



2057 Commerce Drive
Midland, TX 79703

432.520.7720 PHONE
432.520.7701 FAX

www.trcsolutions.com

APPROVED

By Olivia Yu at 2:22 pm, Dec 22, 2017

NMOCD approves of the proposed remediation for 1RP-4610. All confirmation samples must be discrete.

December 4, 2017

Olivia Yu
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1625 French Drive
Hobbs, NM 88240

Henryetta Price
Carlsbad Field Office
United States Department of the Interior
Bureau of Land Management
620 E. Greene Street
Carlsbad, New Mexico 88220

Re: Amended Soil Investigation Summary and Proposed Remediation Workplan
Blue Jay Federal #001H Battery (1RP-4610)
GPS: N 32.5664367366954° W 103.495571226436°
Unit Letter "O", Section 18, Township 20 South, Range 35 East
Lea County, New Mexico

Dear Ms. Yu and Ms. Price,

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG) has prepared this Soil Investigation Summary and Proposed Remediation Workplan (Workplan) for the Blue Jay Federal #001H Release Site (Release Site). The purpose of this Workplan is to propose remediation activities designed to advance the Blue Jay Federal #001H Release Site toward an New Mexico Oil Conservation Division (NMOCD) approved Site Closure Status. The legal description of the Release Site is Unit Letter "O", Section 18, Township 20 South, Range 35 East, in Lea County, New Mexico. The GPS coordinates for the site are N 32.5664367366954° W 103.495571226436°. The subject property is administered by the United States Bureau of Land Management (BLM). A Site Location Map and Site Map are provided as Figure 1 and Figure 2, respectively.

On January 25, 2017, COG discovered a crude oil release at the flare stack. Due to the presence of crude oil in the flare stack, a fire started, but was immediately extinguished due to the limited amount of fluid which escaped the flare stack. The release impacted an area which measured approximately 49,809 square feet. On January 25, 2017, a COG representative verbally notified the NMOCD and BLM and submitted a Release Notification and Corrective Action (Form C-141) to the NMOCD on February 15, 2017. During initial response activities, COG dispatched a vacuum truck to remove all freestanding fluids. Approximately ten

(10) barrels of fluid was released from the flare stack, with nine (9) barrels recovered. The Form C-141 is attached to this report.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 18, Township 20 South, Range 35 East. A reference map utilized by the NMOCD Hobbs District Office indicates groundwater should be encountered at approximately fifty (50) feet below ground surface (bgs). Based on the NMOCD site classification system, twenty (20) points will be assigned to the subject area ranking as a result of this criterion.

No water wells were observed within one-thousand (1,000) feet of the Release Site. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

No surface water was observed within one-thousand (1,000) feet of the release. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

Based on the NMOCD Site Classification criteria, the Release Site soil remediation levels are 10 mg/Kg for benzene, 50 mg/Kg for benzene, toluene, ethylbenzene and xylenes (BTEX), and one hundred (100) mg/Kg for total petroleum hydrocarbons (TPH). Per NMOCD request, chloride remediation levels for the Release Site will be 250 mg/Kg.

On February 7, 2017, a Concho Representative collected twelve (12) delineation soil samples (T1-Surface, T1-1', T1-2', T1-3', T2-Surface, T2-1', T2-2', T2-3', T3-Surface, T3-1', T3-2', T3-3') from the impacted area. The soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M, and chloride using Method SM 4500 Cl-B. The analytical results indicated benzene and BTEX concentrations were less than the applicable laboratory Method Detection Limit (MDL) and NMOCD regulatory guidelines for the submitted soil samples. The laboratory results indicated TPH concentrations were less than the applicable laboratory MDL and NMOCD regulatory guidelines for the submitted soil samples, with the exception of soil samples T2-Surface (4,396.9 mg/Kg), T2-1' (178 mg/Kg), and T3-Surface (2,240 mg/Kg), which were above NMOCD regulatory guidelines. Chloride concentrations ranged from 16 mg/Kg for soil samples T1-Surface, T2-1', and T3-1' to 80 mg/Kg for soil samples T3-Surface. A review of laboratory analytical results indicated chloride concentrations were below NMOCD regulatory guidelines for all of the collected samples. The laboratory analytical results are attached to this report.

On September 8, 2017, a TRC Representative collected six (6) soil samples (T1a 0-3", T2a 0-3", T2a 1.5', T3a 0-6", OS-1 0-6", and OS-2 0-6") from the impacted area as requested by the BLM and NMOCD. The soil samples were submitted to Xenco Laboratories in Midland, Texas for determination of concentrations of BTEX using Method SW 846-8021B, TPH using Method SW 846-8015M Extended 35, and/or chloride using Method E 300. The laboratory analytical results indicated benzene and BTEX concentrations were less than the applicable laboratory MDL for the submitted soil samples, with the exception of soil samples T2a 0-3" and T3a 0-6", which exhibited BTEX concentrations of 0.0896 mg/Kg and 0.05347 mg/Kg, respectively. A review of laboratory analytical results indicated BTEX concentrations were below NMOCD regulatory guidelines. Laboratory analytical results indicate TPH concentrations ranged from less than applicable laboratory MDL for soil samples T3a 0-6", OS-1

0-6", and OS-2 0-6" to 8,010 mg/Kg for soil sample T1a 0-3". A review of laboratory analytical results indicated TPH concentrations were below NMOCD regulatory guidelines for soil samples T3a 0-6", OS-1 0-6", and OS-2 0-6". Laboratory analytical results for the soil samples (OS-1 0-6" and OS-2 0-6") submitted for chloride analysis indicated chloride concentrations were <5.00 mg/Kg for soil sample OS-1 0-6" and 6.50 mg/Kg for soil sample OS-2 0-6" and below NMOCD regulatory guidelines. In addition, two (2) composite soil samples (Composite-1 and Composite-2) were collected from the impacted top soil stockpile adjacent to caliche pad and submitted to the laboratory for TPH analysis. Laboratory analytical results indicated TPH concentrations were 7,110 mg/Kg for soil sample Composite-1 and 2,455 mg/Kg for Composite-2. A review of laboratory analytical results indicated TPH concentrations for soil samples Composite-1 and Composite-2 were above NMOCD regulatory guidelines.

Based on the analytical results of the soil samples collected on February 7, 2017 and September 8, 2017, COG proposes the following field activities designed to remediate the Blue Jay Federal #001H Release:

- Utilizing a backhoe, excavate the Release Site on the caliche pad to a depth of approximately three (3) to six (6) inches bgs in the area represented by soil samples T1 and T1a and excavate to a depth of approximately two (2) feet bgs in the area represented by soil samples T2 and T2a. No excavation activities will be performed in the area on the caliche pad or vegetated area represented by soil samples T3 and T3a. Excavated soil will be temporarily stockpiled on a plastic liner adjacent to the excavation, pending transportation to a NMOCD approved disposal.
- Impacted soil on the top soil stockpile adjacent to the caliche pad will be excavated to approximately six (6) to eight (8) inches bgs and temporarily stockpiled on a plastic liner adjacent to the excavation, pending transportation to a NMOCD approved disposal.
- Collect an appropriate number of excavation floor soil samples, spaced at approximately every fifty (50) feet, and submit the soil samples to the laboratory for determination of concentrations of BTEX, TPH, and chloride. In addition, a minimum of four (4) soil samples will be from the sidewalls of the excavated area to confirm horizontal delineation of the impacted soil.
- On receipt of favorable analytical results (below the regulatory guidelines referenced above), the excavation will be backfilled with "like" non-impacted soil and the excavated impacted soil will be transported under manifest to an NMOCD approved disposal facility.
- Prepare and submit a "Remediation Summary and Site Closure Request" to the NMOCD and BLM.

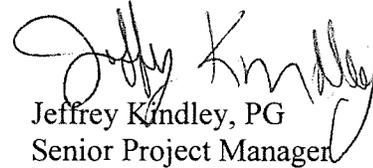
COG is prepared to begin the activities outlined in this Amended Proposed Remediation Workplan on NMOCD and BLM approval.

If you have any questions, or if additional information is required, please feel free to call me at 432-520-7720 (office) or 432-664-6699 (cell).

Thank you,



Nikki Green
Project Manager
TRC Environmental Corporation



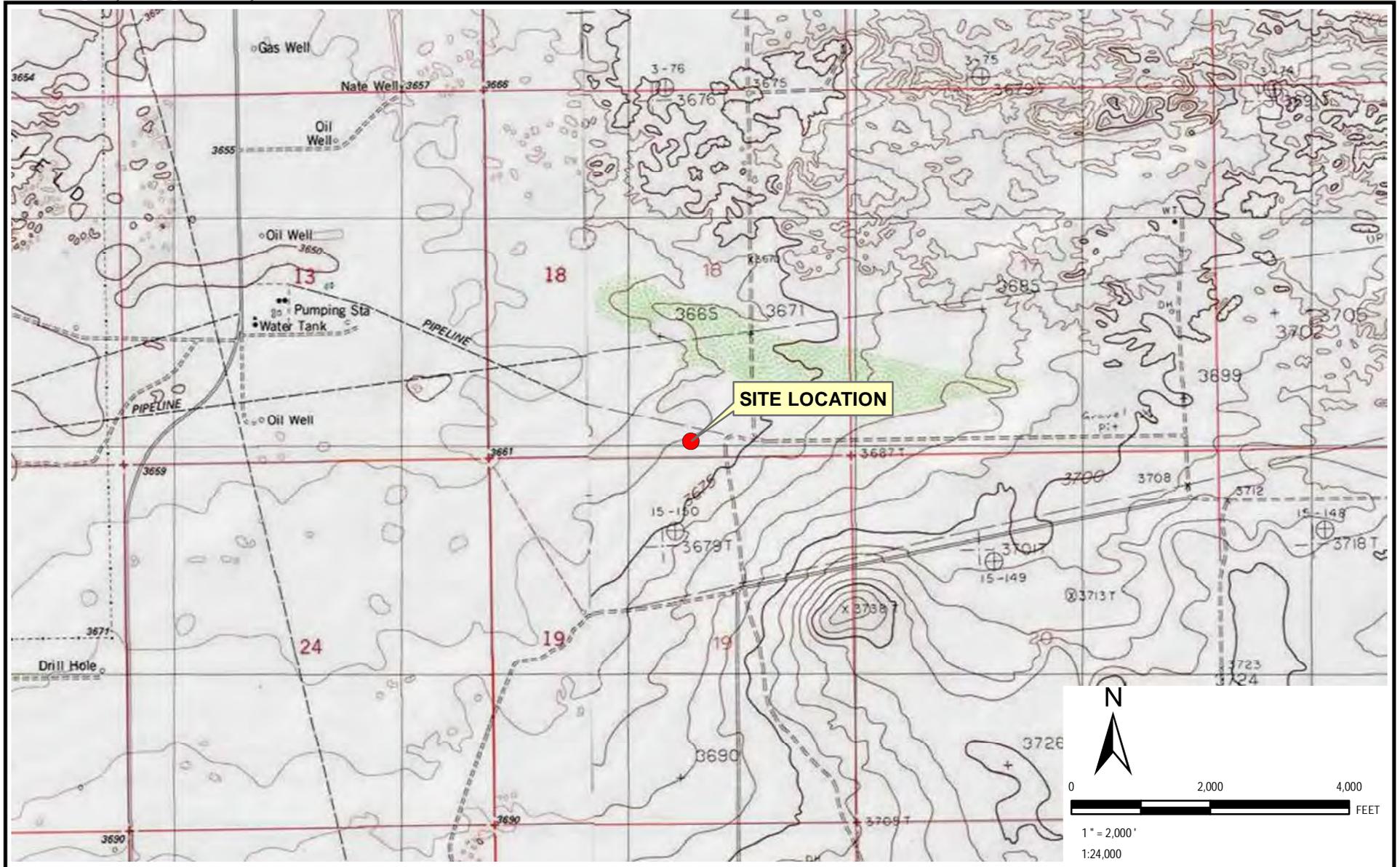
Jeffrey Kindley, PG
Senior Project Manager
TRC Environmental Corporation

Attachments:

- Figure 1 - Site Location Map
- Figure 2 - Site Map
- Figure 3 – Soil Sample Location and Proposed Excavation Map
- Table 1 - Concentrations of Benzene, BTEX, TPH and Chloride in Soil
- Photographic Documentation
- Laboratory Analytical Results
- Release Notification and Corrective Action (Form C-141)

cc: Rebecca Haskell
COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

File



2075 Commerce Drive
Midland, TX 79703
Phone: 432.520.770

TRC - GIS

TITLE:

**FIGURE 1
SITE LOCATION MAP**

PROJECT:

**BLUE JAY FEDERAL #001H
LEA COUNTY, NEW MEXICO
COG OPERATING, LLC**

DRAWN BY: MLOVELACE

CHECKED BY: NGREEN

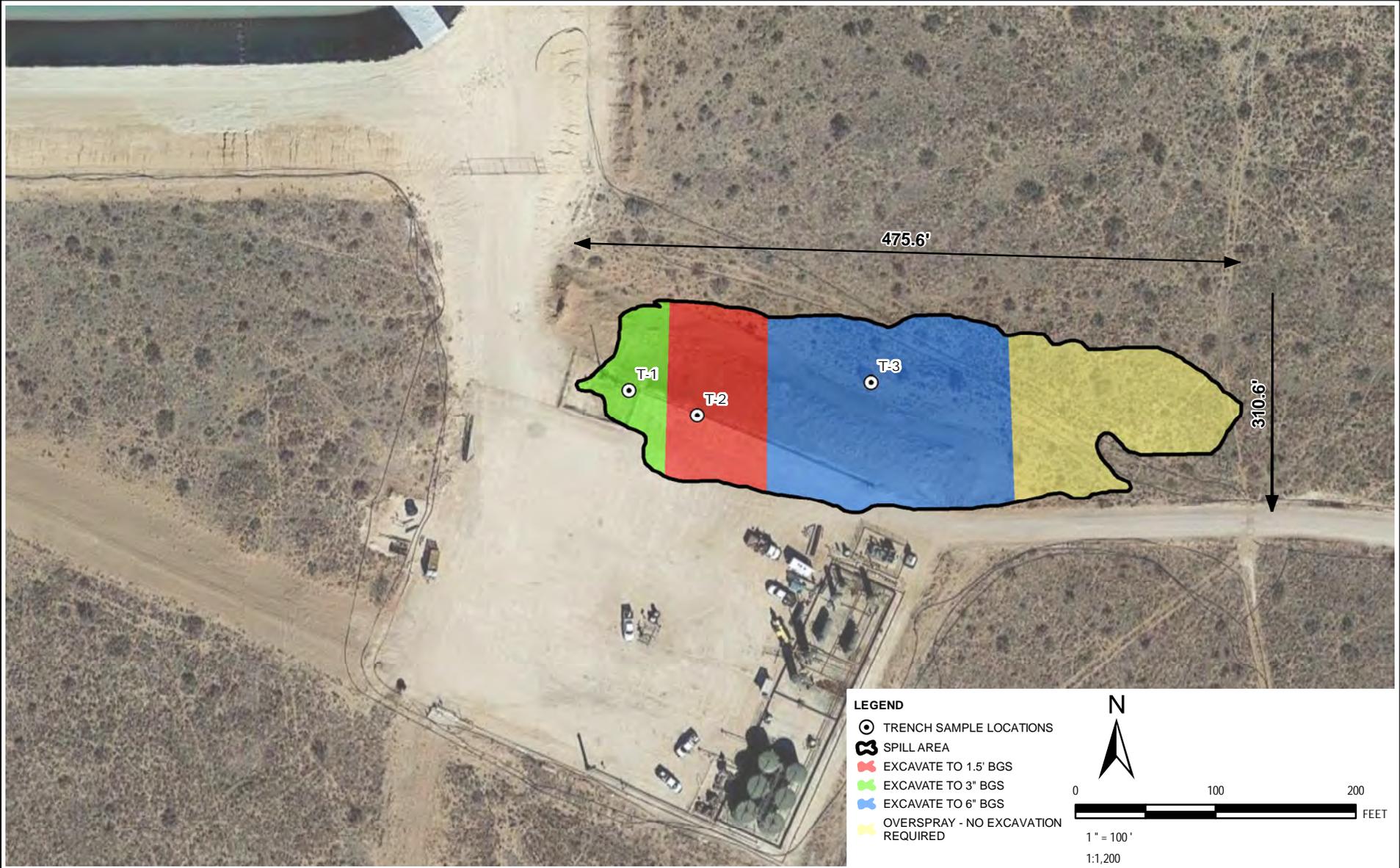
APPROVED BY: NGREEN

DATE: JULY 2017

PROJ. NO.: 279776

GPS: LAT. N 32.5664367°, LONG. W 103.4955712°

SW1/4 SW1/4 SEC 18 T20S R35E



2075 Commerce Drive
Midland, TX 79703
Phone: 432.520.770

TRC - GIS

TITLE:

**FIGURE 2
SITE MAP**

PROJECT:

**BLUE JAY FEDERAL #001
LEA COUNTY, NEW MEXICO
COG OPERATING, LLC.**

DRAWN BY:

MLOVELACE

CHECKED BY:

NGREEN

APPROVED BY:

NGREEN

DATE:

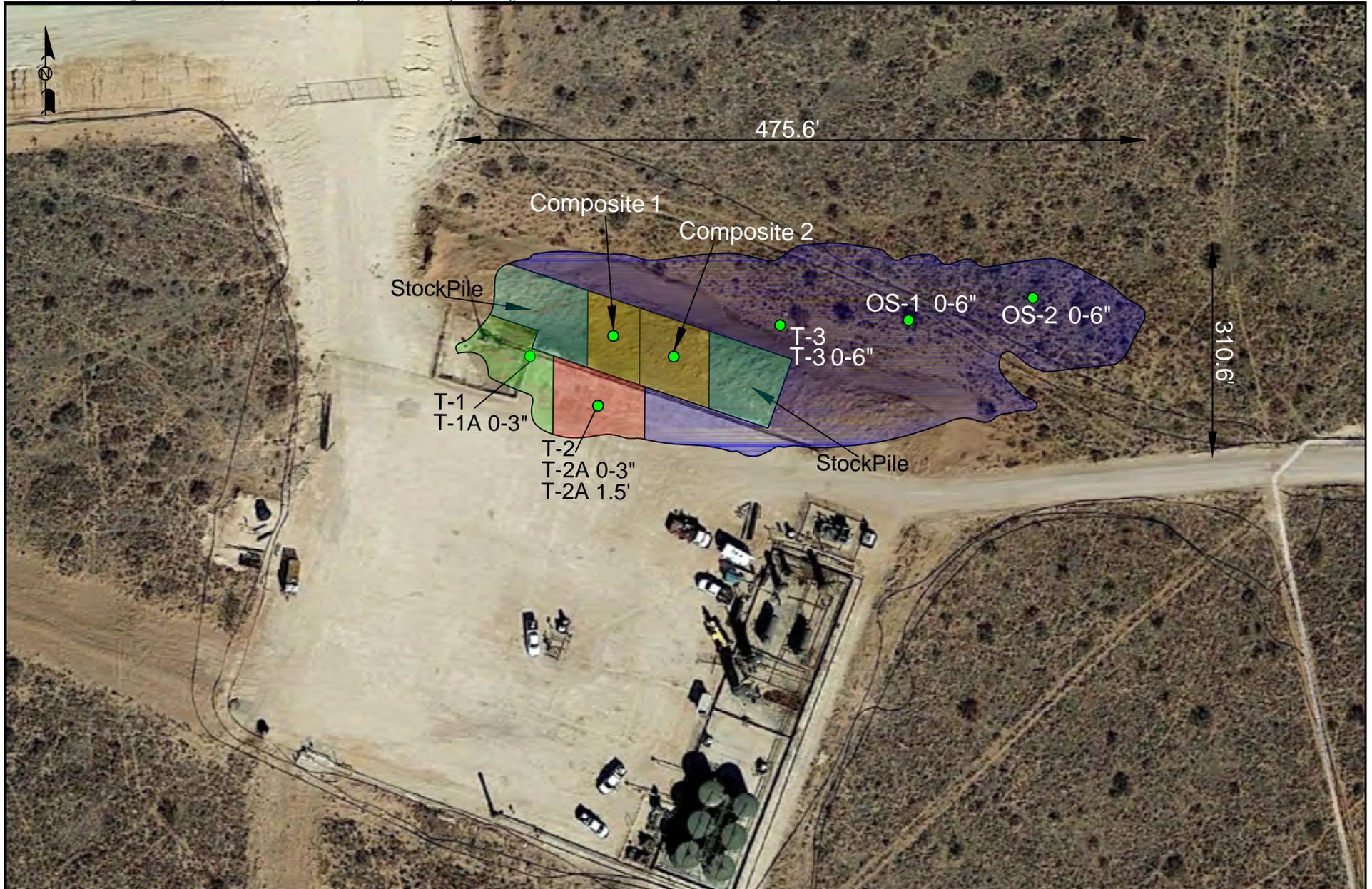
AUGUST 2017

PROJ. NO.:

279776

GPS: LAT. N 32.5664367°, LONG. W 103.4955712°

SW1/4 SW1/4 SEC 18 T20S R35E



LEGEND:

- No Excavation Necessary
- Sample Point Location
- Excavate 6-8"
- Excavate 6"
- Excavate 2'

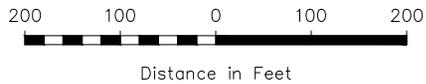


Figure 3
 Soil Sample Location &
 Proposed Excavation Map
 COG Operating, LLC.
 Concho Blue Jay Federal #001
 Lea County, NM

Scale: 1" = 200'

CAD By: JH

Checked By: NG

Draft: November 8, 2017

Lat. N 32.5664367° , Long. 103.4955712°

SW1/4 SW1/4 SEC 18 T20S R35E

TRC Proj. No.: 279776



2057 Commerce Drive
 Midland, Texas 79703
 432.520.7720

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

COG Operating LLC
Blue Jay Federal #001H Battery (IRP-4610)
LEA COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b					METHOD: SW 8015M					E 300.1	SM4500Cl-B
			BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C ₆ -C ₁₀	TPH DRO C ₁₀ -C ₂₈	TPH ORO C ₂₈ -C ₃₅	TOTAL TPH C ₆ -C ₂₈	TOTAL TPH C ₆ -C ₃₅	CHLORIDE	CHLORIDE
NMOCD Site Classification Criteria			10				50				100	100	250	250
T1-Surface	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	16.0
T1-1'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	32.0
T1-2'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	64.0
T1-3'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	64.0
T2-Surface	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	16.9	4,380	-	4,396.9	-	-	64.0
T2-1'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	178	-	178	-	-	16.0
T2-2'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	32.0
T2-3'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	64.0
T3-Surface	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	2,240	-	2,240	-	-	80.0
T3-1'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	16.0
T3-2'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	48.0
T3-3'	02/07/17	Trench	<0.050	<0.050	<0.050	<0.150	<0.150	<10.0	<10.0	-	<10.0	-	-	32.0
T1a 0-3"	09/08/17	Trench	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	179	47.3	-	226.3	-	-
T2a 0-3"	09/08/17	Trench	<0.00787	0.0441	0.0103	0.0352	0.0896	<15.0	6,630	1,380	-	8,010	-	-
T2a 1.5'	09/08/17	Trench	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	169	20.4	-	189.4	-	-
T3a 0-6"	09/08/17	Trench	<0.00398	0.0259	0.00657	0.02	0.05347	<15.0	<15.0	<15.0	-	<15.0	-	-
OS-1 0-6"	09/08/17	Trench	<0.00375	<0.00375	<0.00375	<0.00375	<0.00375	<15.0	<15.0	<15.0	-	<15.0	-	<5.00
OS-2 0-6"	09/08/17	Trench	<0.00369	<0.00369	<0.00369	<0.00369	<0.00369	<14.9	19.4	<14.9	-	19.4	-	6.50
Composite-1	09/08/17	Composite	<0.00386	<0.00386	<0.00386	<0.00386	<0.00386	<14.9	5,260	1,850	-	7,110	-	-
Composite-2	09/08/17	Composite	<0.00380	<0.00380	<0.00380	<0.00380	<0.00380	<15.0	1,870	585	-	2,455	-	-

Photographic Documentation

Client: COG Operating, LLC
Project Name: Blue Jay Federal #001H Battery

Prepared by: TRC Environmental Corp.
Location: Lea County, NM

Photograph No. 1

Date:
September 8, 2017

Direction:
Northwest

Description:
View of Release Site in the areas represented by trenches T1 and T2.



Photograph No. 2

Date:
September 8, 2017

Direction:
Southwest

Description:
View of impacted portion of stockpile.



Photographic Documentation

Client: COG Operating, LLC
Project Name: Blue Jay Federal #001H Battery

Prepared by: TRC Environmental Corp.
Location: Lea County, NM

Photograph No. 3

Date:
September 8, 2017

Direction:
Northeast

Description:
View of Overspray Area.



Photograph No. 4

Date:
September 8, 2017

Direction:
East

Description:
View of Overspray Area and non-impacted portion of stockpile.





February 22, 2017

AARON LIEB
COG OPERATING
P. O. BOX 1630
ARTESIA, NM 88210

RE: BLUE JAY FEDERAL #001H

Enclosed are the results of analyses for samples received by the laboratory on 02/15/17 12:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene
Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T 1 - SURFACE (H700396-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/16/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/16/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 78.6 % 35-147
Surrogate: 1-Chlorooctadecane 90.6 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T 1 - 1' (H700396-02)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/16/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/16/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 87.4 % 35-147

Surrogate: 1-Chlorooctadecane 92.9 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T 1 - 2' (H700396-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/16/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/16/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 79.1 % 35-147

Surrogate: 1-Chlorooctadecane 88.9 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T 1 - 3' (H700396-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/16/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/16/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 82.2 % 35-147

Surrogate: 1-Chlorooctadecane 90.2 % 28-171

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T 2 - SURFACE (H700396-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	16.9	10.0	02/16/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	4380	10.0	02/16/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 84.7 % 35-147

Surrogate: 1-Chlorooctadecane 155 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T 2 - 1' (H700396-06)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/17/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	178	10.0	02/17/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 90.9 % 35-147
Surrogate: 1-Chlorooctadecane 94.6 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T 2 - 2' (H700396-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/17/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/17/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 76.6 % 35-147

Surrogate: 1-Chlorooctadecane 88.2 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T2 - 3' (H700396-08)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/17/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/17/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 81.5 % 35-147

Surrogate: 1-Chlorooctadecane 91.3 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T 3 - SURFACE (H700396-09)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/17/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	2240	10.0	02/17/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 92.2 % 35-147

Surrogate: 1-Chlorooctadecane 142 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T3 - 1' (H700396-10)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/17/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/17/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 86.4 % 35-147

Surrogate: 1-Chlorooctadecane 99.4 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T3 - 2' (H700396-11)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/17/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/17/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 79.9 % 35-147

Surrogate: 1-Chlorooctadecane 96.9 % 28-171

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 AARON LIEB
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

Received:	02/15/2017	Sampling Date:	02/07/2017
Reported:	02/22/2017	Sampling Type:	Soil
Project Name:	BLUE JAY FEDERAL #001H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: T3 - 3' (H700396-12)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/19/2017	ND	2.02	101	2.00	7.72		
Toluene*	<0.050	0.050	02/19/2017	ND	1.88	94.2	2.00	9.17		
Ethylbenzene*	<0.050	0.050	02/19/2017	ND	1.84	92.0	2.00	12.1		
Total Xylenes*	<0.150	0.150	02/19/2017	ND	5.25	87.4	6.00	12.0		
Total BTEX	<0.300	0.300	02/19/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/20/2017	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	02/17/2017	ND	187	93.3	200	0.843		
DRO >C10-C28	<10.0	10.0	02/17/2017	ND	201	100	200	0.331		

Surrogate: 1-Chlorooctane 83.0 % 35-147
Surrogate: 1-Chlorooctadecane 96.7 % 28-171

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report





101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: COG Operating LLC
 Project Manager: Aaron Lieb
 Address: 2407 Pecos Avenue
 City: Artesia State: NM Zip: 88210
 Phone #: 575-748-1553 Fax #: Project Owner:
 Project #: Project Name: Blue Jay Federal #001H
 Project Location: State: TX Zip: 79701
 P.O. #: Company: COG Operating LLC
 Attn: Robert McNeill
 Address: 600 W Illinois
 City: Midland
 State: TX Zip: 79701
 Phone #: (432) 221-0388
 Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	BTEX	TPH	Chloride
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H1003910														
	T3-Surface													
	T3-1'					X			27/17	2:00PM	X	X	X	
	T3-2'					X			27/17	2:00PM	X	X	X	
	T3-3'					X			27/17	2:00PM	X	X	X	

PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors or any of them, or the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [Signature] Date: 8-15-17
 Received By: [Signature] Date: 8-15-17
 Time: 7:00
 Rejected By: [Signature]

Delivered By: (Circle One) #75 2.50
 Sampler - UPS - Bus - Other: Cool Intact
 Yes No Yes No
 CHECKED BY: [Signature]

REMARKS:
 Phone Result: Yes No Add'l Phone #:
 Fax Result: Yes No Add'l Fax #:
 dneel2@concho.com
 alieb@concho.com
 rorubbs@concho.com
 raskell@concho.com



Certificate of Analysis Summary 562479

TRC Solutions, Inc, Midland, TX

Project Name: Blue Jay Federal #001H (1/25/17)



Project Id:
Contact: Nikki Green
Project Location: Lea County NM

Date Received in Lab: Mon Sep-11-17 03:03 pm
Report Date: 19-SEP-17
Project Manager: Kelsey Brooks

Analysis Requested	Lab Id:	562479-001	562479-002	562479-003	562479-004	562479-005	562479-006
	Field Id:	T1a 0-3"	T2a 0-3"	T2a 1.5"	T3a 0-6"	OS-1 0-6"	OS-2 0-6"
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-08-17 11:05	Sep-08-17 10:55	Sep-08-17 10:40	Sep-08-17 11:00	Sep-08-17 10:45	Sep-08-17 10:50
BTEX by EPA 8021B	Extracted:	Sep-13-17 08:00	Sep-14-17 08:37	Sep-13-17 13:00	Sep-14-17 16:00	Sep-14-17 08:37	Sep-14-17 08:37
	Analyzed:	Sep-13-17 10:01	Sep-14-17 17:26	Sep-13-17 22:47	Sep-15-17 09:52	Sep-14-17 11:47	Sep-14-17 12:06
	Units/RL:	mg/kg RL					
Benzene		<0.00201 0.00201	<0.00787 0.00787	<0.00199 0.00199	<0.00398 0.00398	<0.00375 0.00375	<0.00369 0.00369
Toluene		<0.00201 0.00201	0.0441 0.00787	<0.00199 0.00199	0.0259 0.00398	<0.00375 0.00375	<0.00369 0.00369
Ethylbenzene		<0.00201 0.00201	0.0103 0.00787	<0.00199 0.00199	0.00657 0.00398	<0.00375 0.00375	<0.00369 0.00369
Xylenes, Total		<0.00201 0.00201	0.0352 0.00787	<0.00199 0.00199	0.021 0.00398	<0.00375 0.00375	<0.00369 0.00369
Total BTEX		<0.00201 0.00201	0.0896 0.00787	<0.00199 0.00199	0.05347 0.00398	<0.00375 0.00375	<0.00369 0.00369
Chloride by EPA 300	Extracted:					Sep-15-17 13:15	Sep-15-17 13:15
	Analyzed:					Sep-15-17 18:07	Sep-15-17 18:15
	Units/RL:					mg/kg RL	mg/kg RL
Chloride						<5.00 5.00	6.50 4.97
TPH by SW8015 Mod	Extracted:	Sep-12-17 16:00					
	Analyzed:	Sep-13-17 03:22	Sep-13-17 07:15	Sep-13-17 04:48	Sep-13-17 05:09	Sep-13-17 05:29	Sep-13-17 05:50
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Diesel Range Organics (DRO)		179 15.0	6630 15.0	169 15.0	<15.0 15.0	<15.0 15.0	19.4 14.9
Oil Range Hydrocarbons (ORO)		47.3 15.0	1380 15.0	20.4 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		226.3 15	8010 15	189.4 15	<15 15	<15 15	19.4 14.9

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager



Certificate of Analysis Summary 562479

TRC Solutions, Inc, Midland, TX

Project Name: Blue Jay Federal #001H (1/25/17)



Project Id:
Contact: Nikki Green
Project Location: Lea County NM

Date Received in Lab: Mon Sep-11-17 03:03 pm
Report Date: 19-SEP-17
Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	562479-007	562479-008				
	<i>Field Id:</i>	Composite-1	Composite-2				
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL				
	<i>Sampled:</i>	Sep-08-17 10:30	Sep-08-17 10:35				
BTEX by EPA 8021B	<i>Extracted:</i>	Sep-14-17 08:37	Sep-14-17 08:37				
	<i>Analyzed:</i>	Sep-14-17 12:24	Sep-14-17 12:43				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Benzene		<0.00386 0.00386	<0.00380 0.00380				
Toluene		<0.00386 0.00386	<0.00380 0.00380				
Ethylbenzene		<0.00386 0.00386	<0.00380 0.00380				
Xylenes, Total		<0.00386 0.00386	<0.0038 0.0038				
Total BTEX		<0.00386 0.00386	<0.0038 0.0038				
TPH by SW8015 Mod	<i>Extracted:</i>	Sep-12-17 16:00	Sep-12-17 16:00				
	<i>Analyzed:</i>	Sep-13-17 07:34	Sep-13-17 06:34				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<14.9 14.9	<15.0 15.0				
Diesel Range Organics (DRO)		5260 14.9	1870 15.0				
Oil Range Hydrocarbons (ORO)		1850 14.9	585 15.0				
Total TPH		7110 14.9	2455 15				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
 Project Manager

Analytical Report 562479

for
TRC Solutions, Inc

Project Manager: Nikki Green
Blue Jay Federal #001H (1/25/17)

19-SEP-17

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)



19-SEP-17

Project Manager: **Nikki Green**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **562479**
Blue Jay Federal #001H (1/25/17)
Project Address: Lea County NM

Nikki Green:

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) 562479. 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. 562479 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kelsey Brooks

Project Manager

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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 562479



TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T1a 0-3"	S	09-08-17 11:05		562479-001
T2a 0-3"	S	09-08-17 10:55		562479-002
T2a 1.5"	S	09-08-17 10:40		562479-003
T3a 0-6"	S	09-08-17 11:00		562479-004
OS-1 0-6"	S	09-08-17 10:45		562479-005
OS-2 0-6"	S	09-08-17 10:50		562479-006
Composite-1	S	09-08-17 10:30		562479-007
Composite-2	S	09-08-17 10:35		562479-008



CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Blue Jay Federal #001H (1/25/17)

Project ID:
Work Order Number(s): 562479

Report Date: 19-SEP-17
Date Received: 09/11/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3027465 BTEX by EPA 8021B

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

Batch: LBA-3027595 BTEX by EPA 8021B

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

Batch: LBA-3027682 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 562479-004.

Batch: LBA-3027739 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 562479-005,562479-002,562479-007,562479-006.

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



Certificate of Analytical Results 562479



TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id: **T1a 0-3"**
 Lab Sample Id: 562479-001

Matrix: Soil
 Date Collected: 09.08.17 11.05

Date Received: 09.11.17 15.03

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 09.12.17 16.00

Basis: Wet Weight

Seq Number: 3027473

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	09.13.17 03.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	179	15.0	mg/kg	09.13.17 03.22		1
Oil Range Hydrocarbons (ORO)	PHCG2835	47.3	15.0	mg/kg	09.13.17 03.22		1
Total TPH	PHC635	226.3	15	mg/kg	09.13.17 03.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	09.13.17 03.22	
o-Terphenyl	84-15-1	90	%	70-135	09.13.17 03.22	

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 09.13.17 08.00

Basis: Wet Weight

Seq Number: 3027465

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.13.17 10.01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.13.17 10.01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.13.17 10.01	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	09.13.17 10.01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.13.17 10.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	09.13.17 10.01	
1,4-Difluorobenzene	540-36-3	99	%	80-120	09.13.17 10.01	

TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id: T2a 0-3"	Matrix: Soil	Date Received: 09.11.17 15.03
Lab Sample Id: 562479-002	Date Collected: 09.08.17 10.55	
Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 09.12.17 16.00	Basis: Wet Weight
Seq Number: 3027473		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	09.13.17 07.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	6630	15.0	mg/kg	09.13.17 07.15		1
Oil Range Hydrocarbons (ORO)	PHCG2835	1380	15.0	mg/kg	09.13.17 07.15		1
Total TPH	PHC635	8010	15	mg/kg	09.13.17 07.15		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	94	%	70-135	09.13.17 07.15		
o-Terphenyl	84-15-1	123	%	70-135	09.13.17 07.15		

Analytical Method: BTEX by EPA 8021B	Prep Method: SW5030B
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 09.14.17 08.37
Seq Number: 3027739	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00787	0.00787	mg/kg	09.14.17 17.26	U	2
Toluene	108-88-3	0.0441	0.00787	mg/kg	09.14.17 17.26		2
Ethylbenzene	100-41-4	0.0103	0.00787	mg/kg	09.14.17 17.26		2
Xylenes, Total	1330-20-7	0.0352	0.00787	mg/kg	09.14.17 17.26		2
Total BTEX		0.0896	0.00787	mg/kg	09.14.17 17.26		2
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	70	%	80-120	09.14.17 17.26	***	
1,4-Difluorobenzene	540-36-3	99	%	80-120	09.14.17 17.26		



Certificate of Analytical Results 562479



TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id: T2a 1.5"
Lab Sample Id: 562479-003

Matrix: Soil
Date Collected: 09.08.17 10.40

Date Received: 09.11.17 15.03

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 09.12.17 16.00

Basis: Wet Weight

Seq Number: 3027473

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	09.13.17 04.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	169	15.0	mg/kg	09.13.17 04.48		1
Oil Range Hydrocarbons (ORO)	PHCG2835	20.4	15.0	mg/kg	09.13.17 04.48		1
Total TPH	PHC635	189.4	15	mg/kg	09.13.17 04.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	09.13.17 04.48	
o-Terphenyl	84-15-1	90	%	70-135	09.13.17 04.48	

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 09.13.17 13.00

Basis: Wet Weight

Seq Number: 3027595

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.13.17 22.47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.13.17 22.47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.13.17 22.47	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	09.13.17 22.47	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.13.17 22.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	80-120	09.13.17 22.47	
1,4-Difluorobenzene	540-36-3	92	%	80-120	09.13.17 22.47	



Certificate of Analytical Results 562479



TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id: **T3a 0-6"**
 Lab Sample Id: 562479-004

Matrix: Soil
 Date Collected: 09.08.17 11.00

Date Received: 09.11.17 15.03

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 09.12.17 16.00

Basis: Wet Weight

Seq Number: 3027473

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	09.13.17 05.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	09.13.17 05.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	09.13.17 05.09	U	1
Total TPH	PHC635	<15	15	mg/kg	09.13.17 05.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-135	09.13.17 05.09		
o-Terphenyl	84-15-1	90	%	70-135	09.13.17 05.09		

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 09.14.17 16.00

Basis: Wet Weight

Seq Number: 3027682

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00398	0.00398	mg/kg	09.15.17 09.52	U	2
Toluene	108-88-3	0.0259	0.00398	mg/kg	09.15.17 09.52		2
Ethylbenzene	100-41-4	0.00657	0.00398	mg/kg	09.15.17 09.52		2
Xylenes, Total	1330-20-7	0.021	0.00398	mg/kg	09.15.17 09.52		2
Total BTEX		0.05347	0.00398	mg/kg	09.15.17 09.52		2
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	75	%	80-120	09.15.17 09.52	***	
1,4-Difluorobenzene	540-36-3	98	%	80-120	09.15.17 09.52		

TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id: OS-1 0-6"	Matrix: Soil	Date Received: 09.11.17 15.03
Lab Sample Id: 562479-005	Date Collected: 09.08.17 10.45	
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MNV		% Moisture:
Analyst: MNV	Date Prep: 09.15.17 13.15	Basis: Wet Weight
Seq Number: 3027941		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	09.15.17 18.07	U	1

Analytical Method: TPH by SW8015 Mod	Prep Method: TX1005P
Tech: ARM	% Moisture:
Analyst: ARM	Date Prep: 09.12.17 16.00
Seq Number: 3027473	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	09.13.17 05.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	09.13.17 05.29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	09.13.17 05.29	U	1
Total TPH	PHC635	<15	15	mg/kg	09.13.17 05.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	09.13.17 05.29	
o-Terphenyl	84-15-1	96	%	70-135	09.13.17 05.29	

Analytical Method: BTEX by EPA 8021B	Prep Method: SW5030B
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 09.14.17 08.37
Seq Number: 3027739	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00375	0.00375	mg/kg	09.14.17 11.47	U	1
Toluene	108-88-3	<0.00375	0.00375	mg/kg	09.14.17 11.47	U	1
Ethylbenzene	100-41-4	<0.00375	0.00375	mg/kg	09.14.17 11.47	U	1
Xylenes, Total	1330-20-7	<0.00375	0.00375	mg/kg	09.14.17 11.47	U	1
Total BTEX		<0.00375	0.00375	mg/kg	09.14.17 11.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	80-120	09.14.17 11.47	
4-Bromofluorobenzene	460-00-4	21	%	80-120	09.14.17 11.47	**

TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id: **OS-2 0-6"**
 Lab Sample Id: 562479-006

Matrix: Soil
 Date Collected: 09.08.17 10.50

Date Received: 09.11.17 15.03

Analytical Method: Chloride by EPA 300
 Tech: MNV
 Analyst: MNV
 Seq Number: 3027941

Date Prep: 09.15.17 13.15

Prep Method: E300P
 % Moisture:
 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.50	4.97	mg/kg	09.15.17 18.15		1

Analytical Method: TPH by SW8015 Mod
 Tech: ARM
 Analyst: ARM
 Seq Number: 3027473

Date Prep: 09.12.17 16.00

Prep Method: TX1005P
 % Moisture:
 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	09.13.17 05.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	19.4	14.9	mg/kg	09.13.17 05.50		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	09.13.17 05.50	U	1
Total TPH	PHC635	19.4	14.9	mg/kg	09.13.17 05.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.13.17 05.50	
o-Terphenyl	84-15-1	88	%	70-135	09.13.17 05.50	

Analytical Method: BTEX by EPA 8021B
 Tech: ALJ
 Analyst: ALJ
 Seq Number: 3027739

Date Prep: 09.14.17 08.37

Prep Method: SW5030B
 % Moisture:
 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00369	0.00369	mg/kg	09.14.17 12.06	U	1
Toluene	108-88-3	<0.00369	0.00369	mg/kg	09.14.17 12.06	U	1
Ethylbenzene	100-41-4	<0.00369	0.00369	mg/kg	09.14.17 12.06	U	1
Xylenes, Total	1330-20-7	<0.00369	0.00369	mg/kg	09.14.17 12.06	U	1
Total BTEX		<0.00369	0.00369	mg/kg	09.14.17 12.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	29	%	80-120	09.14.17 12.06	**
1,4-Difluorobenzene	540-36-3	101	%	80-120	09.14.17 12.06	

TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id: Composite-1	Matrix: Soil	Date Received: 09.11.17 15.03
Lab Sample Id: 562479-007	Date Collected: 09.08.17 10.30	
Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 09.12.17 16.00	Basis: Wet Weight
Seq Number: 3027473		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	09.13.17 07.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	5260	14.9	mg/kg	09.13.17 07.34		1
Oil Range Hydrocarbons (ORO)	PHCG2835	1850	14.9	mg/kg	09.13.17 07.34		1
Total TPH	PHC635	7110	14.9	mg/kg	09.13.17 07.34		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	105	%	70-135	09.13.17 07.34		
o-Terphenyl	84-15-1	83	%	70-135	09.13.17 07.34		

Analytical Method: BTEX by EPA 8021B	Prep Method: SW5030B
Tech: ALJ	% Moisture:
Analyst: ALJ	Date Prep: 09.14.17 08.37
Seq Number: 3027739	Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00386	0.00386	mg/kg	09.14.17 12.24	U	1
Toluene	108-88-3	<0.00386	0.00386	mg/kg	09.14.17 12.24	U	1
Ethylbenzene	100-41-4	<0.00386	0.00386	mg/kg	09.14.17 12.24	U	1
Xylenes, Total	1330-20-7	<0.00386	0.00386	mg/kg	09.14.17 12.24	U	1
Total BTEX		<0.00386	0.00386	mg/kg	09.14.17 12.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	44	%	80-120	09.14.17 12.24	**	
1,4-Difluorobenzene	540-36-3	117	%	80-120	09.14.17 12.24		

TRC Solutions, Inc, Midland, TX

Blue Jay Federal #001H (1/25/17)

Sample Id: **Composite-2**

Matrix: Soil

Date Received: 09.11.17 15.03

Lab Sample Id: 562479-008

Date Collected: 09.08.17 10.35

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 09.12.17 16.00

Basis: Wet Weight

Seq Number: 3027473

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	09.13.17 06.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	1870	15.0	mg/kg	09.13.17 06.34		1
Oil Range Hydrocarbons (ORO)	PHCG2835	585	15.0	mg/kg	09.13.17 06.34		1
Total TPH	PHC635	2455	15	mg/kg	09.13.17 06.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.13.17 06.34	
o-Terphenyl	84-15-1	85	%	70-135	09.13.17 06.34	

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 09.14.17 08.37

Basis: Wet Weight

Seq Number: 3027739

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00380	0.00380	mg/kg	09.14.17 12.43	U	1
Toluene	108-88-3	<0.00380	0.00380	mg/kg	09.14.17 12.43	U	1
Ethylbenzene	100-41-4	<0.00380	0.00380	mg/kg	09.14.17 12.43	U	1
Xylenes, Total	1330-20-7	<0.0038	0.0038	mg/kg	09.14.17 12.43	U	1
Total BTEX		<0.0038	0.0038	mg/kg	09.14.17 12.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	80-120	09.14.17 12.43	
4-Bromofluorobenzene	460-00-4	82	%	80-120	09.14.17 12.43	

- 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

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 - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

4147 Greenbriar Dr, Stafford, TX 77477	Phone	Fax
9701 Harry Hines Blvd , Dallas, TX 75220	(281) 240-4200	(281) 240-4280
5332 Blackberry Drive, San Antonio TX 78238	(214) 902 0300	(214) 351-9139
1211 W Florida Ave, Midland, TX 79701	(210) 509-3334	(210) 509-3335
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(432) 563-1800	(432) 563-1713
	(602) 437-0330	



QC Summary 562479

TRC Solutions, Inc
Blue Jay Federal #001H (1/25/17)

Analytical Method: Chloride by EPA 300

Seq Number: 3027941

MB Sample Id: 731046-1-BLK

Matrix: Solid

LCS Sample Id: 731046-1-BKS

Prep Method: E300P

Date Prep: 09.15.17

LCSD Sample Id: 731046-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	257	103	90-110	0	20	mg/kg	09.15.17 14:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3027941

Parent Sample Id: 562388-013

Matrix: Soil

MS Sample Id: 562388-013 S

Prep Method: E300P

Date Prep: 09.15.17

MSD Sample Id: 562388-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	464	249	692	92	702	96	90-110	1	20	mg/kg	09.15.17 14:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3027941

Parent Sample Id: 562407-004

Matrix: Soil

MS Sample Id: 562407-004 S

Prep Method: E300P

Date Prep: 09.15.17

MSD Sample Id: 562407-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5690	249	5690	0	5760	28	90-110	1	20	mg/kg	09.15.17 17:50	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3027473

MB Sample Id: 730846-1-BLK

Matrix: Solid

LCS Sample Id: 730846-1-BKS

Prep Method: TX1005P

Date Prep: 09.12.17

LCSD Sample Id: 730846-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1090	109	1070	107	70-135	2	35	mg/kg	09.12.17 22:48	
Diesel Range Organics (DRO)	<15.0	1000	1100	110	1100	110	70-135	0	35	mg/kg	09.12.17 22:48	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		108		104		70-135	%	09.12.17 22:48
o-Terphenyl	110		101		102		70-135	%	09.12.17 22:48



QC Summary 562479

TRC Solutions, Inc
Blue Jay Federal #001H (1/25/17)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3027473
Parent Sample Id: 562388-001

Matrix: Soil
MS Sample Id: 562388-001 S

Prep Method: TX1005P
Date Prep: 09.12.17
MSD Sample Id: 562388-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	1040	104	977	98	70-135	6	35	mg/kg	09.12.17 23:50	
Diesel Range Organics (DRO)	43.0	999	1100	106	1060	102	70-135	4	35	mg/kg	09.12.17 23:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		100		70-135	%	09.12.17 23:50
o-Terphenyl	97		95		70-135	%	09.12.17 23:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3027465
MB Sample Id: 730828-1-BLK

Matrix: Solid
LCS Sample Id: 730828-1-BKS

Prep Method: SW5030B
Date Prep: 09.13.17
LCSD Sample Id: 730828-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.106	106	0.106	106	70-130	0	35	mg/kg	09.13.17 07:46	
Toluene	<0.00199	0.0996	0.0996	100	0.0991	99	70-130	1	35	mg/kg	09.13.17 07:46	
Ethylbenzene	<0.00199	0.0996	0.0972	98	0.0972	97	71-129	0	35	mg/kg	09.13.17 07:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		96		97		80-120	%	09.13.17 07:46
4-Bromofluorobenzene	81		89		90		80-120	%	09.13.17 07:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3027595
MB Sample Id: 730911-1-BLK

Matrix: Solid
LCS Sample Id: 730911-1-BKS

Prep Method: SW5030B
Date Prep: 09.13.17
LCSD Sample Id: 730911-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.104	103	0.100	100	70-130	4	35	mg/kg	09.13.17 19:40	
Toluene	<0.00202	0.101	0.0996	99	0.0952	95	70-130	5	35	mg/kg	09.13.17 19:40	
Ethylbenzene	<0.00202	0.101	0.0994	98	0.0948	95	71-129	5	35	mg/kg	09.13.17 19:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		92		80-120	%	09.13.17 19:40
4-Bromofluorobenzene	82		86		86		80-120	%	09.13.17 19:40



QC Summary 562479

TRC Solutions, Inc
Blue Jay Federal #001H (1/25/17)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3027739

MB Sample Id: 730960-1-BLK

Matrix: Solid

LCS Sample Id: 730960-1-BKS

Prep Method: SW5030B

Date Prep: 09.14.17

LCSD Sample Id: 730960-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.103	103	0.102	103	70-130	1	35	mg/kg	09.14.17 08:56	
Toluene	<0.00200	0.0998	0.0975	98	0.0965	97	70-130	1	35	mg/kg	09.14.17 08:56	
Ethylbenzene	<0.00200	0.0998	0.0963	96	0.0961	97	71-129	0	35	mg/kg	09.14.17 08:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		99		97		80-120	%	09.14.17 08:56
4-Bromofluorobenzene	81		90		90		80-120	%	09.14.17 08:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3027682

MB Sample Id: 730962-1-BLK

Matrix: Solid

LCS Sample Id: 730962-1-BKS

Prep Method: SW5030B

Date Prep: 09.14.17

LCSD Sample Id: 730962-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0991	99	0.0987	99	70-130	0	35	mg/kg	09.14.17 18:04	
Toluene	<0.00200	0.0998	0.0976	98	0.0976	98	70-130	0	35	mg/kg	09.14.17 18:04	
Ethylbenzene	<0.00200	0.0998	0.0958	96	0.0958	96	71-129	0	35	mg/kg	09.14.17 18:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		96		96		80-120	%	09.14.17 18:04
4-Bromofluorobenzene	94		93		92		80-120	%	09.14.17 18:04

Analytical Method: BTEX by EPA 8021B

Seq Number: 3027465

Parent Sample Id: 562479-001

Matrix: Soil

MS Sample Id: 562479-001 S

Prep Method: SW5030B

Date Prep: 09.13.17

MSD Sample Id: 562479-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.124	123	0.107	107	70-130	15	35	mg/kg	09.13.17 08:24	
Toluene	<0.00202	0.101	0.0959	95	0.0983	98	70-130	2	35	mg/kg	09.13.17 08:24	
Ethylbenzene	<0.00202	0.101	0.0771	76	0.0910	91	71-129	17	35	mg/kg	09.13.17 08:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		100		80-120	%	09.13.17 08:24
4-Bromofluorobenzene	84		92		80-120	%	09.13.17 08:24



QC Summary 562479

TRC Solutions, Inc
Blue Jay Federal #001H (1/25/17)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3027595

Parent Sample Id: 562531-004

Matrix: Soil

MS Sample Id: 562531-004 S

Prep Method: SW5030B

Date Prep: 09.13.17

MSD Sample Id: 562531-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0756	76	0.0806	81	70-130	6	35	mg/kg	09.13.17 20:16	
Toluene	<0.00201	0.100	0.0705	71	0.0675	68	70-130	4	35	mg/kg	09.13.17 20:16	X
Ethylbenzene	<0.00201	0.100	0.0680	68	0.0617	62	71-129	10	35	mg/kg	09.13.17 20:16	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		103		80-120	%	09.13.17 20:16
4-Bromofluorobenzene	89		85		80-120	%	09.13.17 20:16

Analytical Method: BTEX by EPA 8021B

Seq Number: 3027739

Parent Sample Id: 562530-002

Matrix: Soil

MS Sample Id: 562530-002 S

Prep Method: SW5030B

Date Prep: 09.14.17

MSD Sample Id: 562530-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0891	88	0.0853	85	70-130	4	35	mg/kg	09.14.17 09:34	
Toluene	<0.00202	0.101	0.0828	82	0.0786	79	70-130	5	35	mg/kg	09.14.17 09:34	
Ethylbenzene	<0.00202	0.101	0.0805	80	0.0745	75	71-129	8	35	mg/kg	09.14.17 09:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		105		80-120	%	09.14.17 09:34
4-Bromofluorobenzene	95		96		80-120	%	09.14.17 09:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3027682

Parent Sample Id: 562531-003

Matrix: Soil

MS Sample Id: 562531-003 S

Prep Method: SW5030B

Date Prep: 09.14.17

MSD Sample Id: 562531-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0909	90	0.0848	85	70-130	7	35	mg/kg	09.14.17 18:42	
Toluene	<0.00202	0.101	0.0882	87	0.0823	82	70-130	7	35	mg/kg	09.14.17 18:42	
Ethylbenzene	<0.00202	0.101	0.0859	85	0.0805	81	71-129	6	35	mg/kg	09.14.17 18:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		101		80-120	%	09.14.17 18:42
4-Bromofluorobenzene	97		100		80-120	%	09.14.17 18:42

CHAIN OF CUSTODY

San Antonio, Texas (210-509-3334)
 Midland, Texas (432-704-5251)

www.xenco.com

Phoenix, Arizona (480-355-0900)

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes													
Company Name / Branch: TRC		Project Name/Number: Blue Jay Federal #001H (1/25/17)		Xenco Quote #		Xenco Job #													
Company Address: 2057 Commerce Drive Midland, Texas 79703		Project Location: Lea County, NM		BTEX 8021B		502479													
Email: nrgreen@trcsolutions.com		Invoice To: Rebecca Haskell with COG Operating LLC rshaskell@concho.com		Chloride E300.0		W = Water S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WW = Waste Water A = Air													
Project Contact: NIKKI GREEN		Phone No: 432-664-6999		TPH 8015M EXT 36		Field Comments													
Sampler's Name: NIKKI GREEN		PO Number:		BTEX 8021B		Temp: 3.8 IR ID: R-8													
		600 W Illinois Avenue Midland, TX 79701		Chloride E300.0		CF: (0-6: -0.2°C)													
		Direct: 432-918-2372 Main: 432-683-7443				(6-23: +0.2°C)													
						Corrected Temp: 3.1													
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH 8015M EXT 36	BTEX 8021B	Chloride E300.0	Note	
1	T1a 0-3"		8-Sep	1105	S	1									X	X	X		
2	T2a 0-3"		8-Sep	1055	S	1									X	X	X		
3	T2a 1.5'		8-Sep	1040	S	1									X	X	X		
4	T3a 0-6"		8-Sep	1100	S	1									X	X	X		
5	OS-1 0-6"		8-Sep	1045	S	1									X	X	X		
6	OS-2 0-6"		8-Sep	1050	S	1									X	X	X		
7	Composite-1		8-Sep	1030	S	1									X	X	X		
8	Composite-2		8-Sep	1035	S	1									X	X	X		
9																			
10																			
Turnaround Time (Business days)										Data Deliverable Information								Note	
<input type="checkbox"/> Same Day TAT										<input checked="" type="checkbox"/> Level II Std QC								Level IV (Full Data Pkg /raw data)	
<input type="checkbox"/> Next Day EMERGENCY										<input type="checkbox"/> 7 Day TAT								Level III Std QC+ Forms	
<input type="checkbox"/> 2 Day EMERGENCY										<input checked="" type="checkbox"/> Contract TAT								Level 3 (CLP Forms)	
<input type="checkbox"/> 3 Day EMERGENCY										<input type="checkbox"/> TRRP Checklist								UST / RG -411	
TAT Starts Day received by Lab, if received by 5:00 pm																		TRRP Checklist	
Relinquished by Sampler: <i>Nikki Green</i>										SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY								FED-EX / UPS: Tracking #	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Relinquished by: <i>Nikki Green</i>										Received By: <i>NAMER</i>								Date Time: 9/11/17 1503	
Date Time: 9/11/17 1503										Received By: <i>NAMER</</i>									



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 09/11/2017 03:03:00 PM

Work Order #: 562479

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)?	3.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Jessica Kramer
 Jessica Kramer

Date: 09/11/2017

Checklist reviewed by: Kelsey Brooks
 Kelsey Brooks

Date: 09/11/2017

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

Form C-141
Revised August 8, 2011

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

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: COG Operating LLC	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: Blue Jay Federal #001H	Facility Type: Tank Battery

Surface Owner: Federal	Mineral Owner:	API No. 30-025-42338
------------------------	----------------	----------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	18	20S	35E	190	South	2310	East	Lea

Latitude 32.5664367366954 Longitude -103.495571226436

NATURE OF RELEASE

Type of Release: Oil (Fire)	Volume of Release: 10 bbls	Volume Recovered: 9 bbls
Source of Release: Flare	Date and Hour of Occurrence: January 25, 2017 7:00 am	Date and Hour of Discovery: January 25, 2017 7:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Ms. Yu - NMOCD / Shelly Tucker BLM	
By Whom? Rebecca Haskell	Date and Hour: January 25, 2017 Time per this email	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

RECEIVED
By Olivia Yu at 3:14 pm, Feb 15, 2017

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release was caused by fluid going through the flare causing a fire. The fire quickly extinguished itself due to the limited amount of fluid that escaped the flare.

Describe Area Affected and Cleanup Action Taken.*

The release was on location and adjacent pasture area. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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: <i>Rebecca Haskell</i>	OIL CONSERVATION DIVISION	
Printed Name: Rebecca Haskell	Approved by Environmental Specialist: <i>JY</i>	
Title: Senior HSE Coordinator	Approval Date: 2/15/2017	Expiration Date:
E-mail Address: rhaskell@concho.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: January 25, 2017 Phone: 432-683-7443		

* Attach Additional Sheets If Necessary

1RP-4610

nOY1704654982

pOY1704655733

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 1/25/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1R-4610 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 3/15/2017. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us