Closure Request

Property:
Concho Operating, LLC.
Big Papi Federal Com #001H
Eddy County, New Mexico
Unit Letter "B", Section 04, Township 26 South, Range 29 East
Latitude 32.07801, Longitude -103.98710
2RP-3861

November 2017

Prepared for:

Concho Operating, LLC.
600 West Illinois Avenue
Midland, TX 79701
Attn: **Mrs. Rebecca Haskell**

Prepared by:

Ryan Reich
Environmental Project Manager

Thomas Franklin
Environmental Manger

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APPENDICES

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1.0 INTRODUCTION

1.1 Site Description & Background

American Safety Services Inc. (ASSI) has prepared this Closure Request for the Concho Operating, LLC. (COG) Big Papi Federal Com #001H. This Closure Request is based upon the interpretation of data collected by COG.

The Big Papi Federal Com #001H (referred to hereinafter as the "Site" or "subject Site") is located in Unit Letter "B", Section 04, Township 26 South, Range 29 East, Eddy County, New Mexico (GPS 32.07801N, -103.98710W).

Remedial actions were conducted by COG accordance with New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (NMOCD) rules (*NMAC 19.15.29 Release Notification*) and the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

1.2 Project Objective

The objective of the Closure Request is to present documentation of the activities that were performed by COG to date and to request an effective means to close the Site.

1.3 Standard of Care

ASSI's services are performed in accordance with standards provided by a firm rendering the same or similar services in the area during the same time period. ASSI makes no warranties, express or implied, as to the services performed hereunder. Additionally, ASSI does not warranty the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client.

1.4 Reliance

This report has been prepared for the exclusive use of COG, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of COG and ASSI. Any unauthorized distribution or reuse is at the sole risk of COG. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and ASSI's Agreement. The limitation of liability defined in the agreement is the aggregate limit of ASSI's liability to the client.

2.0 SITE RANKING & PROPOSED REMEDIAL ACTION GOALS

The Site is subject to regulatory oversight by the NMOCD. To address activities related to releases, the NMOCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the NMOCD rules, specifically NMAC 19.15.29 *Release Notification*. These documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

In accordance with the NMOCD's *Guidelines for Remediation of Leaks, Spills and Releases*, ASSI utilized the general site characteristics to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	**0**
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area, <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	**0**
	No	0	
Distance to Surface Water Body	<200 feet	20	**0**
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			**0**

Based on ASSI's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 0. This ranking is based on the following:

- The depth to the initial groundwater-bearing zone is greater than 100 feet at the Site.
- The impacted area is greater than 200 feet from a private domestic water source.
- Distance to the nearest surface water body is greater than 1,000 ft.

Based on a Total Ranking Score of 0, cleanup goals for soils remaining in place include: 10 milligrams per kilogram (mg/Kg) for Benzene, 50 mg/Kg for Total Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), 5,000 mg/Kg for Total Petroleum Hydrocarbons (TPH), and 600 mg/Kg for Chloride.

Figures 1 and 2 show the location of the Site in Eddy County, New Mexico and surrounding topography.

2.1 Groundwater Research

According to research conducted on the New Mexico Office of the State Engineer (NMOSE) groundwater database, no registered water wells were located in section 29. According to ChevronTexaco Groundwater Trend Map, groundwater is between one hundred (100) and one hundred-fifty (150) feet in the approximate location of the Site.

3.0 INITIAL RELEASE & ACTIVITIES

3.1 Initial Release

On August 23, 2016, COG personnel responded to a release where eight (8) barrels (bbls) of oil were released directly to the ground caused by a lightning strike to the facility. Seven (7) bbls of the fluids were recovered. The release impacted approximately two thousand seven hundred-thirty (2,730) square feet of production pad (Figure 3).

3.2 Trenching Activities

On December 13th ASSI was onsite to perform trenching activities utilizing mechanical means (i.e., backhoe tractor). Mr. Ryan Reich, an ASSI environmental professional was present to document onsite activities. Two (2) trenches were installed in the area of the release. Trench 1 (T1) was advanced to a depth of four (4) feet below grade surface (bgs). Trench 2 (T2) was advanced to a depth of three (3) feet bgs in an attempt to vertically delineate TPH, BTEX and Chloride at depth. Deeper samples could not be collected due to a dense formation encountered during trenching activities. Select samples were field screened for Chloride utilizing electro conductivity during sampling activities. Trench locations can be found in Figure 4 of Appendix A

3.2.1 Trenching Soil Sampling Program

Nine (9) soil samples were collected from both trench locations, five (5) from T1 and four (4) from T2. TPH and BTEX were vertically delineated in both trenches, however, Chloride was found in exceedances in both trench locations. Specifically, at sample location T1, Chloride was present at one (1) foot bgs at a concentration of 1,310 mg/Kg. Sample location T2 had elevated Chloride concentrations ranging from 768 mg/Kg at the surface to 2,800 mg/Kg at one (1) foot bgs. Samples collected from both trench locations were submitted to the laboratory and analyzed for TPH, BTEX and Chloride.

3.3 Reclamation Activities

During the months of April and May 2017, COG personnel were onsite to perform reclamation activities in accordance with the plugging and abandonment of the facility.

Reclamation efforts continued until May 10th leading up to COG installing confirmation trenches.

3.4 Confirmation Trenching Activities

Confirmation trenching activities were conducted by COG personnel on May 10th utilizing mechanical means (i.e., backhoe tractor). Trench 1 (T1) was advanced to a depth of two and one-half (2.5) feet below grade surface (bgs). Trench 2 (T2) was advanced to a depth of three (3) feet bgs in an attempt to vertically delineate TPH and Chloride at depth. Select samples were field screened for Chloride utilizing electro conductivity during sampling activities. Trench locations can be found in Figure 4 of Appendix A

3.4.1 Confirmation Trenching Soil Sampling Program

Eight (8) soil samples were collected from both trench locations, four (4) from T1 and four (4) from T2. TPH, BTEX and Chloride were vertically delineated and were not found in concentrations exceeding remediation guidelines. Samples collected from both trench locations were submitted to the laboratory and analyzed for TPH, BTEX and Chloride.

4.0 LABORATORY ANALYTICAL METHODS

The samples were analyzed for TPH GRO/DRO utilizing EPA method SW-846 8015, BTEX using EPA method SW-846 8021B, and Chloride utilizing EPA method SW-846 300.1. Copies of the laboratory analysis are provided in Appendix D.

Soil was collected in laboratory prepared glassware, placed on ice, and packed in a cooler. The sample coolers and completed chain-of-custody forms were relinquished to Cardinal Laboratories in Hobbs New Mexico for the December 2016 sampling activities and to Xenco Laboratories in Midland, Texas for the May 2017 sampling activities.

Figure 4 shows the approximate location of the sampling (i.e., Trench) locations and dimensions of the previously area in relation to pertinent land features and general Site boundaries, which is included in Appendix A.

5.0 REMEDIATION SUMMARY & CLOSURE REQUEST

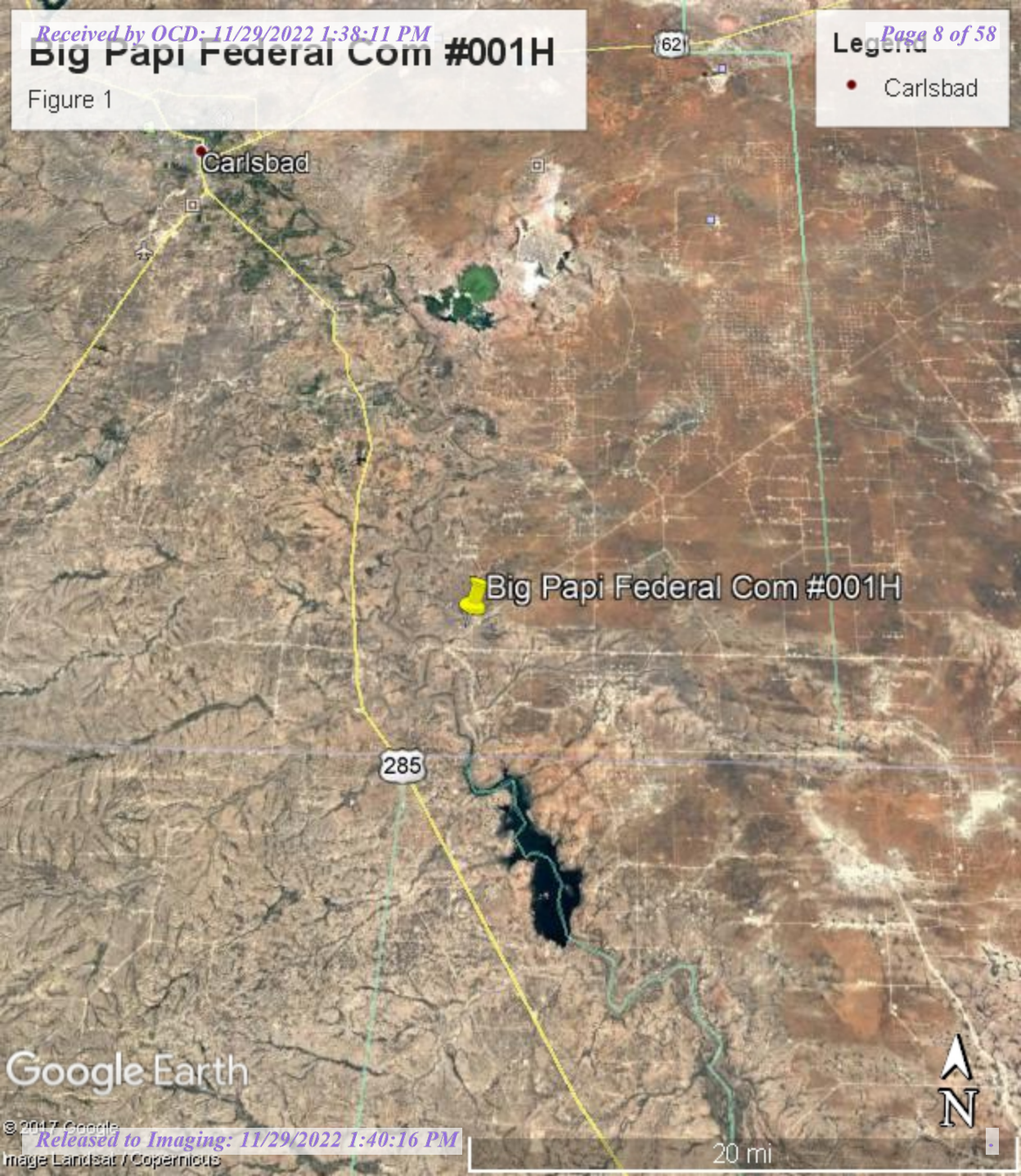
Based upon the data provided by ASSI, the constituents of concern were horizontally and vertically delineated below the cleanup levels. The areas of T1 and T2 have been reclaimed in accordance with the plugging and abandonment of the facility. Based upon the response actions and laboratory analytical results, no additional investigation and/or remediation appears warranted at this time. ASSI respectfully requests closure of the Site on behalf of COG. Copies of the Initial and Final C-141 are provided in Appendix D.

APPENDIX A

Figures

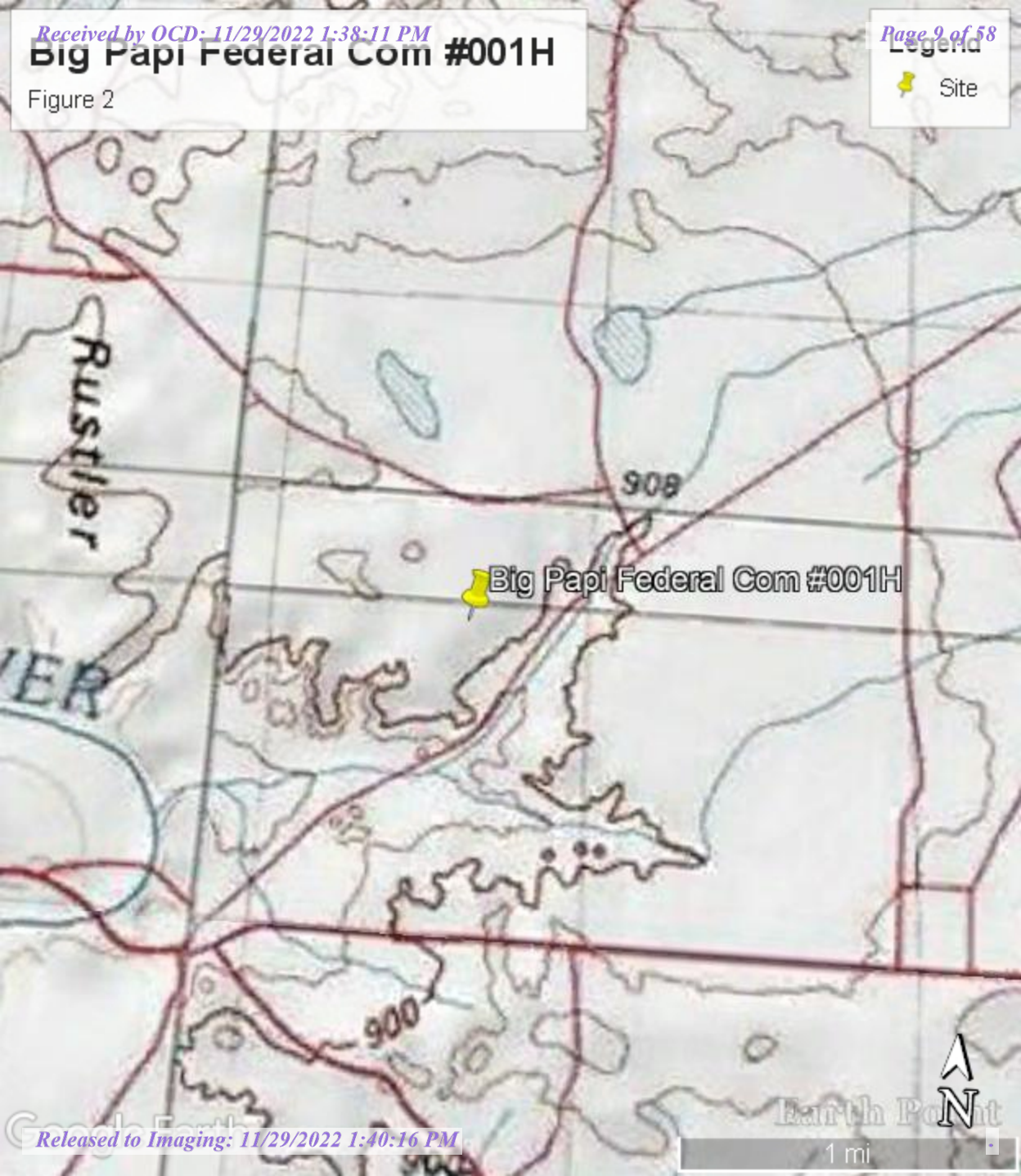
Big Papi Federal Com #001H

Figure 1



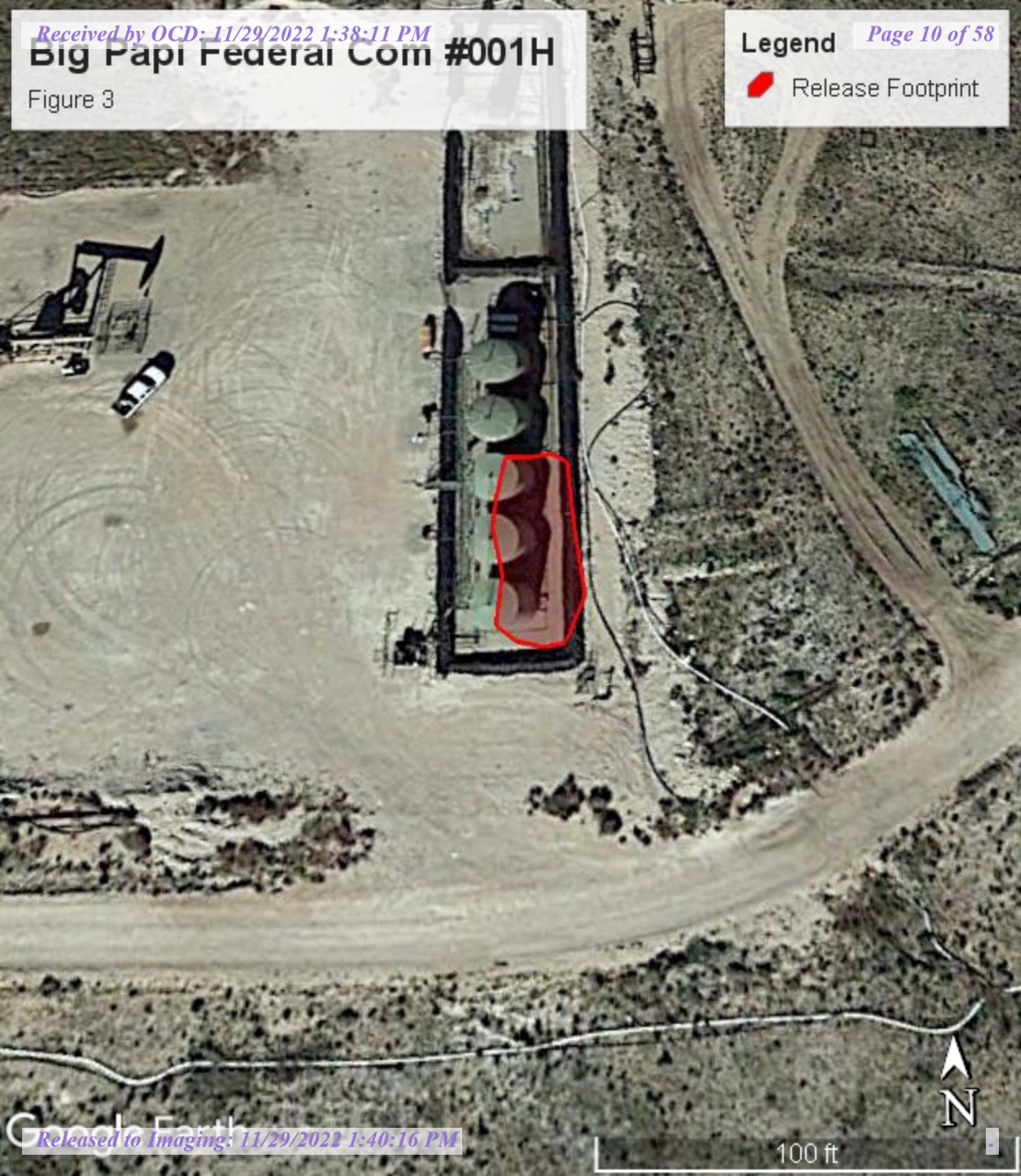
Big Papi Federal Com #001H

Figure 2



Big Papi Federal Com #001H

Figure 3



Big Papi Federal Com #001H

Figure 4

APPENDIX B

Table 1

TABLE 1
Summary of Delineation Sampling Analytical Results
Concentrations of Benzene, BTEX, TPH & Chloride in Soil
Concho Operating, LLC
Big Papi Federal Com #001H
Eddy County, New Mexico
NMOCD REF: 2RP-3861

SAMPLE LOCATION	SAMPLE DEPTH (bgs)	SAMPLE DATE	SOIL STATUS	8021B					8015M			300.0
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	Total TPH (mg/Kg)	CHLORIDE (mg/Kg)
NMOCD - Guidelines for Remediation of Leaks, Spills and Releases				**10**	**NE**	**NE**	**NE**	**50**	**NE**	**NE**	**5,000**	**600**
Vertical Delination Sampling												
T1	Surface	12/13/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	119	119	176
T1	1'	12/13/2016	In-Situ	<0.050	0.088	<0.050	1.63	1.72	34.2	453	487.2	**1,310**
T1	2'	12/13/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	240
T1	3'	12/13/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	98.5	98.5	224
T1	4'	12/13/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	160
T2	Surface	12/13/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	653	653	**768**
T2	1'	12/13/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	74.5	74.5	**2,800**
T2	2'	12/13/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	64.0
T2	3'	12/13/2016	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	96.0
T1	Surface	5/10/2017	In-Situ	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	633	633	113
T1	1'	5/10/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	236
T1	2'	5/10/2017	In-Situ	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	272
T1	2.5'	5/10/2017	In-Situ	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	156
T2	Surface	5/10/2017	In-Situ	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	151
T2	1'	5/10/2017	In-Situ	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	30.3
T2	2'	5/10/2017	In-Situ	<0.0125	<0.0125	<0.0125	<0.0125	<0.0125	<15.0	<15.0	<15.0	135
T2	3'	5/10/2017	In-Situ	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	138

mg/Kg - milligrams per Kilogram

Concentrations in **BOLD** exceed the NMOCD Guidelines

APPENDIX C

Laboratory Analysis

Certificate of Analysis Summary 553111

COG Operating LLC, Artesia, NM

Project Name: Big Papi Fed #1H

Project Id:
Contact: Aaron Lieb
Project Location: Big Papi Fed #1H

Date Received in Lab: Sat May-13-17 11:00 am
Report Date: 22-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	553111-001		553111-002		553111-003		553111-004		553111-005		553111-006	
	Field Id:	T1		T1		T1		T1		T2		T2	
	Depth:			1 ft		2 ft		2.5 ft				1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-10-17 09:00		May-10-17 09:00		May-10-17 09:00		May-10-17 09:00		May-10-17 09:00		May-10-17 09:00	
BTEX by EPA 8021B	Extracted:	May-18-17 10:00		May-18-17 10:00		May-18-17 10:00		May-18-17 10:00		May-18-17 10:00		May-18-17 10:00	
	Analyzed:	May-18-17 19:39		May-18-17 19:55		May-18-17 20:12		May-18-17 17:28		May-18-17 20:28		May-18-17 20:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402	<0.00404	0.00404	<0.00397	0.00397	<0.00399	0.00399
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	Extracted:	May-21-17 12:05		May-21-17 12:05		May-21-17 12:05		May-21-17 12:05		May-21-17 12:05		May-21-17 12:05	
	Analyzed:	May-21-17 15:44		May-21-17 15:52		May-21-17 16:00		May-21-17 16:07		May-21-17 16:15		May-21-17 16:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		113	4.95	236	4.99	272	4.91	156	4.97	151	4.95	30.3	4.90
TPH By SW8015 Mod	Extracted:	May-15-17 14:00		May-15-17 14:00		May-15-17 14:00		May-15-17 14:00		May-15-17 14:00		May-15-17 14:00	
	Analyzed:	May-15-17 22:23		May-15-17 22:43		May-15-17 23:01		May-15-17 23:20		May-15-17 23:40		May-15-17 23:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
C10-C28 Diesel Range Hydrocarbons		633	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		633	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 553111

COG Operating LLC, Artesia, NM

Project Name: Big Papi Fed #1H

Project Id:
Contact: Aaron Lieb
Project Location: Big Papi Fed #1H

Date Received in Lab: Sat May-13-17 11:00 am
Report Date: 22-MAY-17
Project Manager: Liz Givens

Analysis Requested									
	Lab Id:	553111-007		553111-008					
	Field Id:	T2		T2					
	Depth:	2 ft		3 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	May-10-17 09:00		May-10-17 09:00					
BTEX by EPA 8021B	***Extracted:***	May-22-17 09:00		May-18-17 10:00					
	Analyzed:	May-22-17 09:48		May-18-17 21:17					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.0125	0.0125	<0.00199	0.00199				
Toluene		<0.0125	0.0125	<0.00199	0.00199				
Ethylbenzene		<0.0125	0.0125	<0.00199	0.00199				
m,p-Xylenes		<0.0250	0.0250	<0.00398	0.00398				
o-Xylene		<0.0125	0.0125	<0.00199	0.00199				
Total Xylenes		<0.0125	0.0125	<0.00199	0.00199				
Total BTEX		<0.0125	0.0125	<0.00199	0.00199				
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-21-17 15:58		May-21-17 15:58					
	Analyzed:	May-21-17 19:32		May-21-17 19:55					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		135	4.88	138	4.96				
TPH By SW8015 Mod	***Extracted:***	May-15-17 14:00		May-15-17 14:00					
	Analyzed:	May-16-17 00:19		May-16-17 00:38					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0				
C10-C28 Diesel Range Hydrocarbons		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

Brandi Ritcherson
Project Manager

Analytical Report 553111

for

COG Operating LLC

Project Manager: Aaron Lieb

Big Papi Fed #1H

22-MAY-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)

22-MAY-17

Project Manager: **Aaron Lieb**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **553111**
Big Papi Fed #1H
Project Address: Big Papi Fed #1H

Aaron Lieb:

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) 553111. 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. 553111 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brandi Ritcherson
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 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T1	S	05-10-17 09:00	N/A	553111-001
T1	S	05-10-17 09:00	- 1 ft	553111-002
T1	S	05-10-17 09:00	- 2 ft	553111-003
T1	S	05-10-17 09:00	- 2.5 ft	553111-004
T2	S	05-10-17 09:00	N/A	553111-005
T2	S	05-10-17 09:00	- 1 ft	553111-006
T2	S	05-10-17 09:00	- 2 ft	553111-007
T2	S	05-10-17 09:00	- 3 ft	553111-008

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Big Papi Fed #1H

Project ID:
Work Order Number(s): *553111*

Report Date: *22-MAY-17*
Date Received: *05/13/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3017709 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3017911 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id: **T1** Matrix: Soil Date Received:05.13.17 11.00

Lab Sample Id: 553111-001 Date Collected: 05.10.17 09.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 05.21.17 12.05 Basis: Wet Weight

Seq Number: 3017881

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**113**	4.95	mg/kg	05.21.17 15.44		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 05.15.17 14.00 Basis: Wet Weight

Seq Number: 3017485

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 22.23	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	**633**	15.0	mg/kg	05.15.17 22.23		1
Total TPH	PHC635	**633**	15.0	mg/kg	05.15.17 22.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.15.17 22.23	
o-Terphenyl	84-15-1	96	%	70-135	05.15.17 22.23	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 05.18.17 10.00 Basis: Wet Weight

Seq Number: 3017709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.18.17 19.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	80-120	05.18.17 19.39	
4-Bromofluorobenzene	460-00-4	117	%	80-120	05.18.17 19.39	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T1**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-002	Date Collected:	05.10.17 09.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 12.05	Basis:	Wet Weight
Seq Number:	3017881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**236**	4.99	mg/kg	05.21.17 15.52		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 22.43	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 22.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 22.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.15.17 22.43	
o-Terphenyl	84-15-1	102	%	70-135	05.15.17 22.43	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.18.17 19.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	05.18.17 19.55	
4-Bromofluorobenzene	460-00-4	89	%	80-120	05.18.17 19.55	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T1**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-003	Date Collected:	05.10.17 09.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 12.05	Basis:	Wet Weight
Seq Number:	3017881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**272**	4.91	mg/kg	05.21.17 16.00		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 23.01	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 23.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.15.17 23.01	
o-Terphenyl	84-15-1	100	%	70-135	05.15.17 23.01	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.18.17 20.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	80-120	05.18.17 20.12	
4-Bromofluorobenzene	460-00-4	102	%	80-120	05.18.17 20.12	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T1**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-004	Date Collected:	05.10.17 09.00	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 12.05	Basis:	Wet Weight
Seq Number:	3017881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**156**	4.97	mg/kg	05.21.17 16.07		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 23.20	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 23.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 23.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.15.17 23.20	
o-Terphenyl	84-15-1	101	%	70-135	05.15.17 23.20	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	05.18.17 17.28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	80-120	05.18.17 17.28	
1,4-Difluorobenzene	540-36-3	92	%	80-120	05.18.17 17.28	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id: **T2** Matrix: Soil Date Received:05.13.17 11.00

Lab Sample Id: 553111-005 Date Collected: 05.10.17 09.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 05.21.17 12.05 Basis: Wet Weight

Seq Number: 3017881

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**151**	4.95	mg/kg	05.21.17 16.15		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 05.15.17 14.00 Basis: Wet Weight

Seq Number: 3017485

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 23.40	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 23.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 23.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.15.17 23.40	
o-Terphenyl	84-15-1	101	%	70-135	05.15.17 23.40	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 05.18.17 10.00 Basis: Wet Weight

Seq Number: 3017709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.18.17 20.28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	80-120	05.18.17 20.28	
1,4-Difluorobenzene	540-36-3	103	%	80-120	05.18.17 20.28	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T2**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-006	Date Collected:	05.10.17 09.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 12.05	Basis:	Wet Weight
Seq Number:	3017881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.3**	4.90	mg/kg	05.21.17 16.22		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 23.59	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 23.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 23.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	05.15.17 23.59	
o-Terphenyl	84-15-1	115	%	70-135	05.15.17 23.59	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.18.17 20.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	05.18.17 20.45	
4-Bromofluorobenzene	460-00-4	86	%	80-120	05.18.17 20.45	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T2**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-007	Date Collected:	05.10.17 09.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 15.58	Basis:	Wet Weight
Seq Number:	3017885				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**135**	4.88	mg/kg	05.21.17 19.32		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.16.17 00.19	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.16.17 00.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.17 00.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.16.17 00.19	
o-Terphenyl	84-15-1	98	%	70-135	05.16.17 00.19	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.22.17 09.00	Basis:	Wet Weight
Seq Number:	3017911				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
Toluene	108-88-3	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
Ethylbenzene	100-41-4	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
m,p-Xylenes	179601-23-1	<0.0250	0.0250	mg/kg	05.22.17 09.48	U	1
o-Xylene	95-47-6	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
Total Xylenes	1330-20-7	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
Total BTEX		<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	80-120	05.22.17 09.48	
4-Bromofluorobenzene	460-00-4	107	%	80-120	05.22.17 09.48	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T2**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-008	Date Collected:	05.10.17 09.00	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 15.58	Basis:	Wet Weight
Seq Number:	3017885				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**138**	4.96	mg/kg	05.21.17 19.55		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.16.17 00.38	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.16.17 00.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.17 00.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.16.17 00.38	
o-Terphenyl	84-15-1	100	%	70-135	05.16.17 00.38	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.18.17 21.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	80-120	05.18.17 21.17	
4-Bromofluorobenzene	460-00-4	119	%	80-120	05.18.17 21.17	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 553111

COG Operating LLC

Big Papi Fed #1H

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017881 — Matrix: Solid — Date Prep: 05.21.17
MB Sample Id: 724938-1-BLK — LCS Sample Id: 724938-1-BKS — LCSD Sample Id: 724938-1-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	250	100	251	100	90-110	0	20	mg/kg	05.21.17 12:42	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017885 — Matrix: Solid — Date Prep: 05.21.17
MB Sample Id: 724943-1-BLK — LCS Sample Id: 724943-1-BKS — LCSD Sample Id: 724943-1-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	244	98	249	100	90-110	2	20	mg/kg	05.21.17 16:53	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017881 — Matrix: Soil — Date Prep: 05.21.17
Parent Sample Id: 553103-004 — MS Sample Id: 553103-004 S — MSD Sample Id: 553103-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.06	249	277	109	280	110	90-110	1	20	mg/kg	05.21.17 13:05	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017881 — Matrix: Soil — Date Prep: 05.21.17
Parent Sample Id: 553113-001 — MS Sample Id: 553113-001 S — MSD Sample Id: 553113-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	38.9	246	306	109	305	108	90-110	0	20	mg/kg	05.21.17 14:51	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017885 — Matrix: Soil — Date Prep: 05.21.17
Parent Sample Id: 553111-007 — MS Sample Id: 553111-007 S — MSD Sample Id: 553111-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	135	244	387	103	397	106	90-110	3	20	mg/kg	05.21.17 19:40	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017885 — Matrix: Soil — Date Prep: 05.21.17
Parent Sample Id: 553325-008 — MS Sample Id: 553325-008 S — MSD Sample Id: 553325-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.6	248	295	115	258	100	90-110	13	20	mg/kg	05.21.17 21:26	X

QC Summary 553111

COG Operating LLC

Big Papi Fed #1H

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3017485 — Matrix: Solid — Date Prep: 05.15.17
MB Sample Id: 724731-1-BLK — LCS Sample Id: 724731-1-BKS — LCSD Sample Id: 724731-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	960	96	915	92	70-135	5	35	mg/kg	05.15.17 16:53	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	935	94	909	91	70-135	3	35	mg/kg	05.15.17 16:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		113		110		70-135	%	05.15.17 16:53
o-Terphenyl	119		107		106		70-135	%	05.15.17 16:53

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3017485 — Matrix: Soil — Date Prep: 05.15.17
Parent Sample Id: 553084-001 — MS Sample Id: 553084-001 S — MSD Sample Id: 553084-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	999	945	95	932	93	70-135	1	35	mg/kg	05.15.17 17:58	
C10-C28 Diesel Range Hydrocarbons	19.5	999	939	92	927	91	70-135	1	35	mg/kg	05.15.17 17:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		105		70-135	%	05.15.17 17:58
o-Terphenyl	100		93		70-135	%	05.15.17 17:58

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3017709 — Matrix: Solid — Date Prep: 05.18.17
MB Sample Id: 724845-1-BLK — LCS Sample Id: 724845-1-BKS — LCSD Sample Id: 724845-1-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	0.0887	89	0.0805	81	70-130	10	35	mg/kg	05.18.17 13:04	
Toluene	<0.00200	0.0998	0.0946	95	0.0932	93	70-130	1	35	mg/kg	05.18.17 13:04	
Ethylbenzene	<0.00200	0.0998	0.103	103	0.100	100	71-129	3	35	mg/kg	05.18.17 13:04	
m,p-Xylenes	<0.00399	0.200	0.216	108	0.199	100	70-135	8	35	mg/kg	05.18.17 13:04	
o-Xylene	<0.00200	0.0998	0.101	101	0.0965	97	71-133	5	35	mg/kg	05.18.17 13:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	117		98		89		80-120	%	05.18.17 13:04
4-Bromofluorobenzene	119		109		93		80-120	%	05.18.17 13:04

QC Summary 553111

COG Operating LLC

Big Papi Fed #1H

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3017911 — Matrix: Solid — Date Prep: 05.22.17
MB Sample Id: 725005-1-BLK — LCS Sample Id: 725005-1-BKS — LCSD Sample Id: 725005-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0851	84	0.0900	89	70-130	6	35	mg/kg	05.22.17 08:10	
Toluene	<0.00201	0.101	0.0927	92	0.0995	99	70-130	7	35	mg/kg	05.22.17 08:10	
Ethylbenzene	<0.00201	0.101	0.101	100	0.103	102	71-129	2	35	mg/kg	05.22.17 08:10	
m,p-Xylenes	<0.00402	0.201	0.198	99	0.202	100	70-135	2	35	mg/kg	05.22.17 08:10	
o-Xylene	<0.00201	0.101	0.0956	95	0.0909	90	71-133	5	35	mg/kg	05.22.17 08:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		93		113		80-120	%	05.22.17 08:10
4-Bromofluorobenzene	120		109		111		80-120	%	05.22.17 08:10

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3017709 — Matrix: Soil — Date Prep: 05.18.17
Parent Sample Id: 553111-004 — MS Sample Id: 553111-004 S — MSD Sample Id: 553111-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0746	75	0.0744	74	70-130	0	35	mg/kg	05.18.17 14:10	
Toluene	<0.00199	0.0996	0.0779	78	0.0766	77	70-130	2	35	mg/kg	05.18.17 14:10	
Ethylbenzene	<0.00199	0.0996	0.0801	80	0.0732	73	71-129	9	35	mg/kg	05.18.17 14:10	
m,p-Xylenes	<0.00398	0.199	0.162	81	0.148	74	70-135	9	35	mg/kg	05.18.17 14:10	
o-Xylene	<0.00199	0.0996	0.0728	73	0.0783	78	71-133	7	35	mg/kg	05.18.17 14:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		101		80-120	%	05.18.17 14:10
4-Bromofluorobenzene	100		114		80-120	%	05.18.17 14:10

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3017911 — Matrix: Soil — Date Prep: 05.22.17
Parent Sample Id: 553566-001 — MS Sample Id: 553566-001 S — MSD Sample Id: 553566-001 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	0.0814	81	0.0846	84	70-130	4	35	mg/kg	05.22.17 08:43	
Toluene	<0.00202	0.101	0.0916	91	0.0937	93	70-130	2	35	mg/kg	05.22.17 08:43	
Ethylbenzene	<0.00202	0.101	0.0936	93	0.0991	98	71-129	6	35	mg/kg	05.22.17 08:43	
m,p-Xylenes	<0.00405	0.202	0.181	90	0.196	97	70-135	8	35	mg/kg	05.22.17 08:43	
o-Xylene	<0.00202	0.101	0.0962	95	0.0937	93	71-133	3	35	mg/kg	05.22.17 08:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		110		80-120	%	05.22.17 08:43
4-Bromofluorobenzene	109		114		80-120	%	05.22.17 08:43

XENCO LABORATORIES

Setting the Standard since 1990

CHAIN OF CUSTODY

Page 1 Of 1

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote # | Xenco Job # 553111

Client / Reporting Information

Company Name / Branch: COG Operating LLC
Company Address: 2407 PECOS Avenue Artesia NM 88210
Email: alieb@concho.com dneel2@concho.com rhaskell@concho.com
Phone No: 575-748-1553
Project Contact: Aaron Lieb
Samplers's Name- Aaron Lieb

Project Information

Project Name/Number: Big Papi Fed #1H
Project Location: Big Papi Fed #1H
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
PO Number:

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: CHLORIDE	BTEX	TPH	Field Comments
1	T1	SURF	5-10-17	9:00AM											X	X	X	
2	T1	1'													X	X	X	
3	T1	2'													X	X	X	
4	T1	2.5'													X	X	X	
5	T2	SURF													X	X	X	
6	T2	1'													X	X	X	
7	T2	2'													X	X	X	
8	T2	3'													X	X	X	
9																		
10																		

Turnaround Time (Business days)

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

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5-12-17 11:00 AM	Sid Butler 11:00A 5-12-17	2		HRAMER 5.13.17 700
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice

Temp: 3.7 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.5

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 05/13/2017 11:00:00 AM

Work Order #: 553111

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)?	3.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Jessica Kramer Date: 05/15/2017
Jessica Kramer

Checklist reviewed by: Holly Taylor Date: 05/15/2017
Holly Taylor

Certificate of Analysis Summary 553111

COG Operating LLC, Artesia, NM

Project Name: Big Papi Fed #1H

Project Id:
Contact: Aaron Lieb
Project Location: Big Papi Fed #1H

Date Received in Lab: Sat May-13-17 11:00 am
Report Date: 22-MAY-17
Project Manager: Liz Givens

Analysis Requested													
	Lab Id:	553111-001		553111-002		553111-003		553111-004		553111-005		553111-006	
	Field Id:	T1		T1		T1		T1		T2		T2	
	Depth:			1 ft		2 ft		2.5 ft				1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-10-17 09:00		May-10-17 09:00		May-10-17 09:00		May-10-17 09:00		May-10-17 09:00		May-10-17 09:00	
BTEX by EPA 8021B	Extracted:	May-18-17 10:00		May-18-17 10:00		May-18-17 10:00		May-18-17 10:00		May-18-17 10:00		May-18-17 10:00	
	Analyzed:	May-18-17 19:39		May-18-17 19:55		May-18-17 20:12		May-18-17 17:28		May-18-17 20:28		May-18-17 20:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402	<0.00404	0.00404	<0.00397	0.00397	<0.00399	0.00399
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	Extracted:	May-21-17 12:05		May-21-17 12:05		May-21-17 12:05		May-21-17 12:05		May-21-17 12:05		May-21-17 12:05	
	Analyzed:	May-21-17 15:44		May-21-17 15:52		May-21-17 16:00		May-21-17 16:07		May-21-17 16:15		May-21-17 16:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		113	4.95	236	4.99	272	4.91	156	4.97	151	4.95	30.3	4.90
TPH By SW8015 Mod	Extracted:	May-15-17 14:00		May-15-17 14:00		May-15-17 14:00		May-15-17 14:00		May-15-17 14:00		May-15-17 14:00	
	Analyzed:	May-15-17 22:23		May-15-17 22:43		May-15-17 23:01		May-15-17 23:20		May-15-17 23:40		May-15-17 23:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C10 Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
C10-C28 Diesel Range Hydrocarbons		633	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		633	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Brandi Ritcherson
Project Manager

Certificate of Analysis Summary 553111

COG Operating LLC, Artesia, NM

Project Name: Big Papi Fed #1H

Project Id:
Contact: Aaron Lieb
Project Location: Big Papi Fed #1H

Date Received in Lab: Sat May-13-17 11:00 am
Report Date: 22-MAY-17
Project Manager: Liz Givens

Analysis Requested									
	Lab Id:	553111-007		553111-008					
	Field Id:	T2		T2					
	Depth:	2 ft		3 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	May-10-17 09:00		May-10-17 09:00					
BTEX by EPA 8021B	***Extracted:***	May-22-17 09:00		May-18-17 10:00					
	Analyzed:	May-22-17 09:48		May-18-17 21:17					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.0125	0.0125	<0.00199	0.00199				
Toluene		<0.0125	0.0125	<0.00199	0.00199				
Ethylbenzene		<0.0125	0.0125	<0.00199	0.00199				
m,p-Xylenes		<0.0250	0.0250	<0.00398	0.00398				
o-Xylene		<0.0125	0.0125	<0.00199	0.00199				
Total Xylenes		<0.0125	0.0125	<0.00199	0.00199				
Total BTEX		<0.0125	0.0125	<0.00199	0.00199				
Inorganic Anions by EPA 300/300.1	***Extracted:***	May-21-17 15:58		May-21-17 15:58					
	Analyzed:	May-21-17 19:32		May-21-17 19:55					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		135	4.88	138	4.96				
TPH By SW8015 Mod	***Extracted:***	May-15-17 14:00		May-15-17 14:00					
	Analyzed:	May-16-17 00:19		May-16-17 00:38					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C10 Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0				
C10-C28 Diesel Range Hydrocarbons		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

Brandi Ritcherson
Project Manager

Analytical Report 553111

for

COG Operating LLC

Project Manager: Aaron Lieb

Big Papi Fed #1H

22-MAY-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)

22-MAY-17

Project Manager: **Aaron Lieb**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **553111**
Big Papi Fed #1H
Project Address: Big Papi Fed #1H

Aaron Lieb:

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) 553111. 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. 553111 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Brandi Ritcherson
Project Manager

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Sample Cross Reference 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T1	S	05-10-17 09:00	N/A	553111-001
T1	S	05-10-17 09:00	- 1 ft	553111-002
T1	S	05-10-17 09:00	- 2 ft	553111-003
T1	S	05-10-17 09:00	- 2.5 ft	553111-004
T2	S	05-10-17 09:00	N/A	553111-005
T2	S	05-10-17 09:00	- 1 ft	553111-006
T2	S	05-10-17 09:00	- 2 ft	553111-007
T2	S	05-10-17 09:00	- 3 ft	553111-008

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Big Papi Fed #1H

Project ID:
Work Order Number(s): *553111*

Report Date: *22-MAY-17*
Date Received: *05/13/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3017709 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3017911 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id: **T1** Matrix: Soil Date Received:05.13.17 11.00

Lab Sample Id: 553111-001 Date Collected: 05.10.17 09.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 05.21.17 12.05 Basis: Wet Weight

Seq Number: 3017881

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**113**	4.95	mg/kg	05.21.17 15.44		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 05.15.17 14.00 Basis: Wet Weight

Seq Number: 3017485

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 22.23	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	**633**	15.0	mg/kg	05.15.17 22.23		1
Total TPH	PHC635	**633**	15.0	mg/kg	05.15.17 22.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.15.17 22.23	
o-Terphenyl	84-15-1	96	%	70-135	05.15.17 22.23	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 05.18.17 10.00 Basis: Wet Weight

Seq Number: 3017709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.18.17 19.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.18.17 19.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	80-120	05.18.17 19.39	
4-Bromofluorobenzene	460-00-4	117	%	80-120	05.18.17 19.39	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T1**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-002	Date Collected:	05.10.17 09.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 12.05	Basis:	Wet Weight
Seq Number:	3017881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**236**	4.99	mg/kg	05.21.17 15.52		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 22.43	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 22.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 22.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.15.17 22.43	
o-Terphenyl	84-15-1	102	%	70-135	05.15.17 22.43	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.18.17 19.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.18.17 19.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	05.18.17 19.55	
4-Bromofluorobenzene	460-00-4	89	%	80-120	05.18.17 19.55	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T1**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-003	Date Collected:	05.10.17 09.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 12.05	Basis:	Wet Weight
Seq Number:	3017881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**272**	4.91	mg/kg	05.21.17 16.00		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 23.01	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 23.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.15.17 23.01	
o-Terphenyl	84-15-1	100	%	70-135	05.15.17 23.01	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.18.17 20.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.18.17 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	80-120	05.18.17 20.12	
4-Bromofluorobenzene	460-00-4	102	%	80-120	05.18.17 20.12	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T1**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-004	Date Collected:	05.10.17 09.00	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 12.05	Basis:	Wet Weight
Seq Number:	3017881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**156**	4.97	mg/kg	05.21.17 16.07		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 23.20	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 23.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 23.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.15.17 23.20	
o-Terphenyl	84-15-1	101	%	70-135	05.15.17 23.20	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	05.18.17 17.28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.18.17 17.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	80-120	05.18.17 17.28	
1,4-Difluorobenzene	540-36-3	92	%	80-120	05.18.17 17.28	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id: **T2** Matrix: Soil Date Received:05.13.17 11.00

Lab Sample Id: 553111-005 Date Collected: 05.10.17 09.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 05.21.17 12.05 Basis: Wet Weight

Seq Number: 3017881

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**151**	4.95	mg/kg	05.21.17 16.15		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 05.15.17 14.00 Basis: Wet Weight

Seq Number: 3017485

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 23.40	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 23.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 23.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.15.17 23.40	
o-Terphenyl	84-15-1	101	%	70-135	05.15.17 23.40	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 05.18.17 10.00 Basis: Wet Weight

Seq Number: 3017709

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.18.17 20.28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.18.17 20.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	80-120	05.18.17 20.28	
1,4-Difluorobenzene	540-36-3	103	%	80-120	05.18.17 20.28	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T2**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-006	Date Collected:	05.10.17 09.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 12.05	Basis:	Wet Weight
Seq Number:	3017881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.3**	4.90	mg/kg	05.21.17 16.22		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.15.17 23.59	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.15.17 23.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.15.17 23.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	05.15.17 23.59	
o-Terphenyl	84-15-1	115	%	70-135	05.15.17 23.59	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.18.17 20.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.18.17 20.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	05.18.17 20.45	
4-Bromofluorobenzene	460-00-4	86	%	80-120	05.18.17 20.45	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T2**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-007	Date Collected:	05.10.17 09.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 15.58	Basis:	Wet Weight
Seq Number:	3017885				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**135**	4.88	mg/kg	05.21.17 19.32		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.16.17 00.19	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.16.17 00.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.17 00.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.16.17 00.19	
o-Terphenyl	84-15-1	98	%	70-135	05.16.17 00.19	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.22.17 09.00	Basis:	Wet Weight
Seq Number:	3017911				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
Toluene	108-88-3	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
Ethylbenzene	100-41-4	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
m,p-Xylenes	179601-23-1	<0.0250	0.0250	mg/kg	05.22.17 09.48	U	1
o-Xylene	95-47-6	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
Total Xylenes	1330-20-7	<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1
Total BTEX		<0.0125	0.0125	mg/kg	05.22.17 09.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	80-120	05.22.17 09.48	
4-Bromofluorobenzene	460-00-4	107	%	80-120	05.22.17 09.48	

Certificate of Analytical Results 553111

COG Operating LLC, Artesia, NM

Big Papi Fed #1H

Sample Id:	**T2**	Matrix:	Soil	Date Received:	05.13.17 11.00
Lab Sample Id:	553111-008	Date Collected:	05.10.17 09.00	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.21.17 15.58	Basis:	Wet Weight
Seq Number:	3017885				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**138**	4.96	mg/kg	05.21.17 19.55		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.15.17 14.00	Basis:	Wet Weight
Seq Number:	3017485				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
C6-C10 Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.16.17 00.38	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	<15.0	15.0	mg/kg	05.16.17 00.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.17 00.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.16.17 00.38	
o-Terphenyl	84-15-1	100	%	70-135	05.16.17 00.38	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	05.18.17 10.00	Basis:	Wet Weight
Seq Number:	3017709				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.18.17 21.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.18.17 21.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	80-120	05.18.17 21.17	
4-Bromofluorobenzene	460-00-4	119	%	80-120	05.18.17 21.17	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 553111

COG Operating LLC

Big Papi Fed #1H

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017881 — Matrix: Solid — Date Prep: 05.21.17
MB Sample Id: 724938-1-BLK — LCS Sample Id: 724938-1-BKS — LCSD Sample Id: 724938-1-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	250	100	251	100	90-110	0	20	mg/kg	05.21.17 12:42	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017885 — Matrix: Solid — Date Prep: 05.21.17
MB Sample Id: 724943-1-BLK — LCS Sample Id: 724943-1-BKS — LCSD Sample Id: 724943-1-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	244	98	249	100	90-110	2	20	mg/kg	05.21.17 16:53	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017881 — Matrix: Soil — Date Prep: 05.21.17
Parent Sample Id: 553103-004 — MS Sample Id: 553103-004 S — MSD Sample Id: 553103-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.06	249	277	109	280	110	90-110	1	20	mg/kg	05.21.17 13:05	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017881 — Matrix: Soil — Date Prep: 05.21.17
Parent Sample Id: 553113-001 — MS Sample Id: 553113-001 S — MSD Sample Id: 553113-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	38.9	246	306	109	305	108	90-110	0	20	mg/kg	05.21.17 14:51	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017885 — Matrix: Soil — Date Prep: 05.21.17
Parent Sample Id: 553111-007 — MS Sample Id: 553111-007 S — MSD Sample Id: 553111-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	135	244	387	103	397	106	90-110	3	20	mg/kg	05.21.17 19:40	

Analytical Method: Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3017885 — Matrix: Soil — Date Prep: 05.21.17
Parent Sample Id: 553325-008 — MS Sample Id: 553325-008 S — MSD Sample Id: 553325-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.6	248	295	115	258	100	90-110	13	20	mg/kg	05.21.17 21:26	X

QC Summary 553111

COG Operating LLC

Big Papi Fed #1H

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3017485 — Matrix: Solid — Date Prep: 05.15.17
MB Sample Id: 724731-1-BLK — LCS Sample Id: 724731-1-BKS — LCSD Sample Id: 724731-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	960	96	915	92	70-135	5	35	mg/kg	05.15.17 16:53	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	935	94	909	91	70-135	3	35	mg/kg	05.15.17 16:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		113		110		70-135	%	05.15.17 16:53
o-Terphenyl	119		107		106		70-135	%	05.15.17 16:53

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3017485 — Matrix: Soil — Date Prep: 05.15.17
Parent Sample Id: 553084-001 — MS Sample Id: 553084-001 S — MSD Sample Id: 553084-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	999	945	95	932	93	70-135	1	35	mg/kg	05.15.17 17:58	
C10-C28 Diesel Range Hydrocarbons	19.5	999	939	92	927	91	70-135	1	35	mg/kg	05.15.17 17:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		105		70-135	%	05.15.17 17:58
o-Terphenyl	100		93		70-135	%	05.15.17 17:58

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3017709 — Matrix: Solid — Date Prep: 05.18.17
MB Sample Id: 724845-1-BLK — LCS Sample Id: 724845-1-BKS — LCSD Sample Id: 724845-1-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	0.0887	89	0.0805	81	70-130	10	35	mg/kg	05.18.17 13:04	
Toluene	<0.00200	0.0998	0.0946	95	0.0932	93	70-130	1	35	mg/kg	05.18.17 13:04	
Ethylbenzene	<0.00200	0.0998	0.103	103	0.100	100	71-129	3	35	mg/kg	05.18.17 13:04	
m,p-Xylenes	<0.00399	0.200	0.216	108	0.199	100	70-135	8	35	mg/kg	05.18.17 13:04	
o-Xylene	<0.00200	0.0998	0.101	101	0.0965	97	71-133	5	35	mg/kg	05.18.17 13:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	117		98		89		80-120	%	05.18.17 13:04
4-Bromofluorobenzene	119		109		93		80-120	%	05.18.17 13:04

QC Summary 553111

COG Operating LLC

Big Papi Fed #1H

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3017911 | Matrix: Solid | Date Prep: 05.22.17
MB Sample Id: 725005-1-BLK | LCS Sample Id: 725005-1-BKS | LCSD Sample Id: 725005-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0851	84	0.0900	89	70-130	6	35	mg/kg	05.22.17 08:10	
Toluene	<0.00201	0.101	0.0927	92	0.0995	99	70-130	7	35	mg/kg	05.22.17 08:10	
Ethylbenzene	<0.00201	0.101	0.101	100	0.103	102	71-129	2	35	mg/kg	05.22.17 08:10	
m,p-Xylenes	<0.00402	0.201	0.198	99	0.202	100	70-135	2	35	mg/kg	05.22.17 08:10	
o-Xylene	<0.00201	0.101	0.0956	95	0.0909	90	71-133	5	35	mg/kg	05.22.17 08:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	84		93		113		80-120	%	05.22.17 08:10
4-Bromofluorobenzene	120		109		111		80-120	%	05.22.17 08:10

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3017709 | Matrix: Soil | Date Prep: 05.18.17
Parent Sample Id: 553111-004 | MS Sample Id: 553111-004 S | MSD Sample Id: 553111-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0746	75	0.0744	74	70-130	0	35	mg/kg	05.18.17 14:10	
Toluene	<0.00199	0.0996	0.0779	78	0.0766	77	70-130	2	35	mg/kg	05.18.17 14:10	
Ethylbenzene	<0.00199	0.0996	0.0801	80	0.0732	73	71-129	9	35	mg/kg	05.18.17 14:10	
m,p-Xylenes	<0.00398	0.199	0.162	81	0.148	74	70-135	9	35	mg/kg	05.18.17 14:10	
o-Xylene	<0.00199	0.0996	0.0728	73	0.0783	78	71-133	7	35	mg/kg	05.18.17 14:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		101		80-120	%	05.18.17 14:10
4-Bromofluorobenzene	100		114		80-120	%	05.18.17 14:10

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3017911 | Matrix: Soil | Date Prep: 05.22.17
Parent Sample Id: 553566-001 | MS Sample Id: 553566-001 S | MSD Sample Id: 553566-001 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	0.0814	81	0.0846	84	70-130	4	35	mg/kg	05.22.17 08:43	
Toluene	<0.00202	0.101	0.0916	91	0.0937	93	70-130	2	35	mg/kg	05.22.17 08:43	
Ethylbenzene	<0.00202	0.101	0.0936	93	0.0991	98	71-129	6	35	mg/kg	05.22.17 08:43	
m,p-Xylenes	<0.00405	0.202	0.181	90	0.196	97	70-135	8	35	mg/kg	05.22.17 08:43	
o-Xylene	<0.00202	0.101	0.0962	95	0.0937	93	71-133	3	35	mg/kg	05.22.17 08:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		110		80-120	%	05.22.17 08:43
4-Bromofluorobenzene	109		114		80-120	%	05.22.17 08:43

XENCO LABORATORIES

Setting the Standard since 1990

CHAIN OF CUSTODY

Page 1 Of 1

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote # | Xenco Job # 553111

Client / Reporting Information

Company Name / Branch: COG Operating LLC
Company Address: 2407 PECOS Avenue Artesia NM 88210
Email: alieb@concho.com dneel2@concho.com rhaskell@concho.com
Phone No: 575-748-1553
Project Contact: Aaron Lieb
Samplers's Name- Aaron Lieb

Project Information

Project Name/Number: Big Papi Fed #1H
Project Location: Big Papi Fed #1H
Invoice To: COG Operating LLC, Attn: Robert Mcneill, 600 W. Illinois, Midland TX 79701
PO Number:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	CHLORIDE	BTEX	TPH	Field Comments
1	T1	SURF	5-10-17	9:00AM											X	X	X	
2	T1	1'													X	X	X	
3	T1	2'													X	X	X	
4	T1	2.5'													X	X	X	
5	T2	SURF													X	X	X	
6	T2	1'													X	X	X	
7	T2	2'													X	X	X	
8	T2	3'													X	X	X	
9																		
10																		

Turnaround Time (Business days)

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

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		5-12-17 11:00 AM	Sid Butler 5-12-17 11:00A	2		HRAMER 5.13.17 700
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice

Temp: 3.7 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.5

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 05/13/2017 11:00:00 AM

Work Order #: 553111

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)?	3.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**N/A**
#21 VOC samples have zero headspace?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Jessica Kramer — Date: 05/15/2017
Jessica Kramer

Checklist reviewed by: Holly Taylor — Date: 05/15/2017
Holly Taylor

APPENDIX D

Initial and Final C-141

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: Big Papi Federal Com #001H	Facility Type: Battery

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-37832

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	04	26S	29E	330	North	1980	East	Eddy

Latitude 32.07801 **Longitude** 103.98710

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 8 bbls Oil	Volume Recovered: 7 bbls Oil
Source of Release: Lightning	Date and Hour of Occurrence: 8/23/2016 12:00 am	Date and Hour of Discovery: 8/23/2016 1:00 am
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release occurred when lighting hit an out of service facility causing it to explode. Vacuum trucks were dispatched to recover all standing fluids and the resulting tank debris was removed.

Describe Area Affected and Cleanup Action Taken.*

The release remained on location and in the bermed area. 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: Dakota Neel

Printed Name: Dakota Neel

Title: HSE Coordinator

E-mail Address: dneel2@concho.com

Date: November 13, 2017 Phone: 575-746-2010

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: Expiration Date:

Conditions of Approval: Attached ☐

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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 McNeil
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No.: 432-683-7443
Facility Name: Big Papi Federal Com #001H	Facility Type: Battery

Surface Owner: Federal	Mineral Owner: Federal	API No.: 30-015-37832

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	04	26S	29E	330	North	1980	East	Eddy

Latitude 32.07801 **Longitude** -103.98710

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 8 bbls	Volume Recovered: 7 bbls
Source of Release: Lightning	Date and Hour of Occurrence: 8/23/2016 12:00am	Date and Hour of Discovery: 8/23/2016 1:00 am
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
n/a

Describe Cause of Problem and Remedial Action Taken.*
The release was caused when lightning struck the facility causing a total loss. The release impacted the production facility and production pad. Concho plugged and abandoned the well on location and reclaimed the production facility.

Describe Area Affected and Cleanup Action Taken.*
2RP-3861 Concho assigned the spill to ASSI. Confirmation samples were collected and sent to an NMOCD approved laboratory, which determined Chloride levels were less than the NMOCD regulatory standards. Subsequently, the site was reclaimed and the surface has been restored.

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: Rebecca Haskell

Printed Name: Rebecca Haskell

Title: Senior HSE Coordinator

E-mail Address: rhaskell@concho.com

Date: 11/16/2017 Phone: 432-683-7443

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Ashley Maxwell

Approval Date: 11/29/2022 Expiration Date:

Conditions of Approval:

Attached ☐

Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 162200

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 162200
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	11/29/2022