APPROVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company EOG Resources, Inc.	Contact Zane Kurtz
Address 5509 Champions Drive, Midland, TX 79706	Telephone No. 432-425-2023
Facility Name Lomas Rojas 26 #6 SWD	Facility Type Salt Water Disposal

Surface Owner New Mexico	Mineral Owner New Mexico	API No. 300253970500

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County

Latitude 32.101446 **Longitude** -103.539973

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 50 bbls	Volume Recovered 36 bbls
Source of Release Load Line Left Open	Date and Hour of Occurrence 9-27-14	Date and Hour of Discovery 2130pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Contacted Tomas Oberding, NMOCD within 48 hours.	
By Whom? Zane Kurtz	Date and Hour 9-29-14 1244pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Someone intentionally or unintentionally left the load line open and spilling produced water. An estimated amount of 50bbls was released and approx. 36 bbls was recovered. The spill ran off containment onto the pasture owned by Mark McCloy.

Describe Area Affected and Cleanup Action Taken.*
Vertical and horizontal delineation of chloride impacted soil was achieved in the release area. Soil was excavated to an approximate depth of 11 feet bgs in some areas. All impacted soil was hauled off site for landfill disposal.

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

Signature: Zane Kurtz	OIL CONSERVATION DIVISION	
Printed Name: Zane Kurtz	Approved by Environmental Specialist: Kristen Lynch	
Title: Sr. Safety and Environmental Rep., EOG Resources	Approval Date: 11/9/2016	Expiration Date: N/A
E-mail Address: zane_kurtz@eogresources.com	Conditions of Approval: N/A	Attached ☐ 1RP 3364
Date: 10-6-16 Phone: 432-425-2023		

* Attach Additional Sheets If Necessary

CONESTOGA-ROVERS
& ASSOCIATES

6121 Indian School Road NE, Suite 200
Albuquerque, New Mexico 87110
Telephone: (505) 884-0672 Fax: (505) 884-4932
www.CRAworld.com

5ŜŎŜYˉōŜℕ o, 2014 Reference No. 088210/10

Tomáš 'Doc' Oberding, PhD
Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240

Dear Dr. Oberding:

Re: Summary of Soil Sampling
Lomas Rojas 26 #6 SWD
1RP-3364
Lea County, New Mexico

On behalf of EOG Resources, Inc. (EOG), Conestoga Rovers and Associates (CRA), performed subsurface assessments at the above referenced location (Site) on September 30 and October 15, 2014. The Site is located at coordinates 32.101446 N, -103.539973 W and is approximately 20 miles west of Jal, New Mexico, in Lea County (see Figure 1). The case number is 1RP-3364. This report is being submitted on behalf of EOG.

The Site is currently an active tank battery located on a large caliche pad. The surrounding topography is relatively flat, covered with windblown sand, sparse vegetation, and mesquite trees. Based on the C-141 form, a release of produced water occurred on September 27, 2014 when a load line was left open. According to the C-141 form, the release was estimated to be 50 barrels, with 36 barrels recovered. Contaminates of concern are chlorides, BTEX, and TPH.

The impacted soil has been excavated. The soil stockpile was placed on plastic sheeting. The excavation had yet to be backfilled with clean soil at the time of CRA's assessment. Presented below is a summary of the September through October 2014 sampling events.

1.0 Site Risk Ranking

The New Mexico Oil Conservation Division (NMOCD) has a risk ranking system to establish the regulatory limits for petroleum hydrocarbons. The risk ranking system is based on the depth to groundwater, the presence of wellhead protection areas, and the distance from the Site to surface water bodies.

According to Tomáš 'Doc' Oberding, PhD, with NMOCD, the depth to groundwater in the vicinity of the site is estimated to be greater than 100’ feet (ft) below ground surface (bgs). There are no well head protection areas in the vicinity of the Site. An intermittent drainage feature is located no less than 1000 feet from the facility. Based on this, the NMOCD Risk Ranking score for the site is 0. The Recommended Remediation Action Levels (RRALs) for the site are 5000 parts per million (ppm) for TPH, 10 ppm for benzene, 50 ppm for total BTEX. The recommended concentration for chlorides is 500 ppm (see table below).

New Mexico Oil Conservation Division Spill Guidelines	
Ranking Criteria	Score
Depth to Ground Water (greater than 100 ft) Wellhead Protection Area Distance to Surface Body Water	0 0 0
Ranking Criteria Total Score	0
*Because the ranking criteria total score is 0, NMOCD RRALs are 10 ppm for benzene, 50 ppm for BTEX, 5000 ppm for total TPH, and 500 ppm for chlorides.	

2.0 Sampling Activities

The sampling activities performed at the Site consisted of hand-shovel digging, hand auguring, and backhoe/ track-hoe excavation to depths of 11 ft bgs. Sampling tools were cleaned with an Alconox wash solution and clean water rinse prior to collecting each soil sample.

Field screening was performed for chlorides using Hach Chloride Test strips and total petroleum hydrocarbons (TPH) using a Petroflag Hydocarbon analysis kit.

Following field screening, soil samples were collected for laboratory analysis of chlorides by EPA Method 300.0, TPH by EPA Method 8015, and benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method 8021. Soil samples were submitted under chain of custody documentation via overnight delivery to Xenco Laboratories of Odessa, Texas.

Initial soil sampling, performed on September 30, 2014, indicated that soil concentrations of chlorides were above regulatory limits within the spill area. The initial chloride concentrations at S-1 and S-2 were 6832 ppm and 684 ppm, respectively at 3 ft BGS (see Figure 2). The analytical results were below laboratory detection limits for BTEX constituents and TPH.

The locations of S-1 and S-2 were excavated and additional sampling was performed on October 15, 2014 (see Figure 2). An additional soil sample was collected from the bottom of the excavation west of the Site pad (See Figure 2). The results of this sample were below the regulatory limit for chlorides at 69.1 ppm, and below laboratory detection limits for BTEX and TPH. Two samples were taken from 11 feet bgs in the excavation south of the Site pad (See Figure 2), one at the base of the north wall of the excavation and one at the base of the south wall. Laboratory analysis of the soil sample collected from the base of the north wall indicated concentrations of chlorides at 181 ppm, and below laboratory detection limits for BTEX and TPH. Chloride concentrations at the base of the south wall were 404 ppm, with BTEX below laboratory detection limits and a TPH concentration of 34 ppm.

Soil with concentrations exceeding the RRALs has been excavated. Based on laboratory analytical results from the excavation, there does not appear to be a threat to groundwater from the release. Due to this, EOG requests that no further action status be granted to the site. If you have any questions or comments with regards to this request for closure, please do not hesitate to contact our Albuquerque office at (505) 884-0672.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Reviewed by:

Jason Ploss
Staff Scientist

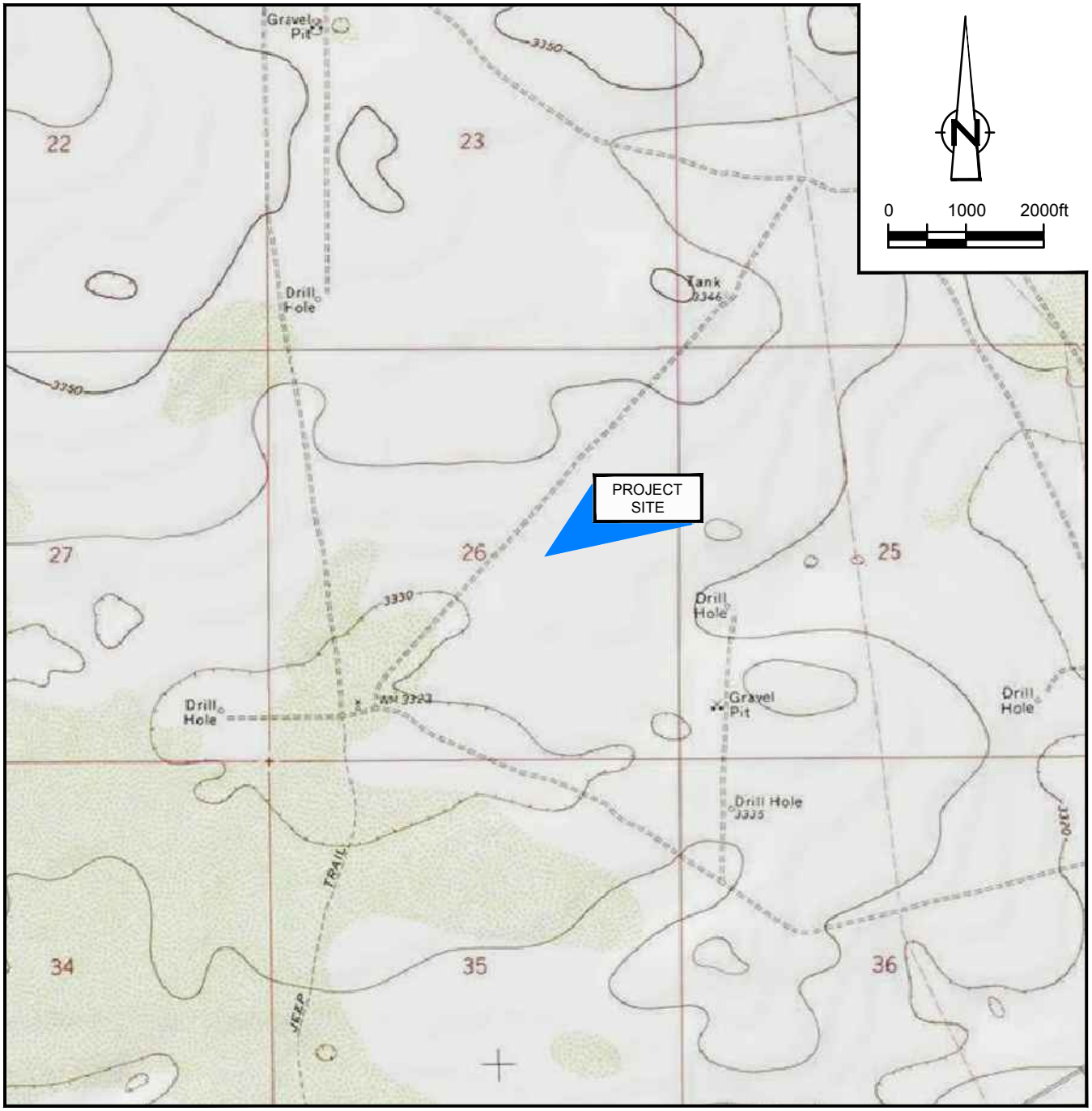
Bernard Bockisch, PMP
Senior Project Manager

BB/mc/1
Encl. (3)

Attachments:

Figure 1. Site Location Map
Figure 2. Site Detail Map
Appendix A. Laboratory Analytical Results

Figures



SOURCE: USGS 7.5 MINUTE QUAD
"PADUCA BREAKS EAST, NEW MEXICO"

LAT/LONG: 32.1014° NORTH, 103.5399° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
LOMAS ROJAS 26 No. 6 SWD
near Jal, New Mexico

088210-10(000)GN-DL001 NOV 25/2014

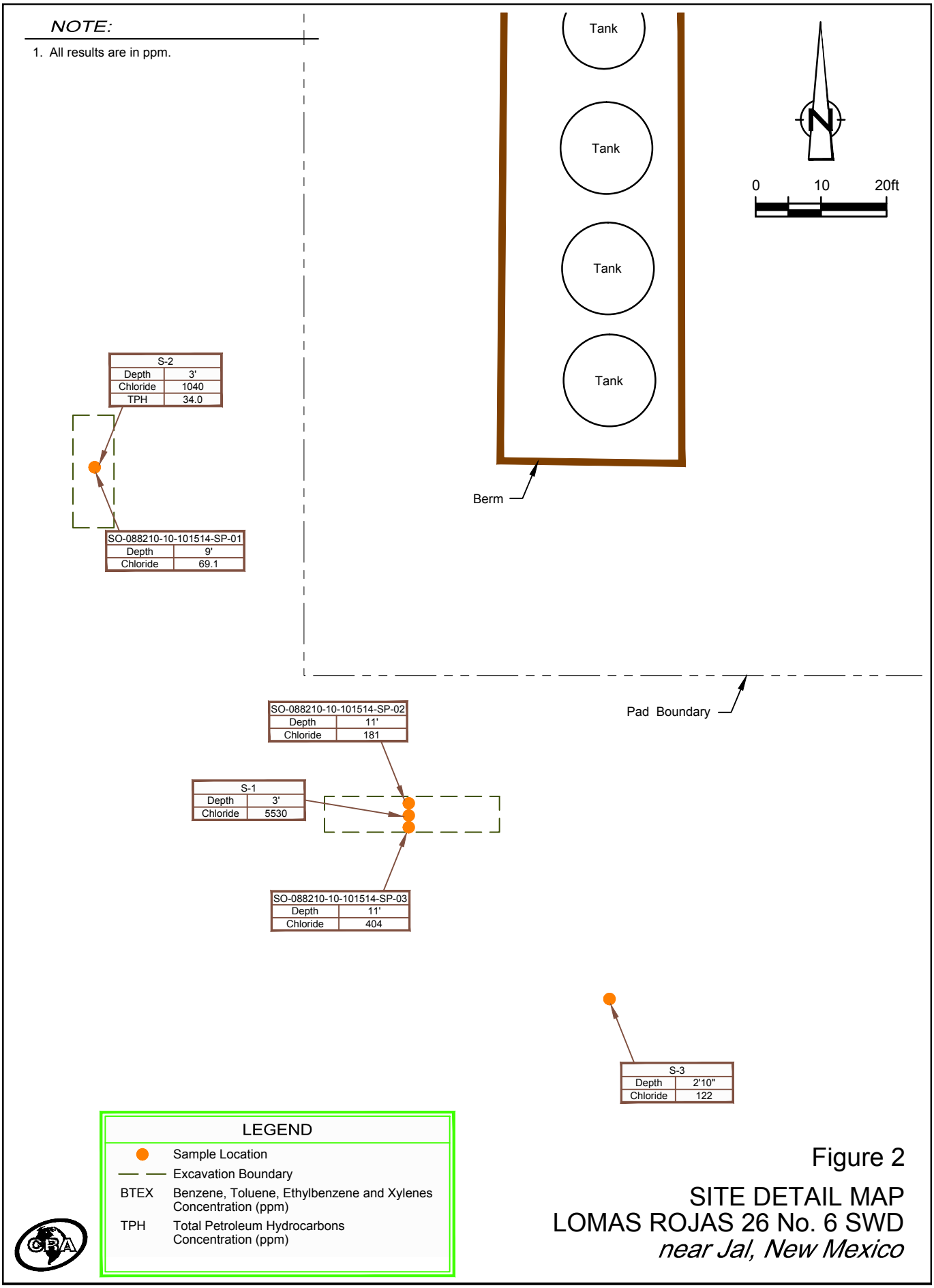


Figure 2

SITE DETAIL MAP
LOMAS ROJAS 26 No. 6 SWD
near Jal, New Mexico

Appendix A

Laboratory Analytical Results

Analytical Report 494461

for

Conestoga-Rovers & Associates-Albuquerque, NM

Project Manager: Bernie Bockisch

EOG- Lomas Rojas 26 #6 SWD

03-OCT-14

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

03-OCT-14

Project Manager: **Bernie Bockisch**
Conestoga-Rovers & Associates-Albuquerque, NM
6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

Reference: XENCO Report No(s): **494461**
EOG- Lomas Rojas 26 #6 SWD
Project Address: Jal,NM

Bernie Bockisch:

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) 494461. 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. 494461 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 494461

Conestoga-Rovers & Associates-Albuquerque, NM, Albuqu

EOG- Lomas Rojas 26 #6 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SO-088210-10-093014-SP-01	S	09-30-14 17:15		494461-001
SO-088210-10-093014-SP-02	S	09-30-14 18:50		494461-002
SO-088210-10-093014-SP-03	S	09-30-14 18:55		494461-003

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 494461

Conestoga-Rovers & Associates-Albuquerque, NM, Albuquerque, NM

Project Name: EOG- Lomas Rojas 26 #6 SWD

Project Id:
Contact: Bernie Bockisch
Project Location: Jal,NM

Date Received in Lab: Thu Oct-02-14 11:02 am
Report Date: 03-OCT-14
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	494461-001		494461-002		494461-003					
	Field Id:	SO-088210-10-093014-SP-05		O-088210-10-093014-SP-05		O-088210-10-093014-SP-0					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Sep-30-14 17:15		Sep-30-14 18:50		Sep-30-14 18:55					
BTEX by EPA 8021B	***Extracted:***	Oct-02-14 14:00		Oct-02-14 14:00		Oct-02-14 14:00					
	Analyzed:	Oct-02-14 23:46		Oct-03-14 00:02		Oct-03-14 00:19					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.00118	ND	0.00111	ND	0.00123				
Toluene		ND	0.00237	ND	0.00221	ND	0.00245				
Ethylbenzene		ND	0.00118	ND	0.00111	ND	0.00123				
m,p-Xylenes		ND	0.00237	ND	0.00221	ND	0.00245				
o-Xylene		ND	0.00118	ND	0.00111	ND	0.00123				
Total Xylenes		ND	0.00118	ND	0.00111	ND	0.00123				
Total BTEX		ND	0.00118	ND	0.00111	ND	0.00123				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Oct-02-14 13:00		Oct-02-14 13:00		Oct-02-14 13:00					
	Analyzed:	Oct-02-14 17:02		Oct-02-14 17:25		Oct-02-14 17:47					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		5530	474	1040	111	122	24.6				
Percent Moisture	***Extracted:***										
	Analyzed:	Oct-02-14 17:30		Oct-02-14 17:30		Oct-02-14 17:30					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		15.7	1.00	10.2	1.00	18.8	1.00				
TPH By SW8015 Mod	***Extracted:***	Oct-02-14 14:00		Oct-02-14 14:00		Oct-02-14 14:00					
	Analyzed:	Oct-02-14 15:21		Oct-02-14 16:38		Oct-02-14 17:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	17.7	ND	16.7	ND	18.4				
C12-C28 Diesel Range Hydrocarbons		ND	17.7	34.0	16.7	ND	18.4				
C28-C35 Oil Range Hydrocarbons		ND	17.7	ND	16.7	ND	18.4				
Total TPH		ND	17.7	34.0	16.7	ND	18.4				

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: EOG- Lomas Rojas 26 #6 SWD

Work Orders : 494461,

Project ID:

Lab Batch #: 952054 **Sample:** 494461-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/02/14 15:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.7	110	70-135	
o-Terphenyl	58.5	49.9	117	70-135	

Lab Batch #: 952054 **Sample:** 494461-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/02/14 16:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.7	102	70-135	
o-Terphenyl	55.2	49.9	111	70-135	

Lab Batch #: 952054 **Sample:** 494461-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/02/14 17:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.8	105	70-135	
o-Terphenyl	56.1	49.9	112	70-135	

Lab Batch #: 952050 **Sample:** 494461-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/02/14 23:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 952050 **Sample:** 494461-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/03/14 00:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	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: EOG- Lomas Rojas 26 #6 SWD

Work Orders : 494461,

Project ID:

Lab Batch #: 952050 **Sample:** 494461-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/03/14 00:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 952054 **Sample:** 662345-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/02/14 13:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	61.3	50.0	123	70-135	

Lab Batch #: 952050 **Sample:** 662396-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/02/14 22:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 952054 **Sample:** 662345-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/02/14 14:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	62.6	50.0	125	70-135	

Lab Batch #: 952050 **Sample:** 662396-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/02/14 22:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	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: EOG- Lomas Rojas 26 #6 SWD

Work Orders : 494461,

Project ID:

Lab Batch #: 952054 **Sample:** 662345-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/02/14 14:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	64.2	50.0	128	70-135	

Lab Batch #: 952050 **Sample:** 662396-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/02/14 22:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 952054 **Sample:** 494461-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/02/14 15:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.8	125	70-135	
o-Terphenyl	63.9	49.9	128	70-135	

Lab Batch #: 952050 **Sample:** 494461-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/02/14 22:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	80-120	
4-Bromofluorobenzene	0.0351	0.0300	117	80-120	

Lab Batch #: 952054 **Sample:** 494461-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/02/14 16:12

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	99.9	120	70-135	
o-Terphenyl	62.3	50.0	125	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: EOG- Lomas Rojas 26 #6 SWD

Work Orders : 494461, **Project ID:**

Lab Batch #: 952050 **Sample:** 494461-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/02/14 23:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0327	0.0300	109	80-120	
4-Bromofluorobenzene	0.0335	0.0300	112	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.

BS / BSD Recoveries

Project Name: EOG- Lomas Rojas 26 #6 SWD

Work Order #: 494461 **Project ID:**

Analyst: ARM **Date Prepared:** 10/02/2014 **Date Analyzed:** 10/02/2014

Lab Batch ID: 952050 **Sample:** 662396-1-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	<0.00100	0.100	0.0912	91	0.100	0.0894	89	2	70-130	35	
Toluene	<0.00200	0.100	0.0957	96	0.100	0.0932	93	3	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0973	97	0.100	0.0938	94	4	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.200	100	0.200	0.193	97	4	70-135	35	
o-Xylene	<0.00100	0.100	0.0964	96	0.100	0.0942	94	2	71-133	35	

Analyst: JUM **Date Prepared:** 10/01/2014 **Date Analyzed:** 10/01/2014

Lab Batch ID: 951962 **Sample:** 662321-1-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	<2.00	50.0	49.2	98	50.0	49.5	99	1	80-120	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: EOG- Lomas Rojas 26 #6 SWD

Work Order #: 494461 **Project ID:**

Analyst: ARM **Date Prepared:** 10/02/2014 **Date Analyzed:** 10/02/2014

Lab Batch ID: 952054 **Sample:** 662345-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	942	94	1000	965	97	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1160	116	1000	1160	116	0	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 Recoveries

Project Name: EOG- Lomas Rojas 26 #6 SWD

Work Order #: 494461

Lab Batch #: 951962 **Project ID:**

Date Analyzed: 10/02/2014 **Date Prepared:** 10/01/2014 **Analyst:** JUM

QC- Sample ID: 494422-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	16500	12000	27900	95	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: EOG- Lomas Rojas 26 #6 SWD

Work Order # : 494461 **Project ID:**

Lab Batch ID: 952050 **QC- Sample ID:** 494461-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/02/2014 **Date Prepared:** 10/02/2014 **Analyst:** ARM

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	<0.00118	0.118	0.0924	78	0.118	0.0901	76	3	70-130	35	
Toluene	<0.00236	0.118	0.0967	82	0.118	0.0942	80	3	70-130	35	
Ethylbenzene	<0.00118	0.118	0.0983	83	0.118	0.0954	81	3	71-129	35	
m,p-Xylenes	<0.00236	0.236	0.203	86	0.237	0.197	83	3	70-135	35	
o-Xylene	<0.00118	0.118	0.0973	82	0.118	0.0954	81	2	71-133	35	

Lab Batch ID: 952054 **QC- Sample ID:** 494461-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/02/2014 **Date Prepared:** 10/02/2014 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<17.8	1180	1120	95	1180	1110	94	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<17.8	1180	1310	111	1180	1290	109	2	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.

Sample Duplicate Recovery

Project Name: EOG- Lomas Rojas 26 #6 SWD

Work Order #: 494461

Lab Batch #: 952049 **Project ID:**

Date Analyzed: 10/02/2014 17:30 **Date Prepared:** 10/02/2014 **Analyst:** WRU

QC- Sample ID: 494439-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	19.8	17.8	11	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

CHAIN OF CUSTODY RECORD

COC NO.: 32766

PAGE 1 OF 1

(See Reverse Side for Instructions)

CONESTOGA-ROVERS & ASSOCIATES

Address: 6121 Indian School Rd NE Albuquerque, NM 87110

Phone: 505-280-0572 Fax: _____

bbeckisch@craworld.com

Project No/ Phase/Task Code: 088210/10	**Laboratory Name:** Xenco Laboratories	**Lab Location:** Odessa, TX	**SSOW ID:**
Project Name: EOG - Lomas Bajas 26 #6 SWD	**Lab Contact:** 432-563-1800	**Lab Quote No:**	**Cooler No:**
Project Location: Near Jal, NM			**Carrier:** fed ex
Chemistry Contact: Bernie Beckisch (505) 280-0572			**Airbill No:** 297154834
Sampler(s): Steven Perez 575-441-7670			**Date Shipped:** 10/01/14

Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)	DATE (mm/dd/yy)	TIME (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	CONTAINER QUANTITY & PRESERVATION: Unpreserved	HCl	HNO_3	H_2SO_4	NaOH	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	ANALYSIS REQUESTED (See Back of COC for Definitions): TPH 8015 6/10/20	Chlorides 300.0	BTEX 8021	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:
1	SO-088210-10-093014-SP-01	09/30/14	17:15	SO											↓	↓	↓		
2	SO-088210-10-093014-SP-02	↓	18:50	SO															
3	SO-088210-10-093014-SP-03	↓	18:55	SO															
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

TAT Required in business days (use separate COCs for different TATs):

☑ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other: 24 hrs

Total Number of Containers: _____

All Samples in Cooler must be on COC

Notes/ Special Requirements: COC#494461

	RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
1.	Steven J Perez	CRA	10/01/14	3:25			10/02/14	11:02
2.								
3.								

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10B (20110804)

Final 1.000

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Conestoga-Rovers & Associates-Albuqu

Date/ Time Received: 10/02/2014 11:02:00 AM

Work Order #: 494461

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#6 *Custody Seals Signed and dated?	**No**
#7 *Chain of Custody present?	**Yes**
#8 Sample instructions complete on Chain of Custody?	**Yes**
#9 Any missing/extra samples?	**No**
#10 Chain of Custody signed when relinquished/ received?	**Yes**
#11 Chain of Custody agrees with sample label(s)?	**Yes**
#12 Container label(s) legible and intact?	**Yes**
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#14 Samples in proper container/ bottle?	**Yes**
#15 Samples properly preserved?	**Yes**
#16 Sample container(s) intact?	**Yes**
#17 Sufficient sample amount for indicated test(s)?	**Yes**
#18 All samples received within hold time?	**Yes**
#19 Subcontract of sample(s)?	**No**
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	**N/A**
#22 >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: Kelsey Brooks Date: 10/02/2014

Checklist reviewed by: Kelsey Brooks Date: 10/02/2014