

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised October 10, 2003

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

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company <u>St. Mary Land & Exploration Co. 154903</u>	Contact <u>Donna Huddleston</u>
Address <u>3300 N. A Street, Bldg. 7, Ste. 200 Midland, TX</u>	Telephone No. <u>(432)688-1789</u>
Facility Name <u>Parkway Delaware Unit #507</u>	Facility Type <u>Injection</u>

Surface Owner <u>BLM</u>	Mineral Owner <u>BLM</u>	Lease No. _____
--------------------------	--------------------------	-----------------

30-015-29504

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	35	19S	29E					

RECEIVED
JAN -4 2010
NMOCD ARTESIA

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release <u>Produced Water</u>	Volume of Release <u>35 bbls</u>	Volume Recovered <u>8 bbls</u>
Source of Release <u>hose connect inj. line to wellhead</u>	Date and Hour of Occurrence <u>12/27/09</u>	Date and Hour of Discovery <u>12/27/09</u>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <u>Mike Bratcher W/OCD & Jim Amos W/ BLM</u>	
By Whom? <u>Bill Hearne</u>	Date and Hour <u>12/27/09 1:34PM</u>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Found split in 1.0" 4000# WP rubber hose connecting injection lateral line to wellhead for injection. Hose has been replaced. Picked up 8 bbls of produced water

Describe Area Affected and Cleanup Action Taken.*
Spill Area (on location): 80' x 100' = 8000 sq. ft. Spill Area (off location): 2' x 140' = 280 sq. ft. Picked up 8 bbls of produced water and notified Tetra-Tech Enviromental services to remediate spill area. Dig out contaminated soil and remediate with fresh soil.

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

Signature: <u>Donna Huddleston</u>	OIL CONSERVATION DIVISION	
Printed Name: <u>Donna Huddleston</u>	Approved by District Supervisor: <u>Signed by SDW</u>	Remediation Actions to be completed and Final C-141 submitted with confirmation analyses/documentation on or before the Expiration Date.
Title: <u>Production Tech</u>	Approval Date: <u>3-2-10</u>	Expiration Date: <u>5-5-10 7-1-10</u>
E-mail Address: <u>dhuddleston@stmaryland.com</u>	Conditions of Approval: <u>Within 30 days, on or before 5-2-10</u>	Attached <input type="checkbox"/>
Date: <u>12/29/2009</u> Phone: <u>(432)688-1789</u>	completion of a remediation work plan based on delineation should be finalized and submitted for approval to the Division summarizing all actions taken and/or to be taken to mitigate environmental damage.	<u>2PR-393</u>

* Attach Additional Sheets If Necessary

NSEB 1006136791
SEB 1006139159
SEB 1006139208

NMOCD approval shall be obtained prior to any backfilling activities.

Notify OCD 48 hours prior to obtaining samples where analyses are to be presented to OCD

Bonham, Sherry, EMNRD

From: Bonham, Sherry, EMNRD
Sent: Wednesday, March 31, 2010 10:26 AM
To: 'Reed, Timothy'
Subject: Parkway Delaware Unit #507 30-015-29504 2RP-393

Tim,
Thank you for visiting with me regarding the above mentioned site. Per our discussion, it is approved that TetraTech utilize an air rotary drilling rig for installation of soil borings to collect deeper samples as proposed. Remediation actions are to be completed and Final reports/documentation submitted on or before July 1, 2010.

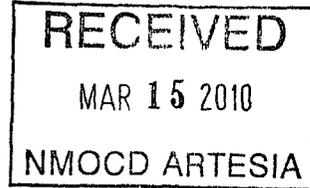
Should you have any questions or concerns regarding this matter, please contact me. And should I not hear from you, I will assume you are in agreement.

Please be advised that NMOCD acceptance and/or approval of documents or work plans 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 and/or approval of documents or work plans do not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

Respectfully,
Sherry Bonham
NMOCD District II



TETRA TECH



February 22, 2010

~~Mr. Mike Bratcher~~
Environmental Engineer Specialist
Oil Conservation Division, District 2
1301 West Grand Avenue
Artesia, NM 88210

Re: Assessment Report and Work Plan for the St. Mary Land & Exploration Co., Parkway Delaware Unit #507 Flow Line Leak, Unit G, Section 35, Township 19 South, Range 29 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech Inc. (Tetra Tech) was contacted by St. Mary Land & Exploration Co. (St. Mary) to assess a flow line spill at the Parkway Delaware Unit #507, located in Unit G, Section 35, Township 19 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32° 37.023', W 104° 02.513'. 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 December 27, 2009. Approximately 35 barrels of produced water was released from a 1" line connecting the injection lateral line to the wellhead for injection. A total of 8 barrels of fluids were recovered. The initial C-141 is enclosed in Appendix A.

Hydrology

The New Mexico State Engineers Well Report listed one well in Section 34 with an average depth of 60' and wells in Sections 35 and 36, with reported depths of 110' and 115', respectively. The *Geology and Groundwater Resources of Eddy County, New Mexico (Report 3)* showed one well in Section 3 of Township 20 South and Range 29 East, with a reported depth to water of 91' bgs. The well reports are shown in Appendix B.

Previously, Tetra Tech personnel supervised the installation of a temporary well (TMW-1) in Section 35 to establish groundwater quality and depth in this section.



During the installation, the well drilled dry. The well was drilled through fine grain sand with gypsum layers and red shale to a total depth of 140', to the top of a black and gray shale formation (blue shale). The well was measured two days later and showed a depth to groundwater of 122.93 TOC.

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 (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 January 25, 2010, Tetra Tech personnel inspected the site and installed a total of eighteen (18) auger holes to assess the spill area. The spill area is shown on the attached Figure 3. The auger holes were advanced to depths ranging from 1.5' to 6.5' below surface. Select samples were analyzed for TPH analysis 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 C. The results of the sampling are summarized in Table 1.

Referring to Table 1, all of the samples analyzed were below the RRAL for both BTEX and TPH. Chloride concentrations were defined or appeared to be close to definition based upon decline, in AH-4, AH-8, AH-9 and AH-16. In most cases, deeper samples could not be collected due to a hard caliche layer.

Work Plan

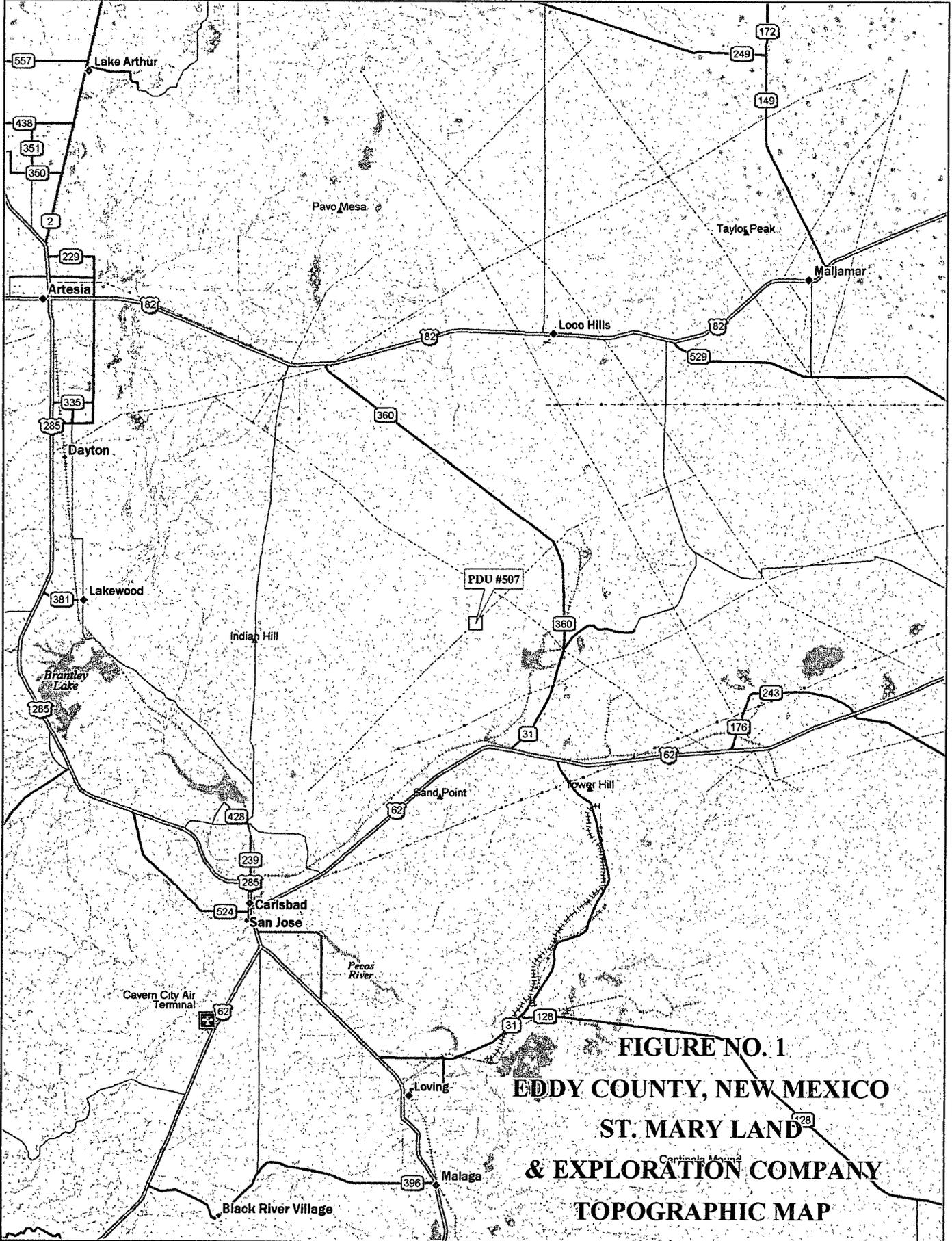
Based upon the results of the initial sampling and the presence of a hard caliche layer, Tetra Tech proposes to utilize an air rotary drilling rig for installation of soil borings to collect deeper samples. Once the additional samples are analyzed and evaluated, a remediation plan will be prepared for NMOCD approval. If you require any additional information or have any questions or comments concerning this work plan, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Tim Reed, P.G.
Senior Project Manager

cc: Don Riggs - St. Mary Land & Exploration Co.
Mark Bondy - St. Mary Land & Exploration Co.
Chad McNeely - St. Mary Land & Exploration Co.

FIGURES



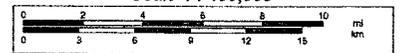
Data use subject to license.

© DeLorme. Topo USA® 8.

www.delorme.com



Scale 1 : 400,000



1" = 6.31 mi

Data Zoom 9-0

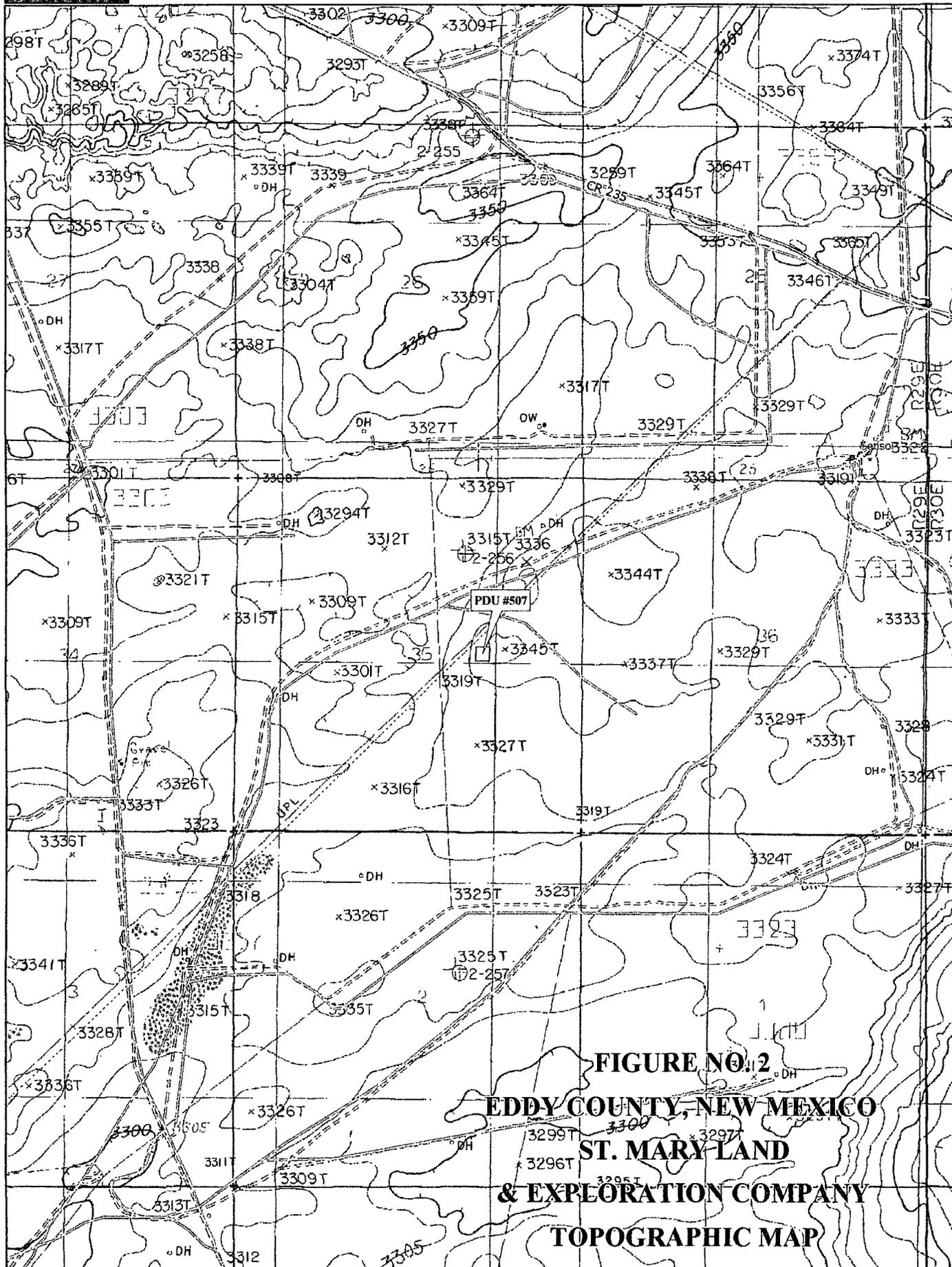
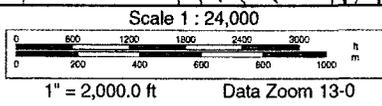
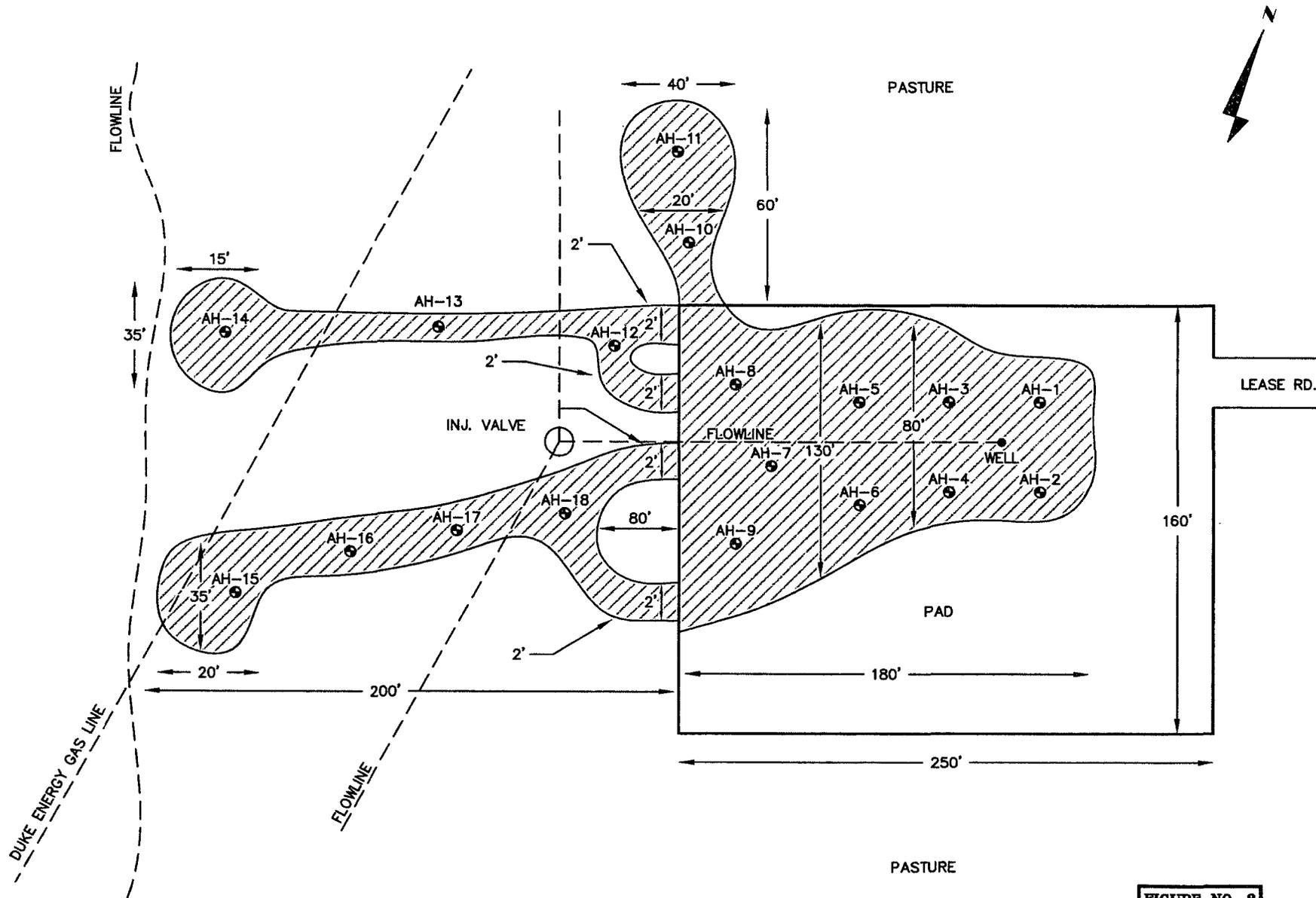


FIGURE NO. 2
EDDY COUNTY, NEW MEXICO
ST. MARY LAND
& EXPLORATION COMPANY
TOPOGRAPHIC MAP

Data use subject to license.
 © DeLorme, Topo USA® 8.
 www.delorme.com





- SPILL AREA
- SAMPLE LOCATIONS

DATE:
2/11/10
DWN. BY:
JJ
FILE:
H:\ST. MARY\0400419

NOT TO SCALE

FIGURE NO. 3
EDDY COUNTY, NEW MEXICO
ST. MARY LAND & EXPLORATION COMPANY
PDU #507
TETRA TECH, INC. MIDLAND, TEXAS

TABLES

Table 1
St. Mary Land & Exploration
Parkway Deleware Unit # 507
EDDY COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth (ft)	Depth (BEB)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total					
AH-15		0-1'		X		<<50.0	<1.00						<200
		1'-1.5'		X									2,170
		2'-2.5'		X									2,590
AH-16		0-1'		X		<<50.0	<1.00						401
		1'-1.5'		X									2,020
		2'-2.5'		X									858
		3'-3.5'		X									359
AH-17		0-1'		X		<<50.0	<1.00						702
		1'-1.5'		X									3,900
		2'-2.5'		X									5,210
		3'-3.5'		X									2,120
AH-18		0-1'		X		<<50.0	<1.00						<200
		1'-1.5'		X									<200
		2'-2.5'		X									1,180

BEB Below Excavation Bottom

(--) Not Analyzed

 Excavated material

APPENDIX A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

0419
Form C-14
Revised October 10, 200

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company <u>St. Mary Land & Exploration Co.</u>	Contact <u>Donna Huddleston</u>
Address <u>3300 N. A Street, Bldg. 7, Ste. 200 Midland, TX</u>	Telephone No. <u>(432)688-1789</u>
Facility Name <u>Parkway Delaware Unit #507</u>	Facility Type <u>Injection</u>

Surface Owner <u>BLM</u>	Mineral Owner <u>BLM</u>	Lease No. _____
--------------------------	--------------------------	-----------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	35	19S	29E					

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release <u>Produced Water</u>	Volume of Release <u>35 bbls</u>	Volume Recovered <u>8 bbls</u>
Source of Release <u>hose connect inj. line to wellhead</u>	Date and Hour of Occurrence <u>12/27/09</u>	Date and Hour of Discovery <u>12/27/09</u>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <u>Mike Bratcher W/OCD & Jim Amos W/ BLM</u>	
By Whom? <u>Bill Hearne</u>	Date and Hour <u>12/27/09 1:34PM</u>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Found split in 1.0" 4000# WP rubber hose connecting injection lateral line to wellhead for injection. Hose has been replaced. Picked up 8 bbls of produced water

Describe Area Affected and Cleanup Action Taken.*
Spill Area (on location): 80' x 100' = 8000 sq. ft. Spill Area (off location): 2' x 140' = 280 sq. ft. Picked up 8 bbls of produced water and notified Tetra-Tech Environmental services to remediate spill area. Dig out contaminated soil and remediate with fresh soil.

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

Signature: <u>Donna Huddleston</u>	OIL CONSERVATION DIVISION	
Printed Name: <u>Donna Huddleston</u>	Approved by District Supervisor:	
Title: <u>Production Tech</u>	Approval Date:	Expiration Date:
E-mail Address: <u>dhuddleston@stmaryland.com</u>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>12/29/2009</u>	Phone: <u>(432)688-1789</u>	

* Attach Additional Sheets If Necessary

WATER LEVEL						
LOCATION NUMBER	BELOW LAND SURFACE (feet)	DATE OF MEASUREMENT	YIELD (g.p.m.)	METHOD OF LIFT	USE OF WATER	REMARKS
20.28.36.140	19.1	Dec. 27, 1948	-	W	S	
20.29.3.433	91.9	Dec. 13, 1948	-	W	S	See analysis, Table 3.
20.30.3.223	6.0	Dec. 23, 1948	-	W	S	do.
3.424	8.5	do.	-	W	S	do.
5.310	3.5	do.	-	W	S	
16.420	29.9	May 1, 1950	-	W	S	See analysis, Table 3.
20.120	29.3	Dec. 22, 1948	5 E.	W	D	Depth to water measured while pumping.
20.130	45.3	do.	-	W	D	do. See analysis, Table 3.
33.440	203.8	Dec. 27, 1948	-	W	S	See analysis, Table 3.
20.31.13.440	45	Dec. 22, 1948	4 E.	W	S	do.
15.130	63.1	do.	-	W	S	
16.240	61.2	do.	1 E.	W	S	Depth to water measured while pumping. See analysis, Table 3.
21.21.7.440	1,100	-	-	W	D & S	
36.213	942	-	-	W	S	Driller: T. Hillyer.

See explanation at beginning of table.

Order #: 10012911

Analysis Request of Chain of Custody Record

PAGE: 2 OF: 7



TETRA TECH

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

St Marys

SITE MANAGER:

Ike Tavaraz

PROJECT NO.:

114-6400419

PROJECT NAME:

St Marys Parkway Delaware Unit #507
Eddy Co, NM

LAB I.D. NUMBER

DATE

TIME

MATRIX
COMP
GRAB

SAMPLE IDENTIFICATION

NUMBER OF CONTAINERS

FILTERED (Y/N)

PRESERVATIVE METHOD

HCL
HNO3
ICE
NONE

(BTEX 8021B)
TPH 8015 MOD. TX1005 (Ext. to C35)

PAH 8270

RCRA Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC.MS Vol. 8240/8260/824

GC.MS Semi. Vol. 8270/825

PCB's 8080/808

pest. 808/608

Chloride

Gamma Spec.

Alpha Beta (Air)

PLM (Asbestos)

Major Anions/Cations, pH, TDS

221091

1/25

S

AH-4 1.5'-2'

1

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

092

AH-5 0-1'

093

AH-5 1'-1.5'

094

AH-5 2'-2.5'

095

AH-6 0-1'

096

AH-6 1'-1.5'

097

AH-6 2'-2.5'

098

AH-6 3'-3.5'

099

AH-7 0-1'

100

AH-7 1'-1.5'

RELINQUISHED BY: (Signature)

[Signature]

Date: 1/28/10

Time: 16:10

RECEIVED BY: (Signature)

[Signature]

Date: 1/28/10

Time: 16:10

SAMPLED BY: (Print & Initial)

ST/RG

Date: 1/25/10

Time: _____

RELINQUISHED BY: (Signature)

[Signature]

Date: _____

Time: _____

RECEIVED BY: (Signature)

[Signature]

Date: _____

Time: _____

SAMPLE SHIPPED BY: (Circle)

BUS

AIRBILL #: _____

FEDEX

UPS

OTHER: _____

HAND DELIVERED

TETRA TECH CONTACT PERSON:

Ike Tavaraz

Results by:

RUSH Charges

Authorized:

Yes No

RECEIVING LABORATORY:

Tetra

RECEIVED BY: (Signature)

[Signature]

ADDRESS:

CITY: Midland

STATE: TX

ZIP: _____

CONTACT: _____

PHONE: _____

DATE: _____

TIME: _____

SAMPLE CONDITION WHEN RECEIVED:

410c intact

REMARKS:

If total TPH exceeds 1,000 mg/kg run deeper samples Run 10 BTEX w/ highest TPH

Order #: 10012911

Analysis Request of Chain of Custody Record

PAGE: 4/ OF: 7



TETRA TECH

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:

St Marys

SITE MANAGER:

Ike Tovar

PROJECT NO.:

114-6400419

PROJECT NAME:

St Marys Parkway Delaware Unit # 507
Edley Co, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS	PRESERVATIVE METHOD				BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC-MS Vol. 8240/8260/824	GC-MS Semi. Vol. 8270/825	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS						
									HCL	HNO3	ICE	NONE																							
221111	7/25		S	X		AH-11	0-1'	1					X												X										
112						AH-11	1'-1.5'																												
113						AH-11	2'-2.5'																												
114						AH-11	3'-3.5'																												
115						AH-12	0-1'						X																						
116						AH-12	1'-1.5'																												
117						AH-12	2'-2.5'																												
118						AH-12	3'-3.5'																												
119						AH-12	4'-4.5'																												
120						AH-13	0-1'						X																						

RELINQUISHED BY: (Signature) *[Signature]* Date: 11/24/10 Time: 146

RECEIVED BY: (Signature) *[Signature]* Date: 11/25/10 Time: 16:10

SAMPLED BY: (Print & Initial) ST/RG Date: 11/25/10 Time: _____

RELINQUISHED BY: (Signature) _____ Date: _____ Time: _____

RECEIVED BY: (Signature) _____ Date: _____ Time: _____

SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: _____
HAND DELIVERED UPS OTHER: _____

RELINQUISHED BY: (Signature) _____ Date: _____ Time: _____

RECEIVED BY: (Signature) _____ Date: _____ Time: _____

TETRA TECH CONTACT PERSON: Ike Tovar Results by: _____

RECEIVING LABORATORY: Tetra Tech ADDRESS: Midland STATE: TX ZIP: _____ CONTACT: _____ PHONE: _____ DATE: _____ TIME: _____

RECEIVED BY: (Signature) _____ DATE: _____ TIME: _____

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C intact

REMARKS: If total TPH exceeds 1,000 mg/kg run deeper samples Run 10 BTEX w/ highest TPH

