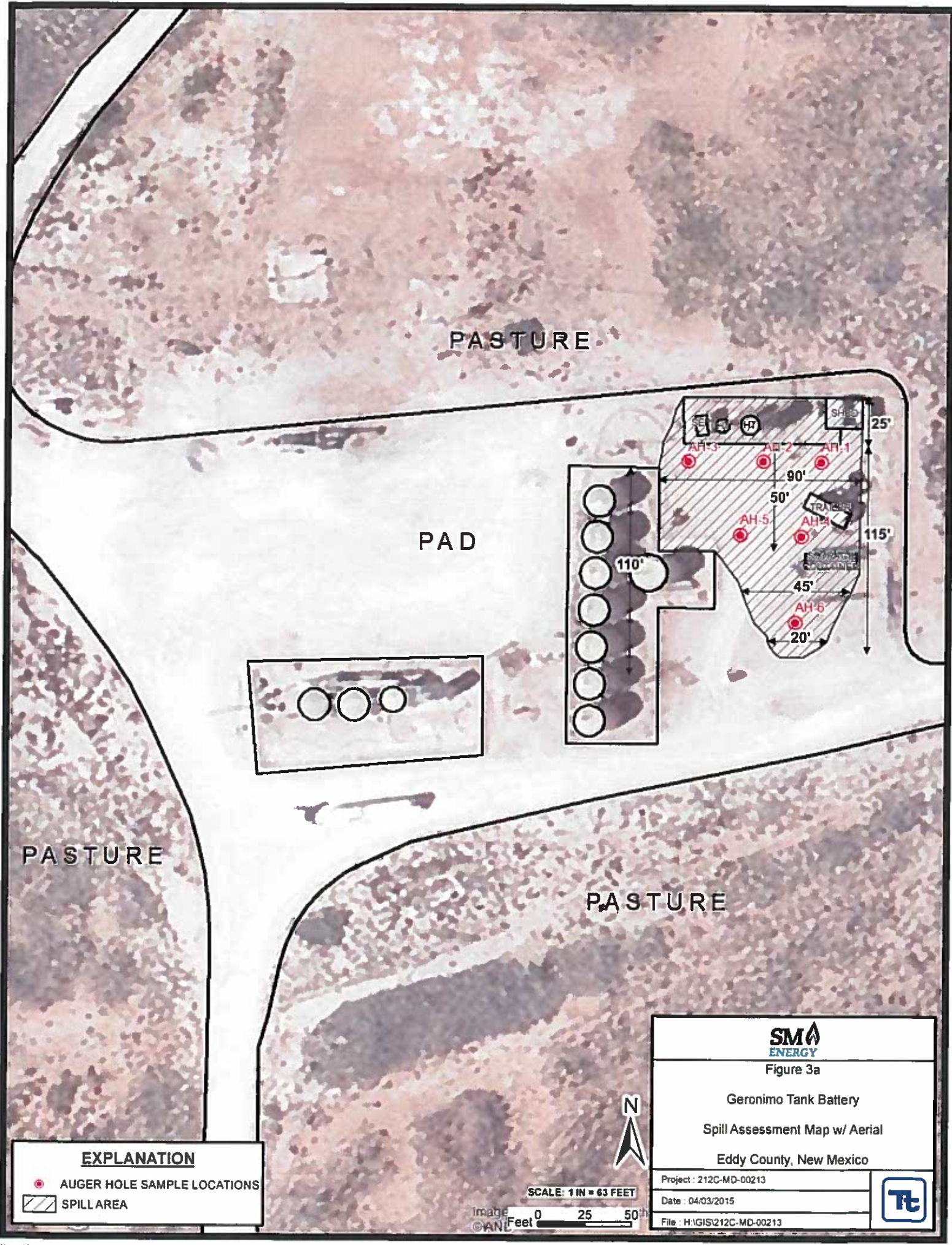
SMA
ENERGY

Figure 3

Geronimo Tank Battery
Spill Assessment Map
Eddy County, New Mexico

Project	212C-MD-00213
Date	04/03/2015
File	H:\GIS\212C-MD-00213





PASTURE

PAD

PASTURE

PASTURE

EXPLANATION

- AUGER HOLE SAMPLE LOCATIONS
- SPILL AREA

SCALE: 1 IN = 63 FEET

Feet 0 25 50



Figure 3a

Geronimo Tank Battery

Spill Assessment Map w/ Aerial

Eddy County, New Mexico

Project : 212C-MD-00213

Date : 04/03/2015

File : H:\GIS\212C-MD-00213



PASTURE

SURFACE
SCRAPE

PAD

1' DEEP

1' DEEP

PASTURE

EXPLANATION

- AUGER HOLE SAMPLE LOCATIONS
- ▨ PROPOSED EXCAVATION AREAS

SCALE: 1 IN = 46 FEET

Feet 0 25 50



Figure 4

Geronimo Tank Battery

Proposed Excavation Areas & Depths Map

Eddy County, New Mexico

Project : 212C-MD-00213

Date : 05/12/2015

File : H:\GIS\212C-MD-00213



Tables

Table 1
SM Energy
Geronimo Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-1	3/31/2015	0-1	X		<4.00	1,160	1,160	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	3,360
	"	1-1.5	X		-	-	-	-	-	-	-	-	192
	"	2-2.5	X		-	-	-	-	-	-	-	-	192
	"	3-3.5	X		-	-	-	-	-	-	-	-	385
	"	4-4.5	X		-	-	-	-	-	-	-	-	192
AH-2	3/31/2015	0-1	X		<4.00	2,200	2,200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	1,440
	"	1-1.5	X		-	-	-	-	-	-	-	-	385
	"	2-2.5	X		-	-	-	-	-	-	-	-	192
	"	3-3.5	X		-	-	-	-	-	-	-	-	1,060
	"	4-4.5	X		-	-	-	-	-	-	-	-	762
	"	5-5.5	X		-	-	-	-	-	-	-	-	381
	"	6-6.5	X		-	-	-	-	-	-	-	-	476
AH-3	3/31/2015	0-1	X		16.1	521	537	<0.0400	0.0501	0.0492	0.498	0.5973	1,240
	"	1-1.5	X		-	-	-	-	-	-	-	-	190
	"	1.5-2.0	X		-	-	-	-	-	-	-	-	190
	3/31/2015	0-1	X		<4.00	<50.0	<50.0	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<20.0
AH-4	"	1-1.5	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	X		-	-	-	-	-	-	-	-	190

Table 1
SM Energy
Geronimo Tank Battery
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	Total						
AH-5	3/31/2015	0-1	X		100	1,580	1,680	<0.0400	0.226	0.510	2.63	3.37	670
	"	1-1.5	X		-	-	-	-	-	-	-	-	<20.0
	"	2-2.5	X		-	-	-	-	-	-	-	-	<20.0
AH-6	3/31/2015	0-1	X		247	483	730	<0.0400	0.351	1.36	4.89	6.60	5,930
	"	1-1.5	X		-	-	-	-	-	-	-	-	96.0
	"	2-2.5	X		-	-	-	-	-	-	-	-	96.0

(-) Not Analyzed

Proposed Excavation Areas and Depths

Surface Scrape

Photos

SM Energy Company
Geronimo Tank Battery
Eddy County, New Mexico



TETRA TECH



View North – Area of AH-1, AH-2, AH-3, AH-4 and AH-5



View east – Area of AH-1



View West – Area of AH-1, AH-2 and AH-3



View southwest – Area of AH-5, and 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 August 8, 2011

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 SM ENERGY COMPANY	Contact LISA HUNT	
Address 6301 Holiday Hill Rd. Bldg 1 Midland, TX 79707	Telephone No. (432)848-4833	
Facility Name Geronimo Battery	Facility Type Production Battery	
Surface Owner BLM	Mineral Owner	API No. 3001524927 (closest well)

LOCATION OF RELEASE

Unit Letter G	Section 24	Township 18S	Range 31E	Feet from the 2310	North/South Line N	Feet from the 2310	East/West Line E	County Eddy
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Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Produced water & oil	Volume of Release 256 wtr/16 oil	Volume Recovered 232 wtr/13.5 oil
Source of Release Heater treater	Date and Hour of Occurrence 2/5/15	Date and Hour of Discovery 2/5/15 7:40a
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Jim Amos - BLM and NMOCD	
By Whom? Tejay Simpson	Date and Hour 2/5/15 11:22 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

A leak was coming out of the top of the fire tube flange & spraying towards the top of the heater. Lease operator switched the production of the heater into secondary heater. The depressurized heater stopping the release of fluid. Vacuum trucks, gang & backhoe operators were called. Heater treater was emptied into a vacuum truck & transferred to a spare storage tank.
Estimate spill volume: 256 water / 16 oil

Describe Area Affected and Cleanup Action Taken.*

Battery pad. 128' x 31'. Vacuum trucks picked up free standing fluid while gang assisted. Recovered fluid was placed in 500 bbls storage tank. Backhoe back dug location recovering contaminated soil & loaded into dump truck for transport to disposal.

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: LISA HUNT	Approved by Environmental Specialist:		
Title: REGULATORY TECHNICIAN	Approval Date:	Expiration Date:	
E-mail Address: LHUNT@SM-ENERGY.COM	Conditions of Approval:		Attached ☐
Date: 03/09/2015	Phone: (432)848-4833		

* Attach Additional Sheets If Necessary

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
SM Energy
Eddy County, New Mexico

17 South			30 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

17 South			31 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

17 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

18 South			30 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

18 South			31 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

18 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

19 South			30 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

19 South			31 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

19 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

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 Field water level

180 Tetra Tech drilled TMW - Total depth 180' - Dry well

Appendix C

Summary Report

Ike Tavarez
Tetra Tech
1901 N. Big Spring St.
Midland, TX 79705

Report Date: April 13, 2015

Work Order: 15040201



Project Location: Eddy Co, NM
Project Name: SM Energy Geronimo TB
Project Number: 212C-MD-00213

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
390223	AH-1 0-1	soil	2015-03-31	00:00	2015-04-02
390224	AH-1 1-1.5	soil	2015-03-31	00:00	2015-04-02
390225	AH-1 2-2.5	soil	2015-03-31	00:00	2015-04-02
390226	AH-1 3-3.5	soil	2015-03-31	00:00	2015-04-02
390227	AH-1 4-4.5	soil	2015-03-31	00:00	2015-04-02
390228	AH-2 0-1	soil	2015-03-31	00:00	2015-04-02
390229	AH-2 1-1.5	soil	2015-03-31	00:00	2015-04-02
390230	AH-2 2-2.5	soil	2015-03-31	00:00	2015-04-02
390231	AH-2 3-3.5	soil	2015-03-31	00:00	2015-04-02
390232	AH-2 4-4.5	soil	2015-03-31	00:00	2015-04-02
390233	AH-2 5-5.5	soil	2015-03-31	00:00	2015-04-02
390234	AH-2 6-6.5	soil	2015-03-31	00:00	2015-04-02
390235	AH-2 7-7.5	soil	2015-03-31	00:00	2015-04-02
390236	AH-3 0-1	soil	2015-03-31	00:00	2015-04-02
390237	AH-3 1-1.5	soil	2015-03-31	00:00	2015-04-02
390238	AH-3 1.5-2.0	soil	2015-03-31	00:00	2015-04-02
390239	AH-4 0-1	soil	2015-03-31	00:00	2015-04-02
390240	AH-4 1-1.5	soil	2015-03-31	00:00	2015-04-02
390241	AH-4 2-2.5	soil	2015-03-31	00:00	2015-04-02
390242	AH-5 0-1	soil	2015-03-31	00:00	2015-04-02
390243	AH-5 1-1.5	soil	2015-03-31	00:00	2015-04-02
390244	AH-5 2-2.5	soil	2015-03-31	00:00	2015-04-02
390246	AH-6 0-1	soil	2015-03-31	00:00	2015-04-02
390247	AH-6 1-1.5	soil	2015-03-31	00:00	2015-04-02
390248	AH-6 2-2.5	soil	2015-03-31	00:00	2015-04-02

Sample - Field Code	BTEX				TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)		
390223 - AH-1 0-1	<0.0200	<0.0200	<0.0200	<0.0200	1160 J _u Q _s	<4.00 Q _s
390228 - AH-2 0-1	<0.0200	<0.0200	<0.0200	<0.0200	2200 Q _s	<4.00 Q _s
390236 - AH-3 0-1	<0.0400 ¹	0.0501	0.0492	0.498	521 Q _s	16.1 Q _s
390239 - AH-4 0-1	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Q _s	<4.00 Q _s
390242 - AH-5 0-1	<0.0400 ²	0.226	0.510	2.63	1580 Q _s	100 Q _s
390246 - AH-6 0-1	<0.0400 ³	0.351	1.36	4.89	483 Q _s	247 Q _s

Sample: 390223 - AH-1 0-1

Param	Flag	Result	Units	RL
Chloride		3360	mg/Kg	4

Sample: 390224 - AH-1 1-1.5

Param	Flag	Result	Units	RL
Chloride		192	mg/Kg	4

Sample: 390225 - AH-1 2-2.5

Param	Flag	Result	Units	RL
Chloride		192	mg/Kg	4

Sample: 390226 - AH-1 3-3.5

Param	Flag	Result	Units	RL
Chloride		385	mg/Kg	4

Sample: 390227 - AH-1 4-4.5

Param	Flag	Result	Units	RL
Chloride		192	mg/Kg	4

Sample: 390228 - AH-2 0-1

Param	Flag	Result	Units	RL
Chloride		1440	mg/Kg	4

¹Dilution due to hydrocarbons.²Dilution due to hydrocarbons.³Dilution due to hydrocarbons.

Sample: 390229 - AH-2 1-1.5

Param	Flag	Result	Units	RL
Chloride		385	mg/Kg	4

Sample: 390230 - AH-2 2-2.5

Param	Flag	Result	Units	RL
Chloride		192	mg/Kg	4

Sample: 390231 - AH-2 3-3.5

Param	Flag	Result	Units	RL
Chloride		1060	mg/Kg	4

Sample: 390232 - AH-2 4-4.5

Param	Flag	Result	Units	RL
Chloride		762	mg/Kg	4

Sample: 390233 - AH-2 5-5.5

Param	Flag	Result	Units	RL
Chloride		381	mg/Kg	4

Sample: 390234 - AH-2 6-6.5

Param	Flag	Result	Units	RL
Chloride		476	mg/Kg	4

Sample: 390235 - AH-2 7-7.5

Param	Flag	Result	Units	RL
Chloride		190	mg/Kg	4

Sample: 390236 - AH-3 0-1

Param	Flag	Result	Units	RL
Chloride		1240	mg/Kg	4

Sample: 390237 - AH-3 1-1.5

Param	Flag	Result	Units	RL
Chloride		190	mg/Kg	4

Sample: 390238 - AH-3 1.5-2.0

Param	Flag	Result	Units	RL
Chloride		190	mg/Kg	4

Sample: 390239 - AH-4 0-1

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 390240 - AH-4 1-1.5

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 390241 - AH-4 2-2.5

Param	Flag	Result	Units	RL
Chloride		190	mg/Kg	4

Sample: 390242 - AH-5 0-1

Param	Flag	Result	Units	RL
Chloride		670	mg/Kg	4

Sample: 390243 - AH-5 1-1.5

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 390244 - AH-5 2-2.5

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 390246 - AH-6 0-1

Param	Flag	Result	Units	RL
Chloride		5930	mg/Kg	4

Sample: 390247 - AH-6 1-1.5

Param	Flag	Result	Units	RL
Chloride		96.0	mg/Kg	4

Sample: 390248 - AH-6 2-2.5

Param	Flag	Result	Units	RL
Chloride		96.0	mg/Kg	4

Analysis Request of Chain of Custody Record

PAGE:

OF: 3

ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

**1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946**

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CLIENT NAME:		PROJECT NO.:		DATE		TIME		MATRIX		COMP.		GRAB		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS		PRESERVATIVE METHOD	
SM Energy		TBD		2015										Eddy Co. NM		1		HCL ICL HNO ₃ NONE	
TBOD		3-31						S		X		AH-1		0-1		1		X	
390223														1 - 1.5		1		X	
390224														2 - 2.5		1		X	
390225														3 - 3.5		1		X	
390226														4 - 4.5		1		X	
390227														AH-2		1		X	
390228														O-1		1		X	
390229														1 - 1.5		1		X	
390230														2 - 2.5		1		X	
390231														3 - 3.5		1		X	
390232														4 - 4.5		1		X	

RECEIVED BY: (Signature) _____ DATE: 8-2-15 TIME: 8:04

RELINQUISHED BY: (Signature) _____ DATE: 8-2-15 TIME: 8:04

RECEIVING LABORATORY: _____ ADDRESS: _____ CITY: _____ STATE: _____ PHONE: _____ ZIP: _____

SAMPLE CONDITION WHEN RECEIVED: 7.1 REMARKS: Run deeper samples if TPH exceeds in sample. OB is total BTEX.

REMARKS:	Run deeper samples if TPH exceeds 5000 mg/kg, if Benzene	1765
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exceeds 10 m/ka OR if total BTEX exceeds 50 mg/ka
 or retains Yellow cap - Return Oilfield core to Tetra Tech - District Manager unless District Manager instructs otherwise

Run all Chlorides

Analysis Request of Chain of Custody Record

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ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

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CLIENT NAME:		PROJECT NAME:		SITE MANAGER:	
PROJECT NO.:		PROJECT NAME:		SITE MANAGER:	
LAB I.D. NUMBER		DATE		TIME	
390233	2015	3.31			
390234					
390235					
390236					
390237					
390238					
390239					
390240					
390241					
390242					

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:	
PROJECT NO.:		PROJECT NAME:		SITE MANAGER:	
LAB I.D. NUMBER		DATE		TIME	
390233	2015	3.31			
390234					
390235					
390236					
390237					
390238					
390239					
390240					
390241					
390242					

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:	
PROJECT NO.:		PROJECT NAME:		SITE MANAGER:	
LAB I.D. NUMBER		DATE		TIME	
390233	2015	3.31			
390234					
390235					
390236					
390237					
390238					
390239					
390240					
390241					
390242					

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:	
PROJECT NO.:		PROJECT NAME:		SITE MANAGER:	
LAB I.D. NUMBER		DATE		TIME	
390233	2015	3.31			
390234					
390235					
390236					
390237					
390238					
390239					
390240					
390241					
390242					

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:	
PROJECT NO.:		PROJECT NAME:		SITE MANAGER:	
LAB I.D. NUMBER		DATE		TIME	
390233	2015	3.31			
390234					
390235					
390236					
390237					
390238					
390239					
390240					
390241					
390242					

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:	
PROJECT NO.:		PROJECT NAME:		SITE MANAGER:	
LAB I.D. NUMBER		DATE		TIME	
390233	2015	3.31			
390234					
390235					
390236					
390237					
390238					
390239					
390240					
390241					
390242					

CLIENT NAME:		PROJECT NAME:		SITE MANAGER:	
PROJECT NO.:		PROJECT NAME:		SITE MANAGER:	
LAB I.D. NUMBER		DATE		TIME	
390233	2015	3.31			
390234					
390235					
390236					
390237					
390238					
390239					
390240					
3					

Please fill out all copies - Laboratory retains Yellow copy - Return Original copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

W04:15040201

Analysis Request of Chain of Custody Record

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ANALYSIS REQUEST
(Circle or Specify Method No.)



TETRA TECH

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: SM Energy		SITE MANAGER: Ike Taxarez	
PROJECT NO: TBD		PROJECT NAME: GERONIMO TB	
LAB I.D. NUMBER	DATE	TIME	SAMPLE IDENTIFICATION
390243	3-31		1-1.5
390244			2-2.5
390245			3-3.5
390246			4-4
390247			1-2.5
390248			2-2.5

PRESERVATIVE METHOD	NUMBER OF CONTAINERS	FILTERED (Y/N)			
		HCL	HNO3	ICE	NONE
BTX 80215	1			X	
TPM 8015 MOB. TX1005 (Ext to C35)	1			X	
PAH 8270	1			X	
RCRA Metals Ag As Ba Cd Cr Pb Hg Se	1			X	
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	1			X	
TCLP Volatiles	1			X	
TCLP Semi Volatiles	1			X	
RCI	1			X	
GC/MS Vol. 8240/8260/624	1			X	
GC/MS Semi. Vol. 8270/625	1			X	
PCB's 8080/608	1			X	
Pest. 808/608	1			X	
Chloride	1			X	
Gamma Spec.	1			X	
Alpha Beta (Air)	1			X	
PLM (Asbestos)	1			X	
Major Anions/Cations, pH, TDS	1			X	

RELINQUISHED BY: (Signature) Ike Taxarez	Date: 4-5-15 Time: 8:05	RECEIVED BY: (Signature) NAH	Date: 4-5-15 Time: 8:05
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____
RELINQUISHED BY: (Signature)	Date: _____ Time: _____	RECEIVED BY: (Signature)	Date: _____ Time: _____
RECEIVING LABORATORY:	ADDRESS:	CITY:	STATE:
CONTACT:	PHONE:	ZIP:	DATE:

REMARKS:
AH5 3-3.5 missing. 4-2-15 AT

SAMPLE CONDITION WHEN RECEIVED: 7.1

LABORATORY RETAINS YELLOW COPY - RETURN ORIGINAL COPY TO TETRA TECH - PROJECT MANAGER RETAINS PINK COPY - ACCOUNTING RECEIVES GOLD COPY.

Analysis Request of Chain of Custody Record

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ANALYSIS REQUEST
(Circle or Specify Method No.)

TETRA TECH

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CLIENT NAME: SM Energy		PROJECT NAME: Gerardo TB		SITE MANAGER: Ike Tavares		PRESERVATIVE METHOD	
PROJECT NO.: TB0		PROJECT NAME: Gerardo TB		SITE MANAGER: Ike Tavares		PRESERVATIVE METHOD	
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION Eddy Co-NM	
390243	3-31		S	X		1	1-1.5
390244						1	2-2.5
390245						1	3-3.5
390246						1	4-4
390247						1	1-2.5
390248						1	2-2.5

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
DATE:	TIME:	DATE:	TIME:
3-31	10:00	3-31	10:00

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
DATE:	TIME:	DATE:	TIME:
3-31	10:00	3-31	10:00

RELINQUISHED BY: (Signature)		RECEIVED BY: (Signature)	
DATE:	TIME:	DATE:	TIME:
3-31	10:00	3-31	10:00

RECEIVING LABORATORY:		REMARKS:	
ADDRESS:	STATE:	PHONE:	DATE:

SAMPLE CONDITION WHEN RECEIVED:		REMARKS:	
DATE:	TIME:	DATE:	TIME:
3-31	10:00	3-31	10:00

41	415	33.5	missing.	7.2.15 AT	AT
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