



EOG Resources, Inc.
Artesia Division Office
104 S. 4th Street
Artesia, N. M. 88210

January 17, 2020

NMOCD District II
811 S. First St.
Artesia, NM 88210

Re: Federal AB B Battery
M-32-18S-25E
Eddy County, NM
2RP-5701

EOG Resources, Inc. is submitting the enclosed Closure Report for the above referenced site. The report is being submitted accompanying the C-141 Final.

EOG Resources Inc. requests closure.

If you have any questions, feel free to call me at (575) 748-1471.

Respectfully,

A handwritten signature in black ink that reads "Chase Settle".

Chase Settle
Rep Safety & Environmental II
EOG Resources, Inc.

EOG Resources, Inc.

Federal AB B Battery

Closure Report

M-32-18S-25E

Eddy County, NM

January 17, 2020

2RP-5701



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I. Location

From the intersection of Hwy 285 and West Kincaid Ranch Road (CR 38), head west for 8 miles, then take the lease road north and follow main lease road for 2,870 feet to the location.

II. Background

On October 18, 2019, EOG Resources, Inc. submitted to the NMOCD District II office a Form C-141 for the release of 1 B/CO and 19 B/PW with 1 B/CO recovered, which occurred on October 11, 2019. This release was caused by high winds breaking the water leg on a 40 barrel capacity 3-Phase Vertical Separator. A vacuum truck was called to recover the standing fluid and a backhoe crew was contracted to excavate visually impacted soils. Excavated soils were sent to a NMOCD approved disposal facility during the initial excavation activities. Initial soil sampling was conducted October 17, 2019, after providing notice of sampling to NMOCD and BLM on October 14, 2019. Based on sample results from the third party laboratory used for analysis, further excavation of the site was undertaken on November 14, 2019, with notification provided to NMOCD and BLM on November 12, 2019. Following this sampling event, the excavation depth and size was again increased based on the laboratory results. Sampling again occurred on December 12, 2019, with notification provided to NMOCD and BLM on December 9, 2019. Further excavation work was completed based on the results of the December 12, 2019, sampling activities. On January 7, 2020, notification of sampling was provided to NMOCD and BLM for January 9, 2020. Also on January 7, 2020, EOG requested an extension from NMOCD for the Closure Report, which was approved the same day. All soil samples were sent to a third party laboratory for analysis and laboratory reports are included as Appendix D.

III. Surface and Ground Water

Area geology is Cenozoic Quaternary. Based on information from the New Mexico Office of the State Engineer, there wasn't sufficient data from the United States Geological Survey National Water Information System (USGS), regarding this location (Section 32, T18S-R25E), depth to groundwater was determined to be 303 feet with the nearest water wells being approximately 0.85 mile to the north and 0.77 mile to the southeast. The site sits between the 2 water well sites, with the north well having a groundwater depth of 300 feet. The southeast well has a groundwater depth of 305 feet.

Watercourses in the area are dry except for infrequent flows in response to major precipitation events, with the nearest body of surface water being Brantley Lake at approximately 9.5 miles away. The site is located outside of critical karst areas and outside of the 100-year floodplain.

IV. NMOCD Assessment Criteria

The site assessment criteria is as follows:

Depth to ground water	> 100'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

Based on the assessment criteria, the NMOCD established RRALs for this site are:

Benzene	10 mg/kg
BTEX	50 mg/kg
TPH	2,500 mg/kg
GRO + DRO	1,000 mg/kg
Chlorides	20,000 mg/kg

energy opportunity growth

V. Soils

USDA Natural Resources Conservation Service (NRCS) classifies soil in the area as Upton-Reagan, with 0-9% slopes.

VII. Remediation Work

Initial excavation of the site began on October 11, 2019. Activities included the removal of saturated and visibly impacted soils with those soils being hauled to a NMOCD approved disposal facility. The site was excavated to a depth of two (2) to three (3) feet with initial horizontal edges also determined by the initial excavation. Vertical delineation sampling was then conducted within the release area, which provided further vertical excavation guidance, including the removal of the production tanks and equipment within the battery once staining was discovered re-emerging from below the tanks between excavation activities. Confirmation vertical and horizontal sampling was then conducted after those excavation activities were complete. These samples displayed that there was need for more excavation vertically, as well as horizontally. Sample activities conducted December 12, 2019, identified that only 2 areas required further excavation. One horizontal area had not met the guidance of 19.15.29.13 NMAC with a resulting chloride concentration of 656 mg/kg, and one area needed further vertical excavation due to DRO concentration of 1500 mg/kg. The sidewall excavation was extended an additional foot and the vertical area was excavated an additional half foot. The confirmation samples collected on January 9, 2020, confirmed that all vertical sample results had achieved the Table 1 standards, and horizontal sample results confirmed that all sidewalls were within the guidelines for 19.15.29.13. All horizontal samples were collected by way of 5-point composite samples, and no vertical or horizontal samples were representative of more than 200 square feet.

All excavated soils were hauled to an NMOCD approved facility for disposal and the backfill for the site consists of locally sourced, clean, non-contaminated caliche soils of a similar type as was removed. This release occurred within the berm of an active production facility, therefore no revegetation efforts will be undertaken in the remediation of this release.

The C-141 Final is included with this closure report, EOG Resources, Inc. requests closure.

Table 1

Soil Analytical Data

Soil Analytical Data

Sample ID	Depth (ft. bgs)	Date	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH (GRO)	TPH (DRO)	TPH EXT DRO	Total TPH	Chlorides
V1-2'	2'	10/17/19	<2.00	11.5	38.3	90	140	2760	12900	2320	17980	112
V1-3'	3'	10/17/19	<2.00	15.7	43.6	117	176	2750	11800	2170	16720	208
V1-4'	4'	10/17/19	<0.050	<0.050	0.057	<0.150	<0.300	<10.0	10.2	12.4	22.6	352
V1C-3.5'	3.5'	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	32
V2-3'	3'	10/17/19	<0.500	1.74	8.51	23.9	34.2	1180	14400	5130	20710	1410
V2-4'	4'	10/17/19	<0.050	<0.050	<0.050	0.194	<0.300	96.6	2960	1060	4116.6	128
V3-1'	1'	10/17/19	<0.050	<0.050	0.219	1.26	1.48	82.3	3320	685	4087.3	2840
V3-2'	2'	10/17/19	<0.050	<0.050	0.544	0.620	1.16	<10.0	398	105	503	240
V3-2.5'	2.5'	10/17/19	<0.050	<0.050	0.171	0.340	0.511	29.8	554	165	748.8	48
V4-1'	1'	10/17/19	<0.500	4.38	10.1	25.1	39.5	746	17900	3510	22156	10800
V4-1.25'	1.25'	10/17/19	<0.500	<0.500	9.76	22.9	32.6	609	4060	599	5268	1330
V5-2'	2'	10/17/19	<0.500	7.97	19.2	41.9	69	933	11600	2060	14593	7360
V5-2.25'	2.25'	10/17/19	<0.050	<0.050	0.071	0.173	<0.300	<10.0	27.4	<10.0	27.4	80
V6-2'	2'	10/17/19	9.29	189	158	274	631	3740	10100	1400	15240	5440
V6-2.25'	2.25'	10/17/19	0.070	0.962	0.992	1.93	3.96	66.9	488	64.5	619.4	752
V1C-3.5'	3.5'	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	32
V2C-3.5'	3.5'	11/14/19	<0.050	<0.050	0.060	0.165	<0.300	60.8	7360	1740	9160.8	96
V2C-4'	4'	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	1500	572	2072	144
V2C-4.5'	4.5'	01/09/20	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	736
V3C-2'	2'	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	524	177	701	128
V4C-1.5'	1.5'	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	277	127	404	448
V5C-2.5'	2.5'	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	22.6	<10.0	22.6	432
V6C-2.5'	2.5'	11/14/19	<0.100	1.28	3.19	9.88	14.3	253	1660	239	2152	720
V6C-3'	3'	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	197	176	373	336
V7C-7.5'	7.5'	11/14/19	9.83	93.1	85.0	192	379	4440	16200	2270	22910	80
V7C-9'	9'	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	416
V8C-7.5'	7.5'	11/14/19	<0.100	1.01	3.21	8.34	12.6	146	1190	167	1503	48
V8C-9'	9'	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	15.2	<10.0	15.2	576
H1	0-7.5	11/14/19	<0.050	<0.050	0.089	0.290	0.379	13.1	1250	298	1561.1	480
H1-2	0-9	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	560
H2	0-7.5	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	10.2	<10.0	10.2	224
H3	0-3.5	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	965	384	1349	720
H3-2	0-4	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	432
H4	0-1.5	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	149	74.8	223.8	1170
H4-2	0-1.5	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	32
H5	0-2.5	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	98.8	50.9	149.7	448
H6	0-2.5	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	150	36.9	186.9	384
H7	0-2.5	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	432	341	773	736
H7-2	0-2.5	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	80
H8	0-2	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	104	47.8	151.8	192
H9	0-3.5	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	664	372	1036	624
H9-2	0-4	12/12/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	656
H9-3	0-4.5	01/09/20	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	528
H10	0-7.5	11/14/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	123	40.2	163.2	112

Figure 1

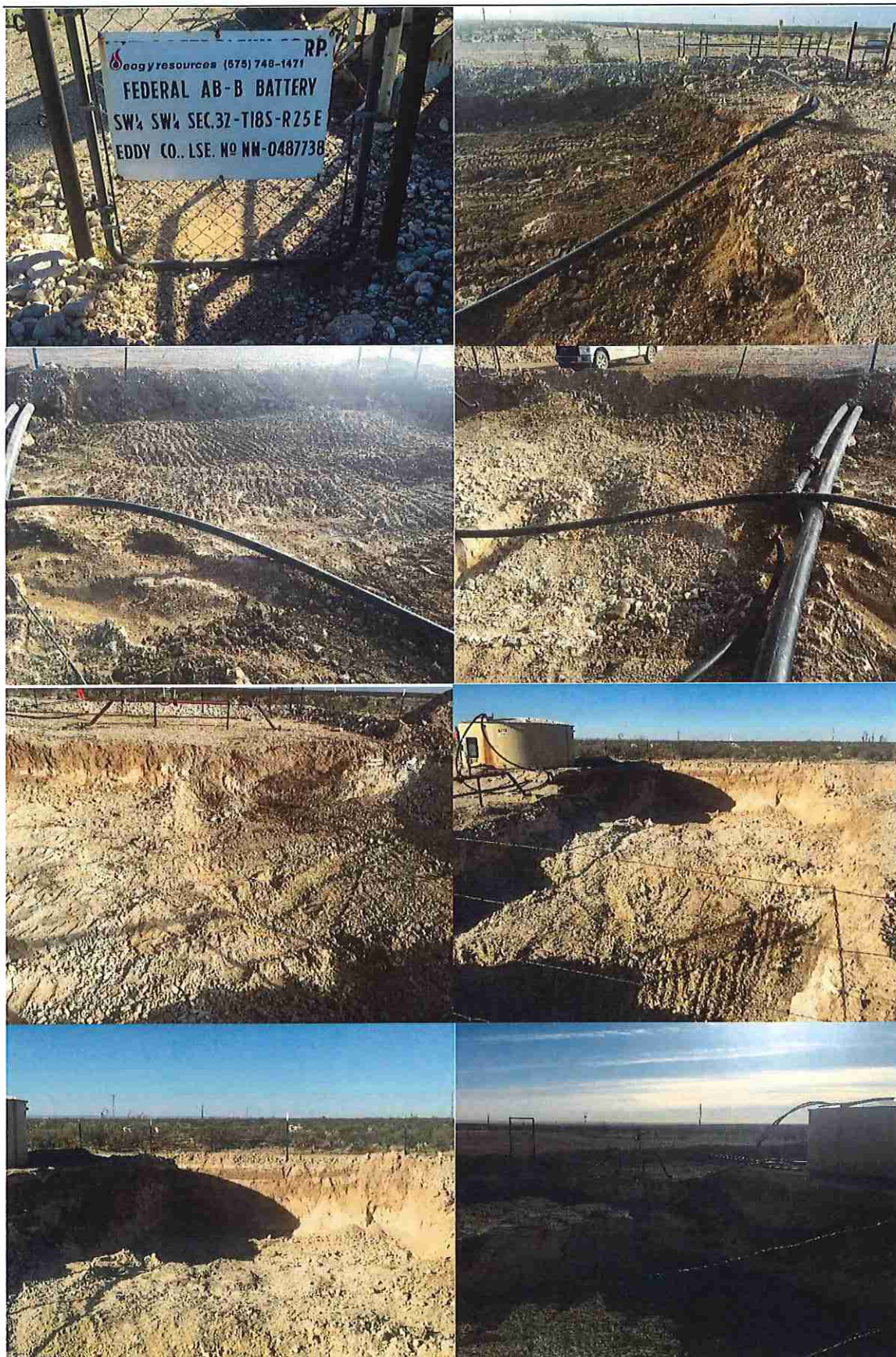
Site Map with Sample Points



January 17, 2020



Photos



Appendix A

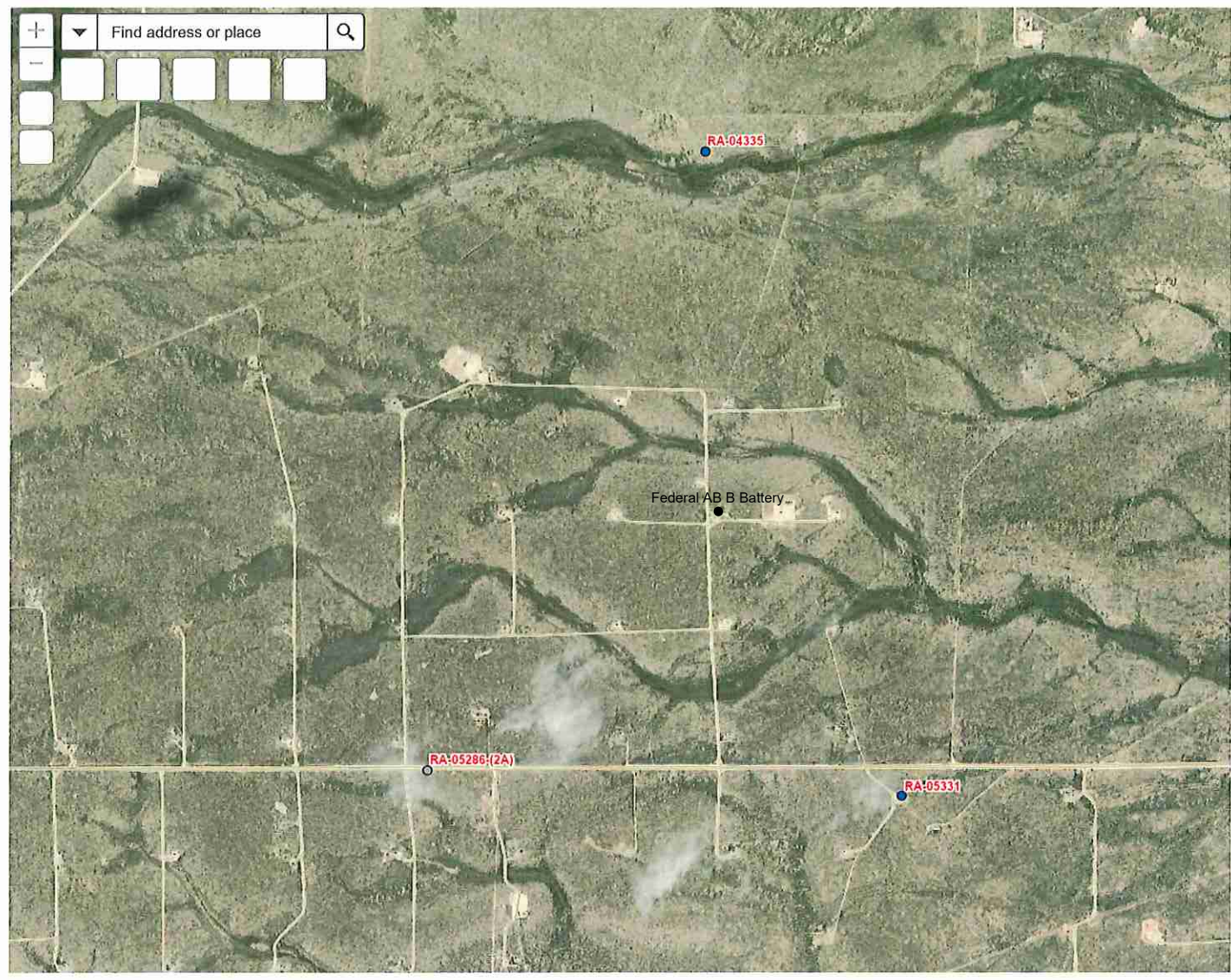
Depth to Groundwater Information



OSE POD Locations

Points of Diversion visible at 1:19,000 with 1,000 features per view

Water Rights Look Up



1:18055
0.3mi
-104.510 32.696 Degrees

New Mexico Office of the State Engineer
Water Column/Average Depth to Water



(A CLW#### in the
POD suffix indicates
the POD has been
replaced & no longer
serves a water right
file.)

(R=POD has
been replaced,
O=orphaned,
C=the file is
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to
largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub- Code	basin	County	Q Q Q	64	16	4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
RA 05331	RA	ED	1	1	4	05	19S	25E			546308	3616955	0	460	305	155
Average Depth to Water:																305 feet
Minimum Depth:																305 feet
Maximum Depth:																305 feet

Record
Count:

UTMNA83 Radius Search (in meters):

Eastings (X): 546308

Northing (Y): 3616955

Radius: 100

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/13/20 11:16 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the
POD suffix indicates
the POD has been
replaced & no longer
serves a water right
file.)

(R=POD has
been replaced,
O=orphaned,
C=the file is
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to
largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	Sub-basin	County	Q Q Q	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	WaterColumn
RA 04335	RA	CH		1	1	32	18S 25E	545580	3619275*		0	400	300 100
Average Depth to Water:											300 feet		
Minimum Depth:											300 feet		
Maximum Depth:											300 feet		

Record
Count:

1

UTM NAD83 Radius Search (in meters):

Easting (X): 545580

Northing (Y): 3619275

Radius: 100

*UTM location was derived from PLSS - see Help

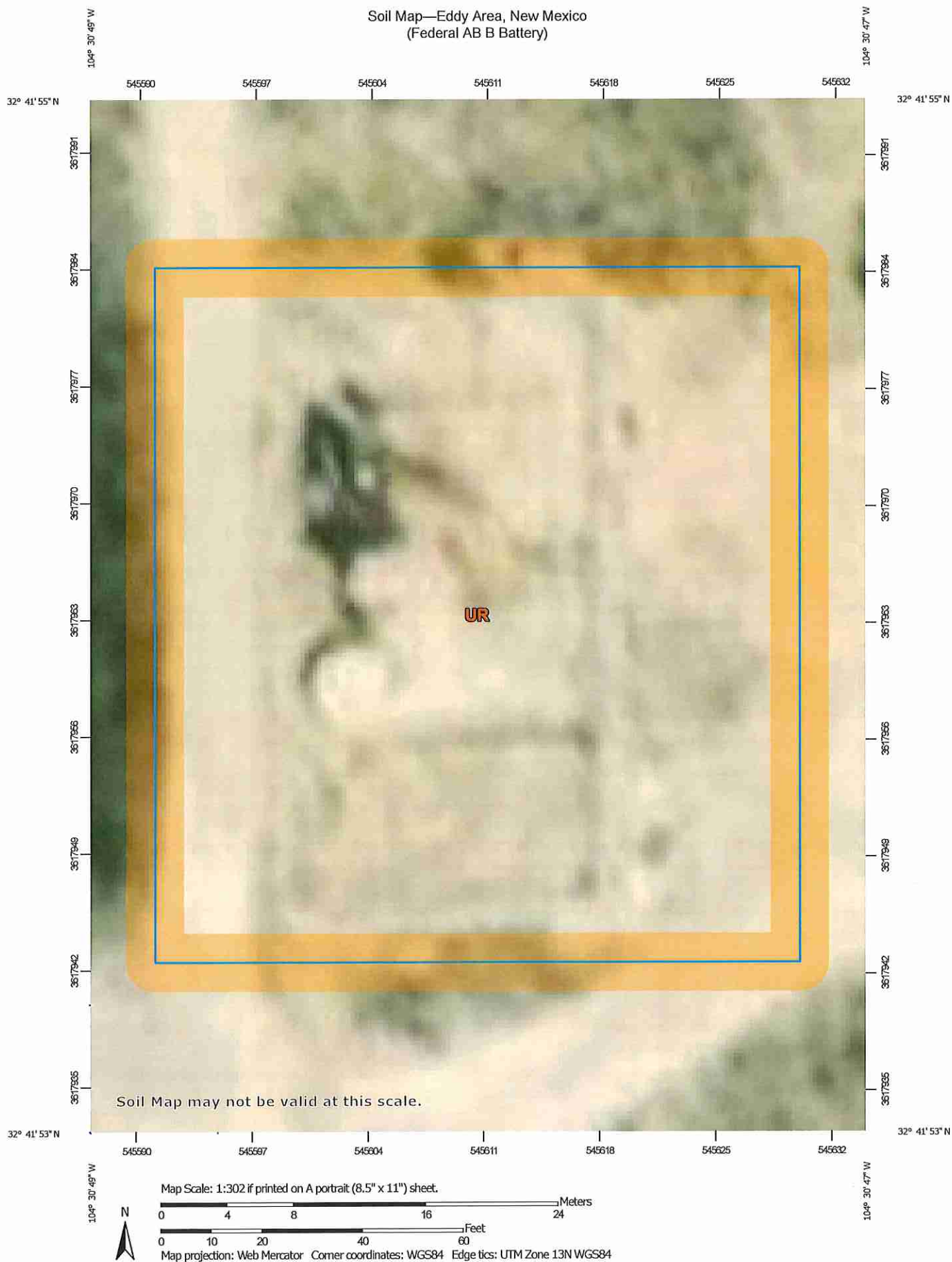
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/13/20 11:19 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

Appendix B

NRCS Soil Classification



Soil Map—Eddy Area, New Mexico
(Federal AB B Battery)

MAP LEGEND

- Area of Interest (AOI)**

 - Area of Interest (AOI)

Soils

 - Soil Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points

Special Point Features

 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Spoil Area
 - Stony Spot
 - Very Stony Spot
 - Wet Spot
 - Other
 - Special Line Features

Water Features

 - Streams and Canals

Transportation

 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads

Background

 - Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.
Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 15, Sep 15, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 30, 2015—Dec 15, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UR	Upton-Reagan complex, 0 to 9 percent slopes	0.4	100.0%
Totals for Area of Interest		0.4	100.0%

Appendix C

100 Year Floodplain Map



FEMA Flood Map Service Center: Search By Address

Navigation

Search

Languages

MSC Home (/portal/)

MSC Search by Address (/portal/search)

MSC Search All Products (/portal/advanceSearch)

MSC Products and Tools (/portal/resources/productsandtools)

Hazus (/portal/resources/hazus)

LOMC Batch Files (/portal/resources/formc)

Product Availability (/portal/productAvailability)

MSC Frequently Asked Questions (FAQs) (/portal/resources/faq)

MSC Email Subscriptions (/portal/subscriptionHome)

Contact MSC Help (/portal/resources/contact)

Enter an address, place, or coordinates: ?

Enter an address, place, or coordinates

Search

Users may experience download failures on the Flood Map Service Center (MSC) website when working with large files. If you are working with files larger than 100MB, try downloading during non-peak hours.

Whether you are in a high risk zone or not, you may need [flood insurance \(https://www.fema.gov/national-flood-insurance-program\)](https://www.fema.gov/national-flood-insurance-program) because most homeowners insurance doesn't cover flood damage. If you live in an area with low or moderate flood risk, you are 5 times more likely to experience flood than a fire in your home over the next 30 years. For many, a National Flood Insurance Program's flood insurance policy could cost less than \$400 per year. Call your insurance agent today and protect what you've built.

Learn more about [steps you can take \(https://www.fema.gov/what-mitigation\)](https://www.fema.gov/what-mitigation) to reduce flood risk damage.

Search Results—Products for EDDY COUNTY UNINCORPORATED AREAS

Show ALL Products » (<https://msc.fema.gov/portal/availabilitySearch?addcommunity=350120&communityName=EDDY COUNTY UNINCORPORATED AREAS#searchresultsanchor>)

The flood map for the selected area is number **35015C0125D**, effective on **06/04/2010** ?

DYNAMIC MAP



MAP IMAGE



<https://msc.fema.gov/portal/downloadProduct?>

filepath=/35/P/Firm/35015C0125D.tif&productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL&productID=35015C0125D

Changes to this FIRM ?

Revisions (0)

Amendments (0)

Revalidations (0)

You can choose a new flood map or move the location pin by selecting a different location on the locator map below or by entering a new location in the search field above. It may take a minute or more during peak hours to generate a dynamic FIRMette. If you are a person with a disability, are blind, or have low vision, and need assistance, please contact a map specialist (<https://msc.fema.gov/portal/resources/contact>).

Go To NFHL Viewer » (<https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5259aa9cd&extent=-104.85707620620396,32.519038647>)



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[Privacy Policy \(/www.fema.gov/privacy-policy\)](https://www.fema.gov/privacy-policy) [FOIA \(/www.fema.gov/foia\)](https://www.fema.gov/foia) [Office of the Inspector General \(/www.oig.dhs.gov/\)](https://www.oig.dhs.gov/)

[Strategic Plan \(/www.fema.gov/fema-strategic-plan\)](https://www.fema.gov/fema-strategic-plan) [Whitehouse.gov \(/www.whitehouse.gov\)](https://www.whitehouse.gov/) [DHS.gov \(/www.dhs.gov\)](https://www.dhs.gov/)

[Ready.gov \(/www.ready.gov\)](https://www.ready.gov/) [USA.gov \(/www.usa.gov\)](https://www.usa.gov/) [Disaster Assistance.gov \(/www.disasterassistance.gov/\)](https://www.disasterassistance.gov/)



[Report Fraud, Waste & Abuse \(https://www.oig.dhs.gov/hotline\)](https://www.oig.dhs.gov/hotline)

Official website of the Department of Homeland Security

Appendix D

Laboratory Soil Data



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 22, 2019

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: FEDERAL AB - B BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/17/19 14:53.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Caley D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 1 - 2' (H903558-01)

BTX 8021B			mg/kg							Analyzed By: BF	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<2.00	2.00	10/20/2019	ND	2.02	101	2.00	0.404			
Toluene*	11.5	2.00	10/20/2019	ND	2.09	104	2.00	0.633			
Ethylbenzene*	38.3	2.00	10/20/2019	ND	2.02	101	2.00	1.59			
Total Xylenes*	90.0	6.00	10/20/2019	ND	6.06	101	6.00	1.11			
Total BTX	140	12.0	10/20/2019	ND							

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 73.3-129

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	112	16.0	10/21/2019	ND	432	108	400	0.00			

TPH 8015M			mg/kg							Analyzed By: MS		S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier			
GRO C6-C10*	2760	50.0	10/18/2019	ND	208	104	200	3.40				
DRO >C10-C28*	12900	50.0	10/18/2019	ND	200	100	200	4.71				
EXT DRO >C28-C36	2320	50.0	10/18/2019	ND								

Surrogate: 1-Chlorooctane 457 % 41-142

Surrogate: 1-Chlorooctadecane 482 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 1 - 3' (H903558-02)

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	15.7	2.00	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	43.6	2.00	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	117	6.00	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTX	176	12.0	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	2750	50.0	10/18/2019	ND	208	104	200	3.40		
DRO >C10-C28*	11800	50.0	10/18/2019	ND	200	100	200	4.71		
EXT DRO >C28-C36	2170	50.0	10/18/2019	ND						

Surrogate: 1-Chlorooctane 448 % 41-142

Surrogate: 1-Chlorooctadecane 443 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 1 - 4' (H903558-03)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	<0.050	0.050	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	0.057	0.050	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	<0.150	0.150	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTEX	<0.300	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/18/2019	ND	208	104	200	3.40	
DRO >C10-C28*	10.2	10.0	10/18/2019	ND	200	100	200	4.71	
EXT DRO >C28-C36	12.4	10.0	10/18/2019	ND					

Surrogate: 1-Chlorooctane 76.9 % 41-142

Surrogate: 1-Chlorooctadecane 86.4 % 37.6-147

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CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 2 - 3' (H903558-04)

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	1.74	0.500	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	8.51	0.500	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	23.9	1.50	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTX	34.2	3.00	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	1180	100	10/18/2019	ND	208	104	200	3.40		
DRO >C10-C28*	14400	100	10/18/2019	ND	200	100	200	4.71		
EXT DRO >C28-C36	5130	100	10/18/2019	ND						

Surrogate: 1-Chlorooctane 293 % 41-142

Surrogate: 1-Chlorooctadecane 637 % 37.6-147

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105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 2 - 4' (H903558-05)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	<0.050	0.050	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	<0.050	0.050	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	0.194	0.150	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTEX	<0.300	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	96.6	10.0	10/19/2019	ND	208	104	200	3.40		
DRO >C10-C28*	2960	10.0	10/19/2019	ND	200	100	200	4.71		
EXT DRO >C28-C36	1060	10.0	10/19/2019	ND						

Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 187 % 37.6-147

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ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 3 - 1' (H903558-06)

BTEx 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	<0.050	0.050	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	0.219	0.050	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	1.26	0.150	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTEx	1.48	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 115 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2840	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	82.3	50.0	10/18/2019	ND	208	104	200	3.40		
DRO >C10-C28*	3320	50.0	10/18/2019	ND	200	100	200	4.71		
EXT DRO >C28-C36	685	50.0	10/18/2019	ND						

Surrogate: 1-Chlorooctane 141 % 41-142

Surrogate: 1-Chlorooctadecane 222 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 3 - 2' (H903558-07)

BTEX 8021B			mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	2.02	101	2.00	0.404		
Toluene*	<0.050	0.050	10/20/2019	ND	2.09	104	2.00	0.633		
Ethylbenzene*	0.544	0.050	10/20/2019	ND	2.02	101	2.00	1.59		
Total Xylenes*	0.620	0.150	10/20/2019	ND	6.06	101	6.00	1.11		
Total BTEX	1.16	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 120 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	10/21/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/18/2019	ND	208	104	200	3.40	
DRO >C10-C28*	398	10.0	10/18/2019	ND	200	100	200	4.71	
EXT DRO >C28-C36	105	10.0	10/18/2019	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 119 % 37.6-147

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Analytical Results For:

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CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 3 - 2.5' (H903558-08)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	<0.050	0.050	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	0.171	0.050	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	0.340	0.150	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTEX	0.511	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	29.8	10.0	10/18/2019	ND	208	104	200	3.40	
DRO >C10-C28*	554	10.0	10/18/2019	ND	200	100	200	4.71	
EXT DRO >C28-C36	165	10.0	10/18/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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Analytical Results For:

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CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 4 - 1' (H903558-09)

BTEx 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	4.38	0.500	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	10.1	0.500	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	25.1	1.50	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTEX	39.5	3.00	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10800	16.0	10/21/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	746	50.0	10/18/2019	ND	208	104	200	3.40	
DRO >C10-C28*	17900	50.0	10/18/2019	ND	200	100	200	4.71	
EXT DRO >C28-C36	3510	50.0	10/18/2019	ND					

Surrogate: 1-Chlorooctane 292 % 41-142

Surrogate: 1-Chlorooctadecane 686 % 37.6-147

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Analytical Results For:

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CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 4 - 1.25' (H903558-10)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	<0.500	0.500	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	9.76	0.500	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	22.9	1.50	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTEX	32.6	3.00	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PII) 112 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1330	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	609	50.0	10/19/2019	ND	214	107	200	1.79	QM-07	
DRO >C10-C28*	4060	50.0	10/19/2019	ND	209	104	200	0.107	QM-07	
EXT DRO >C28-C36	599	50.0	10/19/2019	ND						

Surrogate: 1-Chlorooctane 152 % 41-142

Surrogate: 1-Chlorooctadecane 212 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 5 - 2' (H903558-11)

BTEx 8021B			mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.500	0.500	10/20/2019	ND	2.02	101	2.00	0.404		
Toluene*	7.97	0.500	10/20/2019	ND	2.09	104	2.00	0.633		
Ethylbenzene*	19.2	0.500	10/20/2019	ND	2.02	101	2.00	1.59		
Total Xylenes*	41.9	1.50	10/20/2019	ND	6.06	101	6.00	1.11		
Total BTEx	69.0	3.00	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 109 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7360	16.0	10/21/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	933	50.0	10/19/2019	ND	214	107	200	1.79	
DRO >C10-C28*	11600	50.0	10/19/2019	ND	209	104	200	0.107	
EXT DRO >C28-C36	2060	50.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 200 % 41-142

Surrogate: 1-Chlorooctadecane 418 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 5 - 2.25' (H903558-12)

BTX 8021B			mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/20/2019	ND	2.02	101	2.00	0.404		
Toluene*	<0.050	0.050	10/20/2019	ND	2.09	104	2.00	0.633		
Ethylbenzene*	0.071	0.050	10/20/2019	ND	2.02	101	2.00	1.59		
Total Xylenes*	0.173	0.150	10/20/2019	ND	6.06	101	6.00	1.11		
Total BTX	<0.300	0.300	10/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	10/21/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/19/2019	ND	214	107	200	1.79	
DRO >C10-C28*	27.4	10.0	10/19/2019	ND	209	104	200	0.107	
EXT DRO >C28-C36	<10.0	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 6 - 2' (H903558-13)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	9.29	2.00	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	189	2.00	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	158	2.00	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	274	6.00	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTEX	631	12.0	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5440	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	3740	50.0	10/19/2019	ND	214	107	200	1.79		
DRO >C10-C28*	10100	50.0	10/19/2019	ND	209	104	200	0.107		
EXT DRO >C28-C36	1400	50.0	10/19/2019	ND						

Surrogate: 1-Chlorooctane 282 % 41-142

Surrogate: 1-Chlorooctadecane 358 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 10/17/2019
Reported: 10/22/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 10/17/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: V 6 - 2.25' (H903558-14)

BTEX 8021B			mg/kg		Analyzed By: BF				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.070	0.050	10/20/2019	ND	2.02	101	2.00	0.404	
Toluene*	0.962	0.050	10/20/2019	ND	2.09	104	2.00	0.633	
Ethylbenzene*	0.992	0.050	10/20/2019	ND	2.02	101	2.00	1.59	
Total Xylenes*	1.93	0.150	10/20/2019	ND	6.06	101	6.00	1.11	
Total BTEX	3.96	0.300	10/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	10/21/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	66.9	10.0	10/19/2019	ND	214	107	200	1.79	
DRO >C10-C28*	488	10.0	10/19/2019	ND	209	104	200	0.107	
EXT DRO >C28-C36	64.5	10.0	10/19/2019	ND					

Surrogate: 1-Chlorooctane 116 % 41-142

Surrogate: 1-Chlorooctadecane 122 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company Name: EOG Resources Inc.

Company Address: 104 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-1471

Fax No:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

e-mail:

Chase.Settle@eoqresources.com

Project #:

Project Name: Federal AB-B Battery

Project Loc: Federal AB-B Battery

PO #: 205-0750

(lab use only)

ORDER #: HQD3558

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO ₃	HCl	H ₂ SO ₄	NaOH	Na ₂ S ₂ O ₃	None	Other (Specify)	DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 8015B EXTENDED	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX: 8021B	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT	
1	V1-2'			10/17/2019	8:24 AM		1	X								S	X															X
2	V1-3'			10/17/2019	8:25 AM		1	X								S	X															X
3	V1-4'			10/17/2019	8:26 AM		1	X								S	X															X
4	V2-3'			10/17/2019	8:29 AM		1	X								S	X															X
5	V2-4'			10/17/2019	8:31 AM		1	X								S	X															X
10	V3-1'			10/17/2019	8:33 AM		1	X								S	X															X
7	V3-2'			10/17/2019	8:36 AM		1	X								S	X															X
8	V3-2.5'			10/17/2019	8:39 AM		1	X								S	X															X
9	V4-1'			10/17/2019	8:42 AM		1	X								S	X															X
10	V4-1.25'			10/17/2019	8:47 AM		1	X								S	X															X

Special Instructions: **TPH EXTENDED NEEDED**

Relinquished by: Date: 10-17-19 Time: 2:53 Received by: Date: 10/17/19 Time: 14:53

Relinquished by: Date: Time: Received by: Date: Time:

Relinquished by: Date: Time: Received by: Date: Time:

Temperature Upon Receipt: 7.8 1.2 °C

Laboratory Comments: ☒ Sample Containers Intact? ☒ VOCs Free of Headspaces? ☒ Labels on containers? ☒ Custody seals on containers? ☒ Custody seals on cooler(s)? ☒ Sample Hand Delivered by Sampler/Client Rep.? ☒ by Courier? ☒ UPS ☒ DHL ☒ FedEx ☒ Lone Star



ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

1. **Introduction**

Federal AB-B Battery

Company Name EOG Resources Inc.

Project #:

Company Address: 104 South 4th Street

Project Loc:

Federal AB-B Battery

City/State/Zip: Artesia, NM 88210

PO #: 205-0750

Telephone No: 575-748-1471

Fax No:

Report Format:

☐ Standard

☐ TRRP

☐ NPDES

Sampler Signature:

e-mail:

Chase Settle@eogresources.com

(lab use only)

Analyze For:

ORDER #[illegible]



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 25, 2019

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: FEDERAL AB - B BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/18/19 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Snyder".

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 1C - 3.5' (H903912-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.80	90.1	2.00	2.37	
Toluene*	<0.050	0.050	11/20/2019	ND	1.78	89.1	2.00	2.44	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.82	90.8	2.00	2.24	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.46	91.0	6.00	2.79	
Total BTEX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/22/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	190	95.1	200	0.292	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	193	96.4	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 93.5 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 2C - 3.5' (H903912-02)

BTX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.80	90.1	2.00	2.37	
Toluene*	<0.050	0.050	11/20/2019	ND	1.78	89.1	2.00	2.44	
Ethylbenzene*	0.060	0.050	11/20/2019	ND	1.82	90.8	2.00	2.24	
Total Xylenes*	0.165	0.150	11/20/2019	ND	5.46	91.0	6.00	2.79	
Total BTX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 134 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	11/22/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	60.8	50.0	11/19/2019	ND	190	95.1	200	0.292	
DRO >C10-C28*	7360	50.0	11/19/2019	ND	193	96.4	200	1.89	
EXT DRO >C28-C36	1740	50.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 129 % 41-142

Surrogate: 1-Chlorooctadecane 313 % 37.6-147

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* = Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 3C - 2' (H903912-03)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/20/2019	ND	1.80	90.1	2.00	2.37		
Toluene*	<0.050	0.050	11/20/2019	ND	1.78	89.1	2.00	2.44		
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.82	90.8	2.00	2.24		
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.46	91.0	6.00	2.79		
Total BTEX	<0.300	0.300	11/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 73.3-129

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	128	16.0	11/22/2019	ND	416	104	400	0.00			

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53		
DRO >C10-C28*	524	10.0	11/20/2019	ND	198	98.9	200	2.26		
EXT DRO >C28-C36	177	10.0	11/20/2019	ND						

Surrogate: 1-Chlorooctane 95.2 % 41-142

Surrogate: 1-Chlorooctadecane 117 % 37.6-147

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 4C - 1.5' (H903912-04)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/20/2019	ND	1.80	90.1	2.00	2.37		
Toluene*	<0.050	0.050	11/20/2019	ND	1.78	89.1	2.00	2.44		
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.82	90.8	2.00	2.24		
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.46	91.0	6.00	2.79		
Total BTEX	<0.300	0.300	11/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 99.8 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	11/22/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53		
DRO >C10-C28*	277	10.0	11/20/2019	ND	198	98.9	200	2.26		
EXT DRO >C28-C36	127	10.0	11/20/2019	ND						

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 5C - 2.5' (H903912-05)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20		
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07		
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55		
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98		
Total BTEX	<0.300	0.300	11/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 99.6 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	11/22/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53		
DRO >C10-C28*	22.6	10.0	11/20/2019	ND	198	98.9	200	2.26		
EXT DRO >C28-C36	<10.0	10.0	11/20/2019	ND						

Surrogate: 1-Chlorooctane 84.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.0 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 6C - 2.5' (H903912-06)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	1.28	0.100	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	3.19	0.100	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	9.88	0.300	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTX	14.3	0.600	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 140 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	253	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	1660	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	239	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 126 % 41-142

Surrogate: 1-Chlorooctadecane 142 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 7C - 7.5' (H903912-07)

BTEx 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	9.83	2.00	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	93.1	2.00	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	85.0	2.00	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	192	6.00	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTEX	379	12.0	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 119 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	4440	50.0	11/20/2019	ND	199	99.7	200	1.53		
DRO >C10-C28*	16200	50.0	11/20/2019	ND	198	98.9	200	2.26		
EXT DRO >C28-C36	2270	50.0	11/20/2019	ND						

Surrogate: 1-Chlorooctane 334 % 41-142

Surrogate: 1-Chlorooctadecane 502 % 37.6-147

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* = Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 8C - 7.5' (H903912-08)

BTX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	1.01	0.100	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	3.21	0.100	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	8.34	0.300	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTX	12.6	0.600	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 138 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	146	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	1190	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	167	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 122 % 41-142

Surrogate: 1-Chlorooctadecane 132 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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November 25, 2019

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: FEDERAL AB - B BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/18/19 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 1 (H903913-01)

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	0.089	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	0.290	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTX	0.379	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 73.3-129

Chloride, SM4500CI-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	13.1	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	1250	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	298	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 142 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 2 (H903913-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	10.2	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	<10.0	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 3 (H903913-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	965	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	384	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 132 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 4 (H903913-04)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTEX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	149	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	74.8	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 119 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 5 (H903913-05)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTEX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	98.8	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	50.9	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 86.3 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 6 (H903913-06)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20		
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07		
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55		
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98		
Total BTEX	<0.300	0.300	11/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	11/22/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53		
DRO >C10-C28*	150	10.0	11/20/2019	ND	198	98.9	200	2.26		
EXT DRO >C28-C36	36.9	10.0	11/20/2019	ND						

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 7 (H903913-07)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	432	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	341	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 131 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 8 (H903913-08)

BTEx 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20		
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07		
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55		
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98		
Total BTEX	<0.300	0.300	11/20/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	11/22/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53		
DRO >C10-C28*	104	10.0	11/20/2019	ND	198	98.9	200	2.26		
EXT DRO >C28-C36	47.8	10.0	11/20/2019	ND						

Surrogate: 1-Chlorooctane 90.8 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 9 (H903913-09)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTEX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	664	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	372	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 136 % 37.6-147

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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 11/18/2019
Reported: 11/25/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 11/14/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 10 (H903913-10)

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/20/2019	ND	1.79	89.3	2.00	7.20	
Toluene*	<0.050	0.050	11/20/2019	ND	1.77	88.7	2.00	7.07	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.80	90.2	2.00	7.55	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.44	90.6	6.00	7.98	
Total BTEX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/22/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/20/2019	ND	199	99.7	200	1.53	
DRO >C10-C28*	123	10.0	11/20/2019	ND	198	98.9	200	2.26	
EXT DRO >C28-C36	40.2	10.0	11/20/2019	ND					

Surrogate: 1-Chlorooctane 75.9 % 41-142

Surrogate: 1-Chlorooctadecane 82.2 % 37.6-147

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* = Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Notes and Definitions

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

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

(505) 393-2326 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: Federal AB B Battery

Project #:

Project Loc: Federal AB B Battery

PO #: 205-0750

Fax No:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

e-mail: Chase.Settle@eogresources.com

ORDER #: 4983913

Received by OCD: 1/17/2020 12:37:30 PM



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 20, 2019

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: FEDERAL AB - B BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/16/19 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 2 C - 4' (H904193-01)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/19/2019	ND	1.71	85.5	2.00	10.4	
Toluene*	<0.050	0.050	12/19/2019	ND	1.71	85.4	2.00	10.3	
Ethylbenzene*	<0.050	0.050	12/19/2019	ND	1.67	83.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	12/19/2019	ND	4.97	82.8	6.00	11.6	
Total BTEX	<0.300	0.300	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 111 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66	
DRO >C10-C28*	1500	10.0	12/18/2019	ND	227	113	200	2.47	
EXT DRO >C28-C36	572	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 95.6 % 41-142

Surrogate: 1-Chlorooctadecane 142 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 6 C - 3' (H904193-02)

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/19/2019	ND	1.71	85.5	2.00	10.4	
Toluene*	<0.050	0.050	12/19/2019	ND	1.71	85.4	2.00	10.3	
Ethylbenzene*	<0.050	0.050	12/19/2019	ND	1.67	83.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	12/19/2019	ND	4.97	82.8	6.00	11.6	
Total BTEX	<0.300	0.300	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 110 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	12/17/2019	ND	432	108	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66	
DRO >C10-C28*	197	10.0	12/18/2019	ND	227	113	200	2.47	
EXT DRO >C28-C36	176	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 119 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 7 C - 9' (H904193-03)

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/19/2019	ND	1.71	85.5	2.00	10.4	
Toluene*	<0.050	0.050	12/19/2019	ND	1.71	85.4	2.00	10.3	
Ethylbenzene*	<0.050	0.050	12/19/2019	ND	1.67	83.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	12/19/2019	ND	4.97	82.8	6.00	11.6	
Total BTEX	<0.300	0.300	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	12/17/2019	ND	432	108	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66		
DRO >C10-C28*	<10.0	10.0	12/18/2019	ND	227	113	200	2.47		
EXT DRO >C28-C36	<10.0	10.0	12/18/2019	ND						

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 8 C - 9' (H904193-04)

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/19/2019	ND	1.71	85.5	2.00	10.4	
Toluene*	<0.050	0.050	12/19/2019	ND	1.71	85.4	2.00	10.3	
Ethylbenzene*	<0.050	0.050	12/19/2019	ND	1.67	83.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	12/19/2019	ND	4.97	82.8	6.00	11.6	
Total BTEX	<0.300	0.300	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	12/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66	
DRO >C10-C28*	15.2	10.0	12/18/2019	ND	227	113	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 94.8 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle

Company Name: EOG Y Resources Inc.

Company Address: 104 South 4th Street

City/State/Zip: Artesia, NM 88210

Telephone No: 575-748-1471

Sampler Signature:

e-mail: Chase.Settle@eoqresources.com

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Project Name: Federal AB B Battery

Project #:

Project Loc: Federal AB B Battery

PO #: 205-0750

(lab use only)

ORDER #: H904193

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers	Matrix	TPH: 8015B	TPH: TX 1005	TPH: TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO ₄ , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX: 8021B	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
1	V2C-4'			12/12/2019	8:46 AM		1	X		S	X													X	
2	V6C-3'			12/12/2019	8:48 AM		1	X		S	X													X	
3	V7C-9'			12/12/2019	8:50 AM		1	X		S	X													X	
4	V8C-9'			12/12/2019	8:53 AM		1	X		S	X													X	

Special Instructions:

TPH EXTENDED needed.

Relinquished by:

Date: 12-16-19

Time: 11:30

Received by:

Date: 12-16-19

Time: 11:36

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Relinquished by:

Date:

Time:

Received by ELOT:

Date:

Time:

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspace?

Labels on container(s)?

Custody seals on container(s)?

Sample Hand Delivered?

by Sampler/Client Rep.?

UPS DHL FedEx Lone Star

Temperature Upon Receipt: 1.9°C

#97

Received by OGD: 12/17/19

Received by OGD: 12/17/19



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 20, 2019

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: FEDERAL AB - B BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/16/19 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 1 - 2 (H904192-01)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/18/2019	ND	1.93	96.7	2.00	6.24		
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	93.9	2.00	5.85		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.58		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.58	93.0	6.00	6.58		
Total BTEX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 98.2 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	12/17/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66	
DRO >C10-C28*	<10.0	10.0	12/18/2019	ND	227	113	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 85.7 % 41-142

Surrogate: 1-Chlorooctadecane 90.4 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 3 - 2 (H904192-02)

BTEX 8021B			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/18/2019	ND	1.93	96.7	2.00	6.24		
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	93.9	2.00	5.85		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.58		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.58	93.0	6.00	6.58		
Total BTEX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 98.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	12/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66	
DRO >C10-C28*	<10.0	10.0	12/18/2019	ND	227	113	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 95.0 % 41-142

Surrogate: 1-Chlorooctadecane 99.9 % 37.6-147

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 4 - 2 (H904192-03)

BTEx 8021B			mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/19/2019	ND	1.71	85.5	2.00	10.4		
Toluene*	<0.050	0.050	12/19/2019	ND	1.71	85.4	2.00	10.3		
Ethylbenzene*	<0.050	0.050	12/19/2019	ND	1.67	83.7	2.00	12.1		
Total Xylenes*	<0.150	0.150	12/19/2019	ND	4.97	82.8	6.00	11.6		
Total BTEX	<0.300	0.300	12/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 109 % 73.3-129

Chloride, SM4500Cl-B			mg/kg							Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	32.0	16.0	12/17/2019	ND	432	108	400	0.00			

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66		
DRO >C10-C28*	<10.0	10.0	12/18/2019	ND	227	113	200	2.47		
EXT DRO >C28-C36	<10.0	10.0	12/18/2019	ND						

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 94.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 7 - 2 (H904192-04)

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/19/2019	ND	1.71	85.5	2.00	10.4	
Toluene*	<0.050	0.050	12/19/2019	ND	1.71	85.4	2.00	10.3	
Ethylbenzene*	<0.050	0.050	12/19/2019	ND	1.67	83.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	12/19/2019	ND	4.97	82.8	6.00	11.6	
Total BTEX	<0.300	0.300	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/17/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66	
DRO >C10-C28*	<10.0	10.0	12/18/2019	ND	227	113	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 93.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 12/16/2019
Reported: 12/20/2019
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 12/12/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 9 - 2 (H904192-05)

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/19/2019	ND	1.71	85.5	2.00	10.4	
Toluene*	<0.050	0.050	12/19/2019	ND	1.71	85.4	2.00	10.3	
Ethylbenzene*	<0.050	0.050	12/19/2019	ND	1.67	83.7	2.00	12.1	
Total Xylenes*	<0.150	0.150	12/19/2019	ND	4.97	82.8	6.00	11.6	
Total BTEX	<0.300	0.300	12/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	12/17/2019	ND	432	108	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/18/2019	ND	231	115	200	1.66	
DRO >C10-C28*	<10.0	10.0	12/18/2019	ND	227	113	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	12/18/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager

(505) 393-2326 FAX (505) 393-2476

Project Manager: Chase Settle

Project Name: Federal AB B Battery

Project #: _____

Project Loc: Federal AB B Battery

PO #: 205-0750

Fax No:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:  e-mail: _____

Chase.Settle@eogresources.com

ORDER #: H904192

[illegible]



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

January 10, 2020

CHASE SETTLE

EOG Y RESOURCES, INC

105 SOUTH 4TH STREET

ARTESIA, NM 88210

RE: FEDERAL AB - B BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/09/20 15:16.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 01/09/2020
Reported: 01/10/2020
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 01/09/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: V 2 C - 4.5' (H000084-01)

BTEX 8021B		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2020	ND	2.04	102	2.00	2.52	
Toluene*	<0.050	0.050	01/10/2020	ND	2.04	102	2.00	3.01	
Ethylbenzene*	<0.050	0.050	01/10/2020	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	01/10/2020	ND	6.11	102	6.00	1.58	
Total BTEX	<0.300	0.300	01/10/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 118 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	01/10/2020	ND	400	100	400	7.69	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/10/2020	ND	219	109	200	8.19	
DRO >C10-C28*	<10.0	10.0	01/10/2020	ND	236	118	200	3.78	
EXT DRO >C28-C36	<10.0	10.0	01/10/2020	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 98.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
CHASE SETTLE
105 SOUTH 4TH STREET
ARTESIA NM, 88210
Fax To: (575) 748-4131

Received: 01/09/2020
Reported: 01/10/2020
Project Name: FEDERAL AB - B BATTERY
Project Number: NONE GIVEN
Project Location: FEDERAL AB-B BATTERY

Sampling Date: 01/09/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: H 9 - 3 (H000084-02)

BTEX 8021B			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2020	ND	2.04	102	2.00	2.52	
Toluene*	<0.050	0.050	01/10/2020	ND	2.04	102	2.00	3.01	
Ethylbenzene*	<0.050	0.050	01/10/2020	ND	2.04	102	2.00	2.48	
Total Xylenes*	<0.150	0.150	01/10/2020	ND	6.11	102	6.00	1.58	
Total BTEX	<0.300	0.300	01/10/2020	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 117 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	01/10/2020	ND	400	100	400	7.69	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/10/2020	ND	219	109	200	8.19	
DRO >C10-C28*	<10.0	10.0	01/10/2020	ND	236	118	200	3.78	
EXT DRO >C28-C36	<10.0	10.0	01/10/2020	ND					

Surrogate: 1-Chlorooctane 85.8 % 41-142

Surrogate: 1-Chlorooctadecane 92.3 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Appendix E

Form C-141

(Initial and Closure)

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	2RP-5701
Facility ID	
Application ID	

Release Notification

Responsible Party

EOG Resources, Inc.	7377
Chase Settle	575-748-1471
Chase_Settle@eogresources.com	Incident # (assigned by OCD)
104 S. 4 th Street, Artesia, NM 88210	

Location of Release Source

Latitude 32.69853 Longitude -104.51345
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Federal AB B Battery	Site Type Battery
Date Release Discovered October 11, 2019	API# (if applicable)

Unit Letter	Section	Township	Range	County
M	32	18S	25E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 1	Volume Recovered (bbls) 1
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 19	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

High winds caused the pvc water leg to break on a 40 Bbl 3-phase vertical separation tank that was half full at the time of the release.


State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5701
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>Chase Settle</u>	Title: <u>Rep Safety & Environmental II</u>
Signature: <u></u>	Date: <u>10-18-2019</u>
email: <u>Chase_Settle@eogresources.com</u>	Telephone: <u>575-748-1471</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5701
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	303 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5701
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Chase SettleTitle: Rep Safety and Environmental IISignature: *Chase Settle*Date: 01/17/2020email: Chase_Settle@eogresources.comTelephone: 575-748-1471**OCD Only**

Received by: _____

Date: _____

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Oil Conservation Division

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Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of 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 OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Chase Settle Title: Rep Safety and Environmental II

Signature: *Chase Settle* Date: 01/17/2020

email: Chase_Settle@eogresources.com Telephone: 575-748-1471

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____