El Paso Natural Gas Company, L.L.C.
a Kinder Morgan company

KINDER MORGAN INC.

APPROVED
By OCD Dr Oberding at 2:15 pm, Nov 29, 2016

Conditional approval- monitor for regrowth with reports at 6months and 1 year.

Kristen D. Lynch
Environmental Specialist, District 1
Oil Conservation Division, EMNRD
1625 N. French Drive
Hobbs, New Mexico 88240

RE: El Paso Natural Gas Company Line No. 3031 Inadvertent Release – Rupture No. 2
Request for Closure of RP No. 4427

Dear Ms. Lynch,

El Paso Natural Gas Company (EPNG) is formally requesting the closure of RP No. 4427. This RP number was assigned to the notification record for the inadvertent release of hydrostatic test water (Rupture No. 2) during the spike test of EPNG's Line No. 3031 located in Lea County, New Mexico. The attached document includes all of the documentation and email correspondence related to the rupture event which took place on July 25, 2016.

As you may recall, the initial soil sample analysis included a chloride concentration in exceedance of the NMAC standard. EPNG secured the services of GHD Services, Inc. (GHD) to assist with further investigation of the rupture site.

Included in the attached document:

- Final Form C-141_with signature
- Initial Form C-141_with signature
- Email Correspondence related to the assignment of RP#
- Site Closure Report, prepared by GHD
- Initial Soil Analysis Report

Thank you very much for your assistance with the NMOCD process and documentation of this hydrostatic test rupture event. Please feel free to contact me if you have any questions or require any additional information.

Sincerely,

Sheila J. Castellano

KINDER MORGAN

Sheila Castellano - Contractor Consultant
2 North Nevada Ave
Colorado Springs, CO 80903
o: 719 520-3719
c: 719 352-1367

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.

Rupture #2 - RP# 4427

Release Notification and Corrective Action

OPERATOR

Initial Report X Final Report

Name of Company: El Paso Natural Gas Company, LLC (a Kinder Morgan owned company)	Contact Sheila Castellano
Address: approximately 0.7 miles north of Hennington Road and 0.9 miles east of Heidel Road	Telephone No. (719) 520-3719
Facility Name: El Paso Natural Gas Company, Line 3031	Facility Type 8-inch steel natural gas pipeline

Surface Owner: El Rey Salt Company, Inc. C/O Larry Lowe, President	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	NE/4 Sec18	14S	38E					Lea County, NM

Latitude 33.108137 **Longitude** -103.128895

NATURE OF RELEASE

Type of Release Inadvertent release of hydrostatic test water	Volume of Release approximately 4,350 gallons	Volume Recovered 3,850 gallons
Source of Release 8-inch steel natural gas pipeline	Date and Hour of Occurrence 7/25/16 8:30 a.m. (MDT)	Date and Hour of Discovery 7/25/16 8:30 a.m. (MDT)
Was Immediate Notice Given? **X Yes** ☐ No ☐ Not Required	If YES, To Whom? NMOCD Santa Fe Office: Jim Griswold NMOCD Santa Fe Office: Tomas Oberding NMOCD District 1 Office: Maxey Brown	
By Whom? Sheila Castellano	Date and Hour: 7/25/16 2:15 p.m. (MDT)	
Was a Watercourse Reached? ☐ Yes **X No**	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* EPNG was conducting a hydrostatic spike test of the existing natural gas pipeline L3031 and the pipeline failed during the test. In the initial verbal notification an estimated 1,500 gallons was reported as released. This hydrostatic test water quickly soaked into the ground. During the excavation of the failed section of pipeline, hydrostatic test water seeped into the excavation from the sidewalls of the trench. Project personnel were able to determine that approximately 4,350 gallons had been released. On-site personnel were able to collect 3,850 gallons from the trench back into the frac tank. Per Jim Griswold's request, a brief write-up related to the history of EPNG L3031 was submitted to his office as part of Kinder Morgan's written notification for the previous Rupture #1 on August 5, 2016. Additional details regarding the site investigation and remedial activities are included in the attached GHD "SITE CLOSURE REPORT" for 1RP-4427.

Describe Area Affected and Cleanup Action Taken.* Test water release was contained within the existing right of way. Hydrostatic test water from the released travelled east to the edge of the patrol road and then flowed along the western side of the existing patrol road. Affected soil has been piled and covered. See attached GHD "SITE CLOSURE REPORT" for 1RP-4427 for additional details. Based on the results presented in the report, Kinder Morgan is requesting closure for 1RP-4427.

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: Sheila F. Castellano	OIL CONSERVATION DIVISION	
Printed Name: Sheila F. Castellano	Approved by Environmental Specialist:	
Title: Consultant/Contractor	Approval Date:	Expiration Date:
E-mail Address: sheila_castellano@kindermorgan.com	Conditions of Approval:	Attached ☐
Date: November 9, 2016 Phone: (719) 520-3719		

* Attach Additional Sheets If Necessary

Original

SITE CLOSURE REPORT

Line 3031 Hydrotest Water Release

NMOCD # 1RP-4427
NE/4 of Section 18, Township 14 South
Range 38 East, Lea County, New Mexico

Prepared for: KinderMorgan

GHD | 2135 S. Loop 250 W Midland Texas 79703
11135011 01 **** | Report No 1 | November 07 2016

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Figure 1 Site Location Map

Figure 2 Soil Analytical Map

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Appendix A New Mexico Oil Conservation Division District Form C-141 (Initial)

Appendix B Site Photographs

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1. Introduction

GHD Services, Inc. (GHD) appreciates the opportunity to submit this Site Closure Report on behalf of El Paso Natural Gas Company, LLC, a Kinder Morgan owned company (KM) to the New Mexico Oil Conservation District (NMOCD) for 1RP-4427. This Site Closure Report is appended to the Final Report of NMOCD Form C-141 that is being submitted to the NMOCD.

This Site Closure Report provides documentation associated with a hydrotest water release from KM's 8-inch natural gas pipeline identified as Line 3031. The KM water release ("Site"), is located in the NE 1/4 of Section 18, Township 14 South, Range 38 East, approximately 17 miles northeast of Lovington, New Mexico as shown on the Site Location Map (Figure 1).

2. Section 2 Release Information and Response Activities

A release of hydrostatic test water was discovered at the Site at 8:30 a.m. (MST) on July 25, 2016, during pipeline hydrotesting operations. The release was caused by a small breach in the 8" natural gas steel pipeline, Line 3031. An estimated release of 1,500 gallons of freshwater was immediately verbally reported to the NMOCD by KM at 2:15 p.m. (MST) on July 25, 2016. Mr. Jim Griswold and Dr. Tomas Oberding with the NMOCD Environmental Bureau in Santa Fe were notified of the release, as was Mr. Maxey Brown with the NMOCD District 1 office in Hobbs. NMOCD Form C-141, Release Notification and Corrective Action, dated August 9, 2016 was submitted to the agency containing "Initial Report" information regarding the location, nature of release, remedial actions taken, along with the updated release amount of approximately 4,350 gallons, the recovered amount of approximately 3,850 gallons, and other additional information. A copy of this NMOCD Form C-141 is attached in Appendix A. A remediation permit number 1RP-4427 was assigned to this release.

The released fluids followed a narrow 1 to 2 ft. and shallow spill path toward the north (see Appendix B – Site Photographs). As shown on the attached photo log, the water flowed along the western side of the two track pipeline patrol road. KM originally reported the release to have travelled approximately 20 to 30 feet along the western side of the pipeline patrol road. After reviewing site photographs (see Photo 1 in Appendix B), and in a conservative effort to delineate any impact to the soil, GHD collected soil samples over a length of approximately 120 feet along the western side of the pipeline patrol road. The New Mexico Office of the State Engineer (NMOSE) website was utilized to research the depth to groundwater in the general area. Available depth to groundwater well (DTW) data within a 4-5 mile radius of the release indicated a DTW in the range of 100 – 120 feet in the vicinity.

3. Section 3 Soil Assessment, Delineation, and Remediation

3.1 Pipeline Repair-Excavation and Spill Path Assessment

A section of the pipeline that containing the breach associated with the hydrotest water release was replaced and repaired by KM. An approximate 110' x 30' x 4' deep area was excavated as part of the repair activities. A composite soil sample was collected in the repair excavation, adjacent to the release point, on July 28, 2016. The chloride concentration from the July sample (Site 2 Spill; by TraceAnaylsis) was 603 milligrams per kilogram (mg/kg). Removed soils were placed to the south and west of the excavation. It is noted that the area received substantial precipitation (~4+ inches) in August and September 2016. On September 30, 2016, GHD mobilized to the site to perform additional soil sampling at the release site. Soil samples were collected from within the repair excavation and spill path and then analyzed for chlorides (EPA Method 300). The sample locations and chloride concentrations are posted on Figure 2. All four soil samples collected from 0-6" along the spill path exhibited chloride concentrations below the laboratory reporting limit of 5 mg/kg. Two of the three soil samples collected from 0-6" in the repair excavation floor also had chloride concentrations below 5 mg/kg. The remaining excavation sample, EXC-2, had a chloride concentration of 15.4 mg/kg.

3.2 Soil Stockpile Assessment

In an effort to demonstrate that stockpiled soils could be used to backfill the repair excavation, additional analytical testing was performed at the North Stockpile, South Stockpile, and Berm locations. Chlorides, benzene, toluene, ethylbenzene, xylenes (BTEX; EPA 8260C), and total petroleum hydrocarbons (S 8015D) analysis were performed on composite samples obtained from stockpiled soils staged outside of the repair excavation. Chloride concentrations are posted on Figure 2. All BTEX and TPH concentrations from the three composite stockpile locations exhibited levels below laboratory detection limits. Laboratory reports and chain of custody forms are provided in Appendix C.

The repair excavation is currently open and has not been backfilled. Analytical sample results from the excavation floor and stockpiled soils indicate that existing soil concentrations (chlorides, BTEX, and TPH) are protective of groundwater, human health and the environment. Consequently, GHD, on behalf of KM, recommends no further excavation is necessary and request onsite soils be used as backfill material for the repair excavation.

4. Section 4 Summary

A hydrotest water release was discovered at the Site in July 2016. The following are summary points for the release incident:

- The release occurred at 8:30 a.m. on July 25, 2016, during pipeline hydrotesting operations. The release was caused by a small breach in the 8" natural gas pipeline. An estimated release of 1,500 gallons of freshwater was immediately verbally reported to the NMOCD.

• NMOCD Form C-141, Release Notification and Corrective Action, dated August 9, 2016, was submitted to the agency as an initial report regarding the details of the release, which included the updated release amount of approximately 4,350 gallons with a recovered amount of approximately 3,850 gallons.

• The NMOCD "Guidelines for Remediation of Leaks, Spills and Releases," published August 13, 1993, was utilized for project activities. Based on a ranking criteria score of "0", site RRALs utilized were 5,000 mg/kg for TPH, 10 mg/kg for benzene, and 50 mg/kg for total BTEX.

• A composite soil sample was collected in the repair excavation, adjacent to the release point, on July 28, 2016. The chloride concentration from the July sample (Site 2 Spill) was 603 milligrams per kilogram (mg/kg).

• The extent of the chloride-impacted soils was defined by collecting delineation and confirmation samples from the area proximate to the release site and along the spill path.

• Analytical sample results from the excavation floor and stockpiled soils indicate that existing soil concentrations (chlorides, BTEX, and TPH) are protective of groundwater, human health, and the environment.

• Assessment, restoration, and closure activities are to be performed in coordination with appropriate NMOCD personnel and guidelines.

5. Section 5 Site Closure Request for 1RP-4427

This Site Closure Report for the KM Line 3031 Hydrostatic test Water Release, 1RP-4427, provides documentation of closure activities performed at the release site. Based on assessment and corrective actions performed to date and documented in this report, GHD, on behalf of KM, respectfully requests the NMOCD to rule that no further action for this Site is warranted. In addition, KM requests NMOCD approval to backfill the repair excavation using onsite soil stockpiles.

Please feel free to contact Tom Larson at the GHD Midland, Texas office (432-686-0086) if there are any questions or additional information is required.

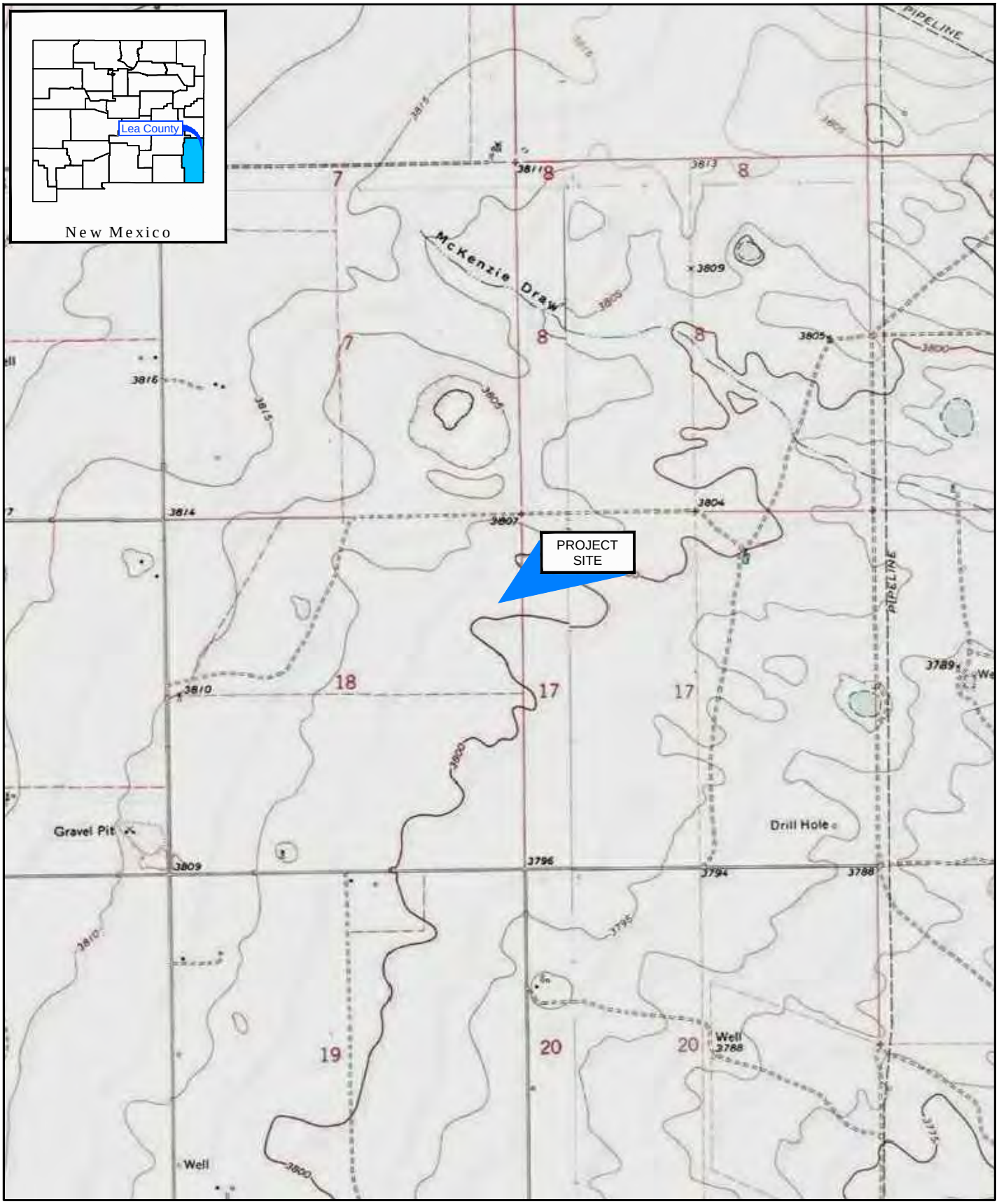
Sincerely,

GHD

Thomas C. Larson, PG
Principal, Midland Operations Manager

John Fergerson, PG
Senior Project Manager

Figures



Source: USGS 7.5 Minute Quad "Prairieview, Prairieview SE, Prairieview NW, and Prairieview NE, New Mexico"

Lat/Long: 33.108137ÁNorth, 103.128895ÁWest

0 1000 2000ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

KINDER MORGAN
LEA COUNTY, NEW MEXICO
1RP-4427 KM HYDROTEST PIPELINE RELEASE

11135011-00

Nov 3, 2016

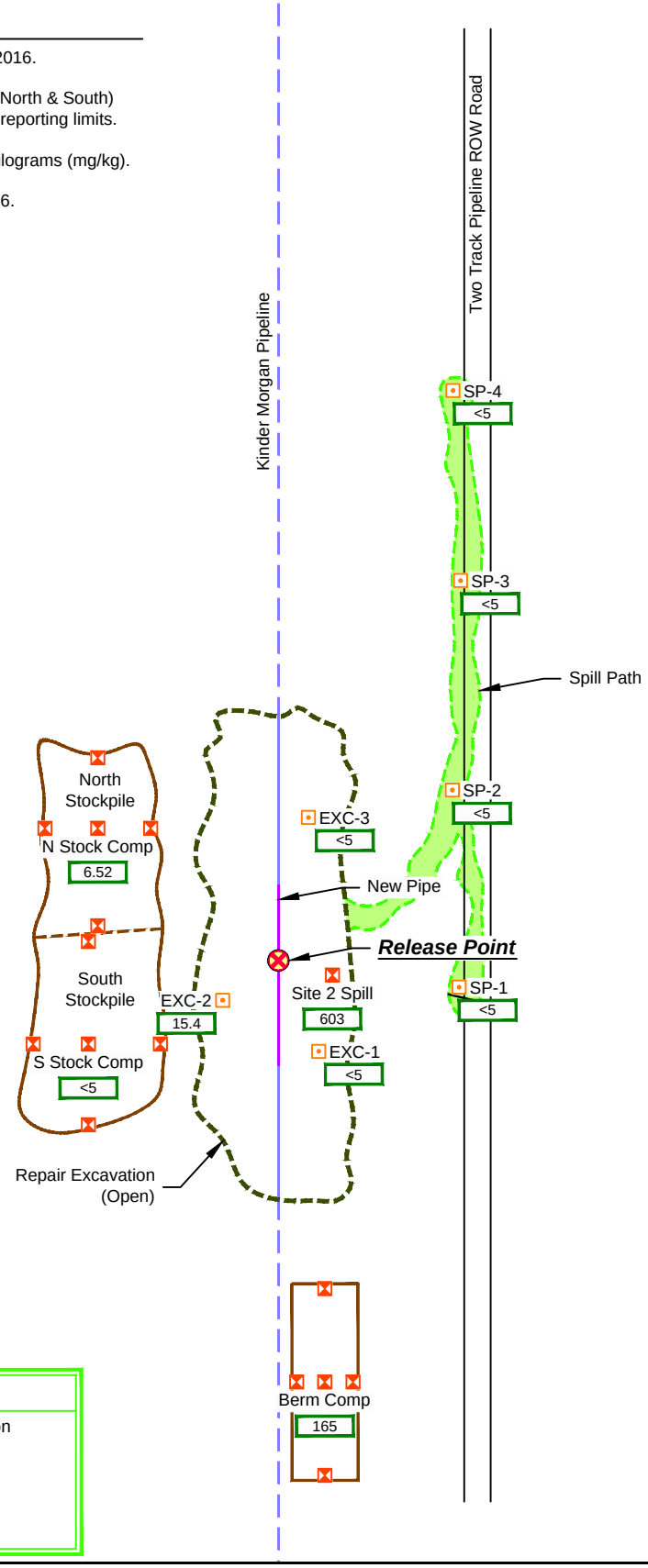
SITE LOCATION MAP

FIGURE 1

CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135011-KM-Hydrotest Water Release Sampling\11135011-00(000)GN-DL001.dwg

NOTES:

1. GHD samples collected September 30, 2016.
2. BTEX or TPH not detected in stock pile (North & South) and berm composite samples above lab reporting limits.
3. Chloride samples are in milligrams per kilograms (mg/kg).
4. Site 2 spill sample collected July 25, 2016.



0 20 40ft

Approximate

KINDER MORGAN
LEA COUNTY, NEW MEXICO
1RP-4427 KM HYDROTEST PIPELINE RELEASE

11135011-00
Nov 3, 2016

SOIL ANALYTICAL RESULTS FIGURE 2

CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135011-KM-Hydrotest Water Release Sampling\11135011-00(000)GN-DL001.dwg

Appendices

Appendix A
New Mexico Oil Conservation Division
District Form C-141 (initial)

Rupture #2

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

x Initial Report ☐ Final Report

Name of Company: El Paso Natural Gas Company, LLC (a Kinder Morgan owned company)	Contact Sheila Castellano
Address: approximately 0.7 miles north of Hennington Road and 0.9 miles east of Heidel Road	Telephone No. (719) 520-3719
Facility Name: El Paso Natural Gas Company Line 3031	Facility Type 8-inch Natural Gas Pipeline

Surface Owner: El Rey Salt Company, Inc. C/O Larry Lowe, President	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	NE/4 Sec18	14S	38E					Lea County, NM

Latitude 33.108137 **Longitude** -103.128895

NATURE OF RELEASE

Type of Release Inadvertent release of hydrostatic test water	Volume of Release approximately 4,350 gallons	Volume Recovered 3,850 gallons
Source of Release 8-inch natural gas pipeline	Date and Hour of Occurrence 7/25/16 8:30a MDT	Date and Hour of Discovery 7/25/16 8:30a MDT
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD Santa Fe Office: Jim Griswold NMOCD Santa Fe Office: Tomas Oberding NMOCD District 1 Office: Maxey Brown	
By Whom? Sheila Castellano	Date and Hour 7/25/16 2:15p MDT	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
EPNG was conducting a hydrostatic spike test of the existing L3031 and the pipeline failed during the test. No remedial action was taken. Preparations were made to stop any future flow from entering the ephemeral wash located at MP 1.4.

Jim Griswold requested a brief write up related to the history of EPNG L3031. Information regarding L3031 was included as part of our written notification for Rupture #1, submitted August 5, 2016.

Describe Area Affected and Cleanup Action Taken.*
Test water release was contained within the existing right of way, flowing approximately 20 – 30 feet down the existing patrol road. Affected soil has been piled and covered. Soil sample was taken from within the affected area. Analysis results are pending.

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: Sheila F. Castellano	OIL CONSERVATION DIVISION	
Printed Name: Sheila F. Castellano	Approved by Environmental Specialist:	
Title: Consultant/Contractor	Approval Date:	Expiration Date:
E-mail Address: sheila_castellano@kindermorgan.com	Conditions of Approval:	Attached ☐
Date: August 9, 2016 Phone: (719) 520-3719		

Appendix B
Site Photographs

Photo 1 – View to north at hydrotest water spill path along west side of patrol road on July 25, 2016

Photo 2 – View to south at hydrotest water spill path along west side of patrol road on July 25, 2016.

Site Photographs

Photo 3 – Close in view of hydrotest water ‘release bulge’ – looking west, July 25, 2016.

Photo 4 – 9/30/16: GHD geologist collecting hand auger samples along the spill path.

Photo 5 – View to west at soil stockpile on west side of repair excavation.

Appendix C
Certified Laboratory Reports And Chain of Custody forms

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Glen Thompson
Kinder Morgan/El Paso Natural Gas-Odessa
1550 Windway
Odessa, TX, 79761

Report Date: August 2, 2016

Work Order: 16072912

Project Name: Lovington Leak
Project Number: Lovington Leak

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
425442	Site 1 Spill	soil	2016-07-28	20:00	2016-07-29
425443	Site 1 Background	soil	2016-07-28	20:00	2016-07-29
425444	Site 2 Spill Line 3031*	soil	2016-07-28	20:15	2016-07-29
425445	Site 2 Background	soil	2016-07-28	20:15	2016-07-29
425446	Site 3 Spill	soil	2016-07-28	20:45	2016-07-29
425447	Site 3 Background	soil	2016-07-28	20:45	2016-07-29

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

* 17 mi NE of Lovington NM

Sample: 425444 - Site 2 Spill

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	131816	Date Analyzed:	2016-07-29	Analyzed By:	RL
Prep Batch:	111704	Sample Preparation:	2016-07-29	Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		3,4	**603**	mg/Kg	5	25.0

Sample: 425444 - Site 2 Spill

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	131830	Date Analyzed:	2016-08-01	Analyzed By:	HJ
Prep Batch:	111719	Sample Preparation:	2016-08-01	Prepared By:	HJ

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	U	1,2,3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			23.2	mg/Kg	1	25.0	93	58.2 - 150

Sample: 425444 - Site 2 Spill

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	131808	Date Analyzed:	2016-07-29	Analyzed By:	MT
Prep Batch:	111698	Sample Preparation:	2016-07-29	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	B,U	1,2,3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.28	mg/Kg	1	2.00	114	76.4 - 123
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	69.4 - 120

Sample: 425444 - Site 2 Spill

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260 C	Prep Method:	S 5030B
QC Batch:	131821	Date Analyzed:	2016-07-29	Analyzed By:	KB
Prep Batch:	111708	Sample Preparation:	2016-07-29	Prepared By:	KB

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dichlorodifluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloromethane (methyl chloride)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Vinyl Chloride	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromomethane (methyl bromide)	U	1,2,3,4	<100	µg/Kg	1	100
Chloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichlorofluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acetone	Qc,U	1,2,3,4	<200	µg/Kg	1	200
Iodomethane (methyl iodide)	U	1,2,3,4	<100	µg/Kg	1	100
Carbon Disulfide	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acrylonitrile	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<100	µg/Kg	1	100
4-Methyl-2-pentanone (MIBK)	Qr,U	1,2,3,4	<100	µg/Kg	1	100
2-Hexanone	Qc,U	1,2,3,4	<100	µg/Kg	1	100
trans 1,4-Dichloro-2-butene	Qc,Qr,U	1,2,3,4	<200	µg/Kg	1	200
1,1-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Methylene chloride	B,Jb	1,2,3,4	<100	µg/Kg	1	100
MTBE	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2,2-Dichloropropane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloroethane (EDC)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloroform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1-Trichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloropropene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Benzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Carbon Tetrachloride	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichloroethene (TCE)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromomethane (methylene bromide)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromodichloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chloroethyl vinyl ether	U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Toluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2-Trichloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromochloromethane	Qr,U	1,3,4	<20.0	µg/Kg	1	20.0

continued ...

sample 425444 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
1,2-Dibromoethane (EDB)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Tetrachloroethene (PCE)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chlorobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Ethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
m,p-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromoform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Styrene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
o-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,3-Trichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Isopropylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Propylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3,5-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
tert-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,4-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,4-Dichlorobenzene (para)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
sec-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
p-Isopropyltoluene	U	1,2,3	<20.0	µg/Kg	1	20.0
4-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichlorobenzene (ortho)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromo-3-chloropropane	Qr,U	1,3,4	<100	µg/Kg	1	100
1,2,3-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
1,2,4-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
Naphthalene	U	1,2,3,4	<100	µg/Kg	1	100
Hexachlorobutadiene	U	1,2,3,4	<100	µg/Kg	1	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	874	µg/Kg	1	965	90	78 - 119
Toluene-d8			989	µg/Kg	1	965	102	85 - 116
4-Bromofluorobenzene (4-BFB)			904	µg/Kg	1	965	94	79 - 119

Sample: 425445 - Site 2 Background

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	131816	Date Analyzed:	2016-07-29	Analyzed By:	RL
Prep Batch:	111704	Sample Preparation:	2016-07-29	Prepared By:	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4	<25.0	mg/Kg	1	25.0

Sample: 425445 - Site 2 Background

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	131801	Date Analyzed:	2016-08-01	Analyzed By:	HJ
Prep Batch:	111686	Sample Preparation:	2016-07-29	Prepared By:	HJ

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			19.0	mg/Kg	1	25.0	76	58.2 - 150

Sample: 425445 - Site 2 Background

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	131808	Date Analyzed:	2016-07-29	Analyzed By:	MT
Prep Batch:	111698	Sample Preparation:	2016-07-29	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	B,U	1,2,3	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.34	mg/Kg	1	2.00	117	76.4 - 123
4-Bromofluorobenzene (4-BFB)			2.05	mg/Kg	1	2.00	102	69.4 - 120

Sample: 425445 - Site 2 Background

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260 C	Prep Method:	S 5030B
QC Batch:	131821	Date Analyzed:	2016-07-29	Analyzed By:	KB
Prep Batch:	111708	Sample Preparation:	2016-07-29	Prepared By:	KB

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Bromochloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dichlorodifluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloromethane (methyl chloride)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Vinyl Chloride	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromomethane (methyl bromide)	U	1,2,3,4	<100	µg/Kg	1	100
Chloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichlorofluoromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acetone	Qc,U	1,2,3,4	<200	µg/Kg	1	200
Iodomethane (methyl iodide)	U	1,2,3,4	<100	µg/Kg	1	100
Carbon Disulfide	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Acrylonitrile	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Butanone (MEK)	Qc,Qr,U	1,2,3,4	<100	µg/Kg	1	100
4-Methyl-2-pentanone (MIBK)	Qr,U	1,2,3,4	<100	µg/Kg	1	100
2-Hexanone	Qc,U	1,2,3,4	<100	µg/Kg	1	100
trans 1,4-Dichloro-2-butene	Qc,Qr,U	1,2,3,4	<200	µg/Kg	1	200
1,1-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Methylene chloride	B,Jb	1,2,3,4	<100	µg/Kg	1	100
MTBE	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,2-Dichloroethene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2,2-Dichloropropane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloroethane (EDC)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chloroform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1-Trichloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1-Dichloropropene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Benzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Carbon Tetrachloride	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Trichloroethene (TCE)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromomethane (methylene bromide)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromodichloromethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chloroethyl vinyl ether	U	1,2,3,4	<20.0	µg/Kg	1	20.0
cis-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
trans-1,3-Dichloropropene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Toluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2-Trichloroethane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Dibromochloromethane	Qr,U	1,3,4	<20.0	µg/Kg	1	20.0

continued ...

sample 425445 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
1,2-Dibromoethane (EDB)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Tetrachloroethene (PCE)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Chlorobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,1,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Ethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
m,p-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromoform	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
Styrene	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
o-Xylene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,1,2,2-Tetrachloroethane	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
2-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,3-Trichloropropane	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Isopropylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
Bromobenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Propylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3,5-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
tert-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2,4-Trimethylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,4-Dichlorobenzene (para)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
sec-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,3-Dichlorobenzene (meta)	U	1,2,3,4	<20.0	µg/Kg	1	20.0
p-Isopropyltoluene	U	1,2,3	<20.0	µg/Kg	1	20.0
4-Chlorotoluene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dichlorobenzene (ortho)	Qr,U	1,2,3,4	<20.0	µg/Kg	1	20.0
n-Butylbenzene	U	1,2,3,4	<20.0	µg/Kg	1	20.0
1,2-Dibromo-3-chloropropane	Qr,U	1,3,4	<100	µg/Kg	1	100
1,2,3-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
1,2,4-Trichlorobenzene	U	1,2,3,4	<100	µg/Kg	1	100
Naphthalene	U	1,2,3,4	<100	µg/Kg	1	100
Hexachlorobutadiene	U	1,2,3,4	<100	µg/Kg	1	100

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		4	827	µg/Kg	1	965	86	78 - 119
Toluene-d8			975	µg/Kg	1	965	101	85 - 116
4-Bromofluorobenzene (4-BFB)			906	µg/Kg	1	965	94	79 - 119

LAB Order ID # 1607291 2

Page _____ of _____

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: Kinder Morgan
Phone #:
Address: (Street, City, Zip) Midland
Fax #:
Contact Person: Glen Thompson
E-mail:
Invoice to:
(If different from above)
Project #:
Project Name: Lovington Leak
Project Location (including state):
Sampler Signature: Kim Boulden

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
~~425440~~	Site 3	4		X								X		7/28/16	1930
441	Frac	4		X								X		"	"
442	Site 1 Spill	2			X							X		7/28/16	2000
443	Site 1 Background	2			X							X			2000
444	Site 2 Spill	2			X							X			2015
445	Site 2 Background	2			X							X			2015
446	Site 3 Spill	2			X							X			2045
447	Site 3 Background	2			X							X			2045

LAB # (LAB USE ONLY)	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC							Turn Around Time if different from standard	Hold
~~425440~~			X	X								X					X	X								
441			X	X								X					X	X								
												X					X	X								
442			X	X								X					X	X								
443			X	X								X					X	X								
444			X	X								X					X	X								
445			X	X								X					X	X								
446			X	X								X					X	X								
447			X	X								X					X	X								
												X					X	X								

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST / OBS / COR
Kim Boulden	TA	7-29-16	900		TA	7-29-16	900	INST ____ OBS ____ °C COR 4 °C
								INST ____ OBS ____ °C COR ____ °C
								INST ____ OBS ____ °C COR ____ °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review

REMARKS: Rush

- [ ] Dry Weight Basis Required
- [ ] TRRP Report Required
- [ ] Check If Special Reporting Limits Are Needed

Carrier # Carrying on ice

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Revision 1, 09/15/15

ORIGINAL COPY

Analytical Report 537913

for

GHD Services, INC- Midland

Project Manager: Tom Larson

Chloride Soil Sampling-Hydrotest Water Release

11135011

10-OCT-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

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10-OCT-16

Project Manager: **Tom Larson**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **537913**
Chloride Soil Sampling-Hydrotest Water Release
Project Address: 17 miles NE Lovingston NM

Tom Larson:

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) 537913. 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. 537913 will be filed for 60 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 537913

GHD Services, INC- Midland, Midland, TX

Chloride Soil Sampling-Hydrotest Water Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-4	S	09-30-16 12:40	- 0.5 ft	537913-001
SP-3	S	09-30-16 12:50	- 0.5 ft	537913-002
SP-2	S	09-30-16 13:00	- 0.5 ft	537913-003
SP-1	S	09-30-16 13:10	- 0.5 ft	537913-004
EXC-3	S	09-30-16 13:35	- 0.5 ft	537913-005
EXC-2	S	09-30-16 13:45	- 0.5 ft	537913-006
EXC-1	S	09-30-16 13:55	- 0.5 ft	537913-007
Pit Comp	S	09-30-16 14:00	ft	537913-008
N Stock Comp	S	09-30-16 14:10	ft	537913-009
S Stock Comp	S	09-30-16 14:20	ft	537913-010

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3001357 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 537913

GHD Services, INC- Midland, Midland, TX

Project Name: Chloride Soil Sampling-Hydrotest Water Release

Project Id: 11135011
Contact: Tom Larson
Project Location: 17 miles NE Lovingston NM

Date Received in Lab: Mon Oct-03-16 09:50 am
Report Date: 10-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	537913-001		537913-002		537913-003		537913-004		537913-005		537913-006	
	Field Id:	SP-4		SP-3		SP-2		SP-1		EXC-3		EXC-2	
	Depth:	0.5 ft		0.5 ft		0.5 ft		0.5 ft		0.5 ft		0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-30-16 12:40		Sep-30-16 12:50		Sep-30-16 13:00		Sep-30-16 13:10		Sep-30-16 13:35		Sep-30-16 13:45	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Oct-07-16 10:00		Oct-07-16 10:00		Oct-07-16 10:00		Oct-07-16 10:00		Oct-07-16 10:00		Oct-07-16 10:00	
	Analyzed:	Oct-07-16 12:46		Oct-07-16 13:07		Oct-07-16 13:14		Oct-07-16 13:21		Oct-07-16 13:28		Oct-07-16 13:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		ND	5.00	ND	5.00	ND	5.00	ND	5.00	ND	5.00	15.4	5.00

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 537913

GHD Services, INC- Midland, Midland, TX

Project Name: Chloride Soil Sampling-Hydrotest Water Release

Project Id: 11135011
Contact: Tom Larson
Project Location: 17 miles NE Lovingston NM

Date Received in Lab: Mon Oct-03-16 09:50 am
Report Date: 10-OCT-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	537913-007		537913-008		537913-009		537913-010					
	Field Id:	EXC-1		Pit Comp		N Stock Comp		S Stock Comp					
	Depth:	0.5 ft											
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Sep-30-16 13:55		Sep-30-16 14:00		Sep-30-16 14:10		Sep-30-16 14:20					
BTEX by EPA 8021B	***Extracted:***			Oct-03-16 16:30		Oct-03-16 16:30		Oct-03-16 16:30					
	Analyzed:			Oct-03-16 16:43		Oct-03-16 18:05		Oct-03-16 17:16					
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene				ND	0.00149	ND	0.00150	ND	0.00149				
Toluene				ND	0.00199	ND	0.00200	ND	0.00199				
Ethylbenzene				ND	0.00199	ND	0.00200	ND	0.00199				
m_p-Xylenes				ND	0.00199	ND	0.00200	ND	0.00199				
o-Xylene				ND	0.00299	ND	0.00300	ND	0.00298				
Total Xylenes				ND	0.00199	ND	0.00200	ND	0.00199				
Total BTEX				ND	0.00149	ND	0.00150	ND	0.00149				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Oct-07-16 10:00		Oct-07-16 10:00		Oct-07-16 10:00		Oct-07-16 10:00					
	Analyzed:	Oct-07-16 13:56		Oct-07-16 14:03		Oct-07-16 14:10		Oct-07-16 14:18					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		ND	5.00	165	5.00	6.52	5.00	ND	5.00				
TPH By SW8015B Mod	***Extracted:***			Oct-04-16 14:00		Oct-04-16 14:00		Oct-04-16 14:00					
	Analyzed:			Oct-05-16 01:22		Oct-05-16 01:46		Oct-05-16 02:09					
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons				ND	15.0	ND	15.0	ND	15.0				
C10-C28 Diesel Range Hydrocarbons				ND	15.0	ND	15.0	ND	15.0				
Total TPH				ND	15.0	ND	15.0	ND	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

+ 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: Chloride Soil Sampling-Hydrotest Water Release

Work Orders : 537913,

Project ID: 11135011

Lab Batch #: 3001357 **Sample:** 537913-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/03/16 16:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 3001357 **Sample:** 537913-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/03/16 17:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 3001357 **Sample:** 537913-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/03/16 18:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 3001374 **Sample:** 537913-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/16 01:22

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	99.9	97	70-135	
o-Terphenyl	50.7	50.0	101	70-135	

Lab Batch #: 3001374 **Sample:** 537913-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/16 01:46

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.9	97	70-135	
o-Terphenyl	51.0	50.0	102	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: Chloride Soil Sampling-Hydrotest Water Release

Work Orders : 537913, **Project ID:** 11135011

Lab Batch #: 3001374 **Sample:** 537913-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/16 02:09

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	52.6	49.9	105	70-135	

Lab Batch #: 3001357 **Sample:** 714537-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/03/16 15:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 3001374 **Sample:** 714561-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/05/16 00:10

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	60.2	50.0	120	70-135	

Lab Batch #: 3001357 **Sample:** 714537-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/03/16 14:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 3001374 **Sample:** 714561-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/05/16 00:33

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	61.5	50.0	123	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: Chloride Soil Sampling-Hydrotest Water Release

Work Orders : 537913,

Project ID: 11135011

Lab Batch #: 3001357 **Sample:** 714537-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/03/16 14:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 3001374 **Sample:** 714561-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/05/16 00:57

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	64.2	50.0	128	70-135	

Lab Batch #: 3001357 **Sample:** 537909-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/03/16 19:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 3001374 **Sample:** 537913-010 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/16 02:33

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	57.2	50.0	114	70-135	

Lab Batch #: 3001357 **Sample:** 537909-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/03/16 20:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0309	0.0300	103	80-120	

* 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: Chloride Soil Sampling-Hydrotest Water Release

Work Orders : 537913, **Project ID:** 11135011

Lab Batch #: 3001374 **Sample:** 537913-010 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/16 02:57

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	99.8	120	70-135	
o-Terphenyl	54.9	49.9	110	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.

BS / BSD Recoveries

Project Name: Chloride Soil Sampling-Hydrotest Water Release

Work Order #: 537913 **Project ID:** 11135011

Analyst: PJB **Date Prepared:** 10/03/2016 **Date Analyzed:** 10/03/2016

Lab Batch ID: 3001357 **Sample:** 714537-1-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	<0.00150	0.100	0.0930	93	0.100	0.0933	93	0	70-130	35	
Toluene	<0.00200	0.100	0.0949	95	0.100	0.0945	95	0	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0981	98	0.100	0.0980	98	0	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.200	100	0.200	0.200	100	0	70-135	35	
o-Xylene	<0.00300	0.100	0.0986	99	0.100	0.0991	99	1	71-133	35	

Analyst: MNR **Date Prepared:** 10/07/2016 **Date Analyzed:** 10/07/2016

Lab Batch ID: 3001659 **Sample:** 714717-1-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	259	104	250	257	103	1	90-110	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

BS / BSD Recoveries

Project Name: Chloride Soil Sampling-Hydrotest Water Release

Work Order #: 537913 **Project ID:** 11135011

Analyst: ARM **Date Prepared:** 10/04/2016 **Date Analyzed:** 10/05/2016

Lab Batch ID: 3001374 **Sample:** 714561-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B 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
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	948	95	1000	918	92	3	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	978	98	1000	950	95	3	70-135	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

Form 3 - MS / MSD Recoveries

Project Name: Chloride Soil Sampling-Hydrotest Water Release

Work Order # : 537913 **Project ID:** 11135011

Lab Batch ID: 3001357 **QC- Sample ID:** 537909-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/03/2016 **Date Prepared:** 10/03/2016 **Analyst:** PJB

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	<0.00150	0.100	0.0813	81	0.0998	0.0799	80	2	70-130	35	
Toluene	<0.00200	0.100	0.0836	84	0.0998	0.0822	82	2	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0853	85	0.0998	0.0857	86	0	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.174	87	0.200	0.175	88	1	70-135	35	
o-Xylene	<0.00300	0.100	0.0884	88	0.0998	0.0880	88	0	71-133	35	

Lab Batch ID: 3001659 **QC- Sample ID:** 537913-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/07/2016 **Date Prepared:** 10/07/2016 **Analyst:** MNR

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	<5.00	250	275	110	250	274	110	0	90-110	20	

Lab Batch ID: 3001659 **QC- Sample ID:** 538140-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/07/2016 **Date Prepared:** 10/07/2016 **Analyst:** MNR

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	7740	2500	10300	102	2500	10300	102	0	90-110	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.

Form 3 - MS / MSD Recoveries

Project Name: Chloride Soil Sampling-Hydrotest Water Release

Work Order # : 537913 **Project ID:** 11135011

Lab Batch ID: 3001374 **QC- Sample ID:** 537913-010 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/05/2016 **Date Prepared:** 10/04/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B 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
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	908	91	998	880	88	3	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	978	98	998	953	95	3	70-135	35	

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.

CHAIN OF CUSTODY

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XENCO LABORATORIES

Setting the Standard since 1990

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Lakeland, Florida (863-646-8528)

Tampa, Florida (813-620-2000)

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Xenco Quote #

Xenco Job # 537913

Client / Reporting Information	Project Information
Company Name / Branch: for Kinder Morgan	Project Name/Number: 11135011
Company Address: GHD Midland	Project Location: 17mi NE Lovington NM
Email: tom.larson@ghd.com Phone No:	Invoice To: GHD
Project Contact: Tom Larson	PO Number:
Samplers's Name: Tom Larson	

Analytical Information

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Date (2016)	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	TPH 8015 mod (N.Mex)	BTEX	Field Comments
1	SP-4	0.5	9/30	1240	S	1									X			Spill Path
2	SP-3	0.5		1250														"
3	SP-2	0.5		1300														"
4	SP-1	0.5		1310														"
5	EXC-3	0.5		1335														Exc floor
6	EXC-2	0.5		1345														"
7	EXC-1	0.5		1355														"
8	Pit Comp	-		1400											X	X		Composite
9	N Stock Comp	-		1410											X	X		"
10	S Stock Comp	-		1420											X	X		"

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY reg.

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

Reg TAT, New Mexico

*Note: added TPH + BTEX and Cl

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Tom Larson	10/3/16 8:50			10-3-16 9:50	
2						
3						
4						
5				Custody Seal #	Preserved where applicable	On Ice

Temp: IR ID:R-8
C/F: 0 6.3°C
Corrected Temp:

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless prev

Final 1.000

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 10/03/2016 09:50:00 AM

Work Order #: 537913

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)?	6.3
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
Jessica Kramer
Date: 10/03/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 10/03/2016

Castellano, Sheila Fennell (Contractor)

From:	Castellano, Sheila Fennell (Contractor)
Sent:	Tuesday, August 09, 2016 4:41 PM
To:	'Jim.Griswold@state.nm.us'
Cc:	tomas.oberding@state.nm.us; MaxeyG.Brown@state.nm.us
Subject:	El Paso Natural Gas Company_Line No. 3031 Spike Test_Form C141 Release Notification_Rupture #2
Attachments:	NMOCD_Form C-141_Rupture#2.pdf

Mr. Griswold,

Attached is El Paso Natural Gas Company's (EPNG) submittal of Form C-141, as NMOCD's required Written Notification, for the unauthorized release of hydrostatic test water in Lea County, New Mexico. The event (**RUPTURE #2**) occurred during a hydrostatic spike test of EPNG's existing 8-inch O.D. Tipperary – Denten Crossover Line (Line No. 3031) on July 25, 2016.

Project Background:
As part of the Kinder Morgan Inc. Integrity Management Program, EPNG is conducting a hydrostatic spike test of the existing 8-inch O.D. Line No. 3031, located approximately 15 miles northeast of the City of Lovington in Lea County, New Mexico. The pipeline originates at the Davis Gas Processing Plant and extends northward 7.02 miles where it ties into EPNG's existing 1300 Line System. Line No. 3031 was constructed by EPNG in 1954 and is in a Class 1 location. EPNG determined that a total of 110,000 gallons of water for cleaning and testing would be required for the test. In general, a spike test consists of filling the pipeline with water and testing within a pressure range determined by percentage of specified minimum yield strength (SMYS) of the lowest strength pipe in the test segment. The hydrostatic spike test duration is a total of eight (8) hours at pressures near the pipe yield strength.

To date, EPNG has experience failures at **seven** different locations during the spike test process. Each event was communicated to NMOCD within 24 hours and efforts to compile more detailed information for the required written notification Form C-141 are ongoing.

EPNG collected water and soil samples from each rupture location. The analysis reports will be forwarded to the NMOCD upon receipt.

Please feel free to contact me directly if you have any questions.

Thank you,
Sheila Castellano

KINDER MORGAN

Sheila Castellano - Contractor Consultant
2 North Nevada Ave
Colorado Springs, CO 80903
o: 719 520-3719
c: 719 352-1367

Rupture #2

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

x Initial Report ☐ Final Report

Name of Company: El Paso Natural Gas Company, LLC (a Kinder Morgan owned company)	Contact Sheila Castellano
Address: approximately 0.7 miles north of Hennington Road and 0.9 miles east of Heidel Road	Telephone No. (719) 520-3719
Facility Name: El Paso Natural Gas Company Line 3031	Facility Type 8-inch Natural Gas Pipeline

Surface Owner: El Rey Salt Company, Inc. C/O Larry Lowe, President	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	NE/4 Sec18	14S	38E					Lea County, NM

Latitude 33.108137 **Longitude** -103.128895

NATURE OF RELEASE

Type of Release Inadvertent release of hydrostatic test water	Volume of Release approximately 4,350 gallons	Volume Recovered 3,850 gallons
Source of Release 8-inch natural gas pipeline	Date and Hour of Occurrence 7/25/16 8:30a MDT	Date and Hour of Discovery 7/25/16 8:30a MDT
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD Santa Fe Office: Jim Griswold NMOCD Santa Fe Office: Tomas Oberding NMOCD District 1 Office: Maxey Brown	
By Whom? Sheila Castellano	Date and Hour 7/25/16 2:15p MDT	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
EPNG was conducting a hydrostatic spike test of the existing L3031 and the pipeline failed during the test. No remedial action was taken. Preparations were made to stop any future flow from entering the ephemeral wash located at MP 1.4.

Jim Griswold requested a brief write up related to the history of EPNG L3031. Information regarding L3031 was included as part of our written notification for Rupture #1, submitted August 5, 2016.

Describe Area Affected and Cleanup Action Taken.*
Test water release was contained within the existing right of way, flowing approximately 20 – 30 feet down the existing patrol road. Affected soil has been piled and covered. Soil sample was taken from within the affected area. Analysis results are pending.

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: Sheila F. Castellano	OIL CONSERVATION DIVISION	
Printed Name: Sheila F. Castellano	Approved by Environmental Specialist:	
Title: Consultant/Contractor	Approval Date:	Expiration Date:
E-mail Address: sheila_castellano@kindermorgan.com	Conditions of Approval:	Attached ☐
Date: August 9, 2016 Phone: (719) 520-3719		

From: Keyes, Jamie, EMNRD [mailto:Jamie.Keyes@state.nm.us]
Sent: Monday, August 22, 2016 8:37 AM
To: Castellano, Sheila Fennell (Contractor)
Cc: Martino, Mary K; Oberding, Tomas, EMNRD; Lynch, Kristen, EMNRD
Subject: RE: EPNG Line 3031_Request to Backfill Rupture Sites 1 - 4

Good morning,

Permission to backfill is granted for 1, 3, and 4 as those soil samples look good. However, 2 has elevated chlorides and will need further delineation.

Thank you,

Jamie R. Keyes
Environmental Specialist, District 1
Oil Conservation Division, EMNRD
(575) 393-6161 ext. 113
575-370-3188 (emergency-cell)

From: Lynch, Kristen, EMNRD [mailto:Kristen.Lynch@state.nm.us]
Sent: Wednesday, August 31, 2016 1:34 PM
To: Castellano, Sheila Fennell (Contractor)
Cc: Keyes, Jamie, EMNRD
Subject: RE: EPNG Line 3031 Rupture #2_information

Shiela,

The RP for Rupture #2 is 4427.

Thanks,

Kristen D. Lynch
Environmental Specialist, District 1
Oil Conservation Division, EMNRD
(575) 393-6161 ext. 111
575-370-3180 (emergency-cell)

From: Castellano, Sheila Fennell (Contractor) [mailto:Sheila_Castellano@KinderMorgan.com]
Sent: Wednesday, August 17, 2016 3:50 PM
To: Lynch, Kristen, EMNRD
Cc: Keyes, Jamie, EMNRD
Subject: EPNG Line 3031 Rupture #2_information

Kristen,

Thank you so much for your guidance! You were very helpful.
As discussed, here is the information related to EPNG L3031 Rupture #2.
Location #2 is the only failure site that we were not able to get a water sample, as it had already settled into the ditch by the time the crews arrived. We did however, get a soil sample from the affected area and the results are attached.

Thanks again, sheila

KINDER MORGAN
Sheila Castellano - Contractor Consultant
2 North Nevada Ave
Colorado Springs, CO 80903
o: 719 520-3719
c: 719 352-1367