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TALON LPE

Soil Assessment and Remediation Work Plan

Dark Canyon Valve Set
Incident ID: NRM2034257903
Talon Project 702958.001.01

Prepared For:

3 Bear Delaware Operating-NM, LLC
1512 Larimer St. Suite 540
Denver, CO 80202

Prepared By:

TALON/LPE
408 W. Texas Avenue
Artesia, NM 88210

March 19, 2021

Mr. Mike Bratcher
NMOCD District 1
811 S. 1st Street
Artesia, NM 88210

Subject: **Soil Assessment and Remediation Work Plan**
Dark Canyon Valve Set
Eddy County, New Mexico
Incident ID: NRM2034257903

3 Bear Delaware Operating-NM, LLC (3Bear) has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities are contained herein.

Site Information

The Dark Canyon Valve Set is located approximately Seven (7) miles southeast of Carlsbad, New Mexico. The legal location for this release is Unit Letter A, Section 21, Township 23 South and Range 26 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.296589 North and -104.289958 West. A site plan is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Reagan loam. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is Holocene to middle Pleistocene in age and is comprised of alluvium and/or eolian deposits. Drainage courses in this area are well drained Appendix II.

The New Mexico Office of the State Engineer Database indicates the nearest reported depth to groundwater is 265-feet below ground surface (BGS), as referenced in POD (Point of Diversion) record C 01463. POD record C-02522 contains well data indicating the depth to groundwater in 1997 was 304'bgs., as referenced in correspondence from Mr. Travis Glenn. See Appendix II for the referenced groundwater depth.

Pursuant to the NMOCD recommendation: on March 08, 2021 thru the date of March 10, 2021 Talon Drillers advanced a temporary water well to depths of 51' bgs. On March 13, 2021 Talon personnel revisited the well site in order to gauge the depth of the well. The gauge registered at 51.5 ft. and no water was present at the bottom of the well. The temporary well was removed and plugged with Bentonite to surface level.

Site Characterization

Pursuant to Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29 of the New Mexico Administrative Code (NMAC), if a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to the groundwater.

Approximate Depth to Groundwater	**245 Feet/BGS**
☐Yes ☒No	Within 300 feet of any continuously flowing watercourse or any other significant watercourse
☐Yes ☒No	Within 200 feet of any lakebed, sinkhole or playa lake
☐Yes ☒No	Within 300 feet from an occupied permanent residence, school, hospital, institution or church
☐Yes ☒No	Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes
☐Yes ☒No	Within 1000 feet of any fresh water well or spring
☐Yes ☒No	Within incorporated municipal boundaries or within a defined Municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978
☐Yes ☒No	Within 300 feet of a wetland
☐Yes ☒No	Within the area overlying a subsurface mine
☐Yes ☒No	Within an unstable area
☐Yes ☒No	Within a 100-year floodplain

This release did not occur within any of these areas and the depth to groundwater exceeds 100-feet BGS. Based upon the analytical data collected for this subsurface investigation, the impacts from this release are below NMOCD remediation closure criteria. However, analytical data indicates chloride concentrations in excess of 600 mg/kg. As such, the upper 4-feet of this area will be restored to levels set forth in Table 1, 19.15.29 NMAC closure criteria. Therefore, the reclamation closure criteria for this site will be as follows:

Table I
Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method	Limit
100'-200'	Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg

	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

Incident Description

According to the C-141: on or about November 20, 2020, due to a pipeline failure approximately 4,000 bbl. of produced water were released onto the right of way. This right of way is part of a high-pressure production zone that traverses adjacent to a county road. The piping has been transported to a laboratory for analysis, in order to determine the mechanism of failure. 3 Bear Energy took proactive environmental protective measure by dispatching a Hydro-vac to recover all free-standing fluid, and by excavating all saturated soil immediately upon discovery. (Appendix I).

Site Assessment

On November 23, 2020, Talon mobilized personnel to begin the site assessment and soil sampling activities. Dirt work completed by others in an effort to remove saturated soils, revealed that the impacted area had been excavated to approximately 4' Bgs. Composite soil samples were collected within and around the impacted area utilizing a hand auger. All soil samples were properly collected, packaged, preserved, and transported to Hall Laboratories for analysis of Chloride analyte (Method EPA 300.0), Results from our initial sampling event are presented in the following data table. A complete laboratory report can be found in Appendix VI.

11-23-20 Lab Report

Sample ID	Depth (ft.)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	**Total TPH** mg/kg	Cl mg/kg
C	2'	NT	NT	NT	NT	NT	-	9000
S. SW	2'	NT	NT	NT	NT	NT	-	9000
E. SW-3	2'	NT	NT	NT	NT	NT	-	6100
E. SW-2	4'	ND	ND	ND	ND	ND	0	2700
A	4'	ND	ND	ND	ND	ND	0	4600
B	4'	ND	ND	ND	ND	ND	0	5000
W. SW	4'	ND	ND	ND	ND	ND	0	260
E. SW-1	4'	ND	ND	ND	ND	ND	0	ND
Source	4'	ND	ND	ND	ND	ND	0	6200

ND= Analyte Not Detected NT= Analyte Not Tested C=Composite

On December 14, 2020, Talon personnel utilized a Reich Air Rotary drill-rig to further vertically delineate those points at which chloride concentrations were still found to be greater than 600 mg/kg. The borings were advanced to the extent that refusal was encountered. The following boring positions were met with refusal B-2, B-4, B-5, B-7, and B-9 thru B-11 due to cobble stone and river rock. The boring extractions were properly analyzed, packaged, preserved, and transported to Hall Laboratories for analyses of Chloride (EPA Method 300.0), BTEX (EPA Method 8021B), and TPH (EPA Method 8015M). The analytical results from this soil boring event are recapped in the table below. The official ab reports can be seen in Appendix VI.

12-16-20 Lab Report

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
B-1	12/14/2020	20'	NT	NT	NT	NT	NT	0	6200
		22'	NT	NT	NT	NT	NT	0	8000
		24' R	NT	NT	NT	NT	NT	0	7200
B-3	12/14/2020	20'	NT	NT	NT	NT	NT	0	2900
		22'	NT	NT	NT	NT	NT	0	5500
		24' R	NT	NT	NT	NT	NT	0	4000
B-6	12/9/2020	14'	ND	ND	ND	ND	ND	0	12000
		16'	NT	NT	NT	NT	NT	0	6800
		18' R	ND	ND	ND	ND	ND	0	6900
B-8	12/9/2020	14'	ND	ND	ND	ND	ND	0	7400
		16'	NT	NT	NT	NT	NT	0	2300
		18'	NT	NT	NT	NT	NT	0	3300
		20' R	ND	ND	ND	10	ND	10	3500
B-12	12/9/2020	6'	ND	ND	ND	ND	ND	0	1300
		8'	NT	NT	NT	NT	NT	0	710
		10'	NT	NT	NT	NT	NT	0	280
		12'	NT	NT	NT	NT	NT	0	320
		14'	NT	NT	NT	NT	NT	0	240
		16'	NT	NT	NT	NT	NT	0	200
		18'	NT	NT	NT	NT	NT	0	140
		20' R	ND	ND	ND	ND	ND	0	670
E.BG	12/9/2020	0-1'	ND	ND	ND	ND	ND	0	ND
		4'	NT	NT	NT	NT	NT	0	ND
		10'	NT	NT	NT	NT	NT	0	ND
		20' R	ND	ND	ND	15	ND	15	ND
W.BG	12/9/2020	0-1'	ND	ND	ND	ND	ND	0	ND
		4'	NT	NT	NT	NT	NT	0	ND
		10'	NT	NT	NT	NT	NT	0	ND
		20' R	ND	ND	ND	ND	ND	0	ND

ND = Analyte Not Detected NT = Analyte Not Tested BG = Background R = Refusal with Air Rotary Drill Rig

Proposed Remedial Actions

The following remedial actions are pursuant to email correspondence from Rob Hamlet, NMOCD District 2, dated 12/21/2020, as appended in Appendix V.

The impacted area near the source has been excavated by 3 Bear Energy to a depth of 24' bgs. The remainder of the impacted spill area has been excavated to approximately 14' bgs. All saturated soils have been removed, transported and disposed of at R360, an NMOCD approved facility. Excavation area maps are attached in Appendix I.
Soil samples will be collected approximately every 200 square feet and analyzed for Chlorides, the analyte of concern, confirming the levels left in place. We propose to backfill each day based upon the results of our field chloride titrations to minimize the amount of time personnel are exposed to nearby traffic and avoid potential overnight traffic hazards of an open excavation. Pursuant to the NMOCD recommendation: the excavated areas will be backfilled to 6' bgs. with caliche, followed by a layer of sand to a depth of 8' bgs, a 20 mil. liner seated, followed by native topsoil to surface. The remediated area will be seeded with State Sandy Loam (SL) seed mixture at the prescribed rate pursuant to NMSLO guidelines for the reclaimed surface area.

Closure

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-746-8768.

Respectfully submitted,

TALON/LPE

Rebecca Pons
Project Manager

Attachments:
Appendix I Site Maps
Appendix II Soil Survey, Groundwater Data, and Boring Log
Appendix III Initial C-141
Appendix IV Photo Documentation
Appendix V Correspondence
Appendix VI Laboratory Data

APPENDIX I

SITE MAPS

Dark Canyon SWD

3 Bear Energy
Eddy County, NM
Bore Hole Locations

Dark Canyon SWD

B-1

W.BG

E.BG

B-3

B-6

B-8

B-12

Legend

- Bore Hole
- Dark Canyon SWD
- Impact Area/Spill Area

Google Earth

N

500 ft

APPENDIX II

SOIL SURVEY,

GROUNDWATER DATA

Eddy Area, New Mexico

RA—Reagan loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w5c
Elevation: 1,100 to 4,400 feet
Mean annual precipitation: 7 to 14 inches
Mean annual air temperature: 60 to 70 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Reagan and similar soils: 98 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reagan

Setting

Landform: Alluvial fans, fan remnants
Landform position (three-dimensional): Rise
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: R042XC007NM - Loamy

Hydric soil rating: No

Minor Components

Upton

Percent of map unit: 1 percent
Ecological site: R042XC025NM - Shallow
Hydric soil rating: No

Atoka

Percent of map unit: 1 percent
Ecological site: R042XC007NM - Loamy
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 16, Jun 8, 2020

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 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01140		C	ED	1	3	3	15	23S	26E	566980	3573870*	356	325		
C 00341	C	CUB	ED		1	3	22	23S	26E	567090	3572566*	1001	1881		
C 00352	C	CUB	ED		1	3	22	23S	26E	567090	3572566*	1001	1867		
C 00537		C	ED		1	4	21	23S	26E	566277	3572558*	1135	400		
C 01463		C	ED	2	2	3	22	23S	26E	567599	3572678*	1140	295	265	30
C 01022		C	ED	4	3	2	22	23S	26E	568005	3572894*	1322	121	90	31
C 01015		C	ED	4	4	4	15	23S	26E	568408	3573714*	1567	318	245	73
C 03238		C	ED	4	4	4	15	23S	26E	568408	3573714*	1567	323	245	78
C 00247		C	ED	4	2	4	15	23S	26E	568406	3574119*	1660	315	230	85
C 01639		C	ED	4	2	4	15	23S	26E	568406	3574119*	1660	300	70	230
C 00535	C	CUB	ED	2	1	1	27	23S	26E	567195	3571862*	1711	1903		
C 00367	C	CUB	ED		3	2	28	23S	26E	566286	3571353*	2256	1909		
C 04449 POD1		C	ED	2	1	4	14	23S	26E	569582	3574424	2872	251	230	21
C 04201 POD1		C	ED	4	4	2	14	23S	26E	569626	3574546	2953	255	110	145

Average Depth to Water: **185 feet**

Minimum Depth: **70 feet**

Maximum Depth: **265 feet**

Record Count: 14

UTMNAD83 Radius Search (in meters):

Easting (X): 566850.11 **Northing (Y):** 3573538.18 **Radius:** 3000

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	C 03238	4	4	4	15	23S	26E	568408	3573714*

Driller License:	1348	**Driller Company:**	TAYLOR WATER WELL SERVICE		
Driller Name:					
Drill Start Date:	10/17/2005	**Drill Finish Date:**	12/28/2005	**Plug Date:**	
Log File Date:	01/23/2006	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	60 GPM
Casing Size:	6.00	**Depth Well:**	323 feet	**Depth Water:**	245 feet

Water Bearing Stratifications:	Top	Bottom	Description
	311	319	Limestone/Dolomite/Chalk

Casing Perforations:	Top	Bottom
	303	323

***UTM location was derived from PLSS - see Help**

9
10
11
14
15
16
21
22
23
26
27
28
23S 26E

DARK CANYON
15-22 STATE

USGS
321826104173801

4019 ft

00247

5457 ft

01140

1189 ft

02522

1105 ft

02522

01015
03238

5147 ft

4022 ft

USGS
321734104164001

3727 ft

3264 ft

3270 ft

03815

03815

01463

01463

00341

00341

RED LIGHT
27-34

RED LIGHT
STATE
23-26-27

N
W
E
S

0 500 1,000
Feet Feet

PREPARED FOR:

3Bear Energy

PREPARED BY:

RCL CONSULTING
DESIGNING THE ENERGY INDUSTRY

DARK CANYON SPILL - DEC 2020

EDDY COUNTY, NEW MEXICO

3BE BI-DIRECTIONAL WATER

- 6" FLEXSTEEL
- 8" FLEXSTEEL
- FUT 6" FLEXSTEEL
- FUTURE TBD'" GATHERING

- DARK CANYON SPILL
- WELL LOCATION
- WELL LOCATION (APPROXIMATE LOCATION)
- 3BEAR OPERATED SWD
- 3BEAR CONNECTED/3RD PARTY SWD
- RECEIPT POINT
- BLM LAND
- STATE LAND

DATE: 12/28/2020

FILE: 3Bear Dark Canyon Spill Dec 2020

LOCATION MAP

RE: Water Level Data C-02522 - Message (HTML)

FILE MESSAGE ACROBAT

Ignore | Junk | Delete | Reply | Reply All | Forward | Meeting | More | Delete | Respond

LINKS | Team Email | Reply & Delete | To Manager | Done | Create New | Quick Steps

Move | Rules | OneNote | Actions | Move

Mark Unread | Categorize | Follow Up | Tags

Translate | Find | Related | Select | Editing

Zoom | Zoom

Insights

Tue 1/5/2021 7:58 AM

Travis Glenn <travis.glenn@outlook.com>

RE: Water Level Data C-02522

To Liz Klein

You forwarded this message on 1/5/2021 8:23 AM.

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Liz,
That well was an existing water well we used on 5/8/1997.
At that time the water level was at 304'.
I do not have any other data for it.
Thanks Travis

From: Liz Klein <lklein@3bearllc.com>
Sent: Monday, January 4, 2021 11:22 AM
To: travis.glenn@outlook.com
Subject: Water Level Data C-02522

Attached is a copy of the information on the New Mexico State Engineer's Office site on well C-02522 for one of your wells. As we discussed we are trying to get groundwater level data in the vicinity of our remediation site (Section 21, T23S, R26E). If you have any water level information that was obtained during the drilling of the well that you could forward that would be great. Or if you have a current groundwater level of that well that would also be very helpful. The New Mexico OCD has requested that we find groundwater level data from the general area of our remediation project.

Please let me know if you have any questions. Really appreciate your time and help.

Thank you.

Liz Klein
3Bear Energy, LLC
303-882-4404 (C)
lklein@3bearllc.com
1512 Larimer Street, Suite 540
Denver, CO 80202

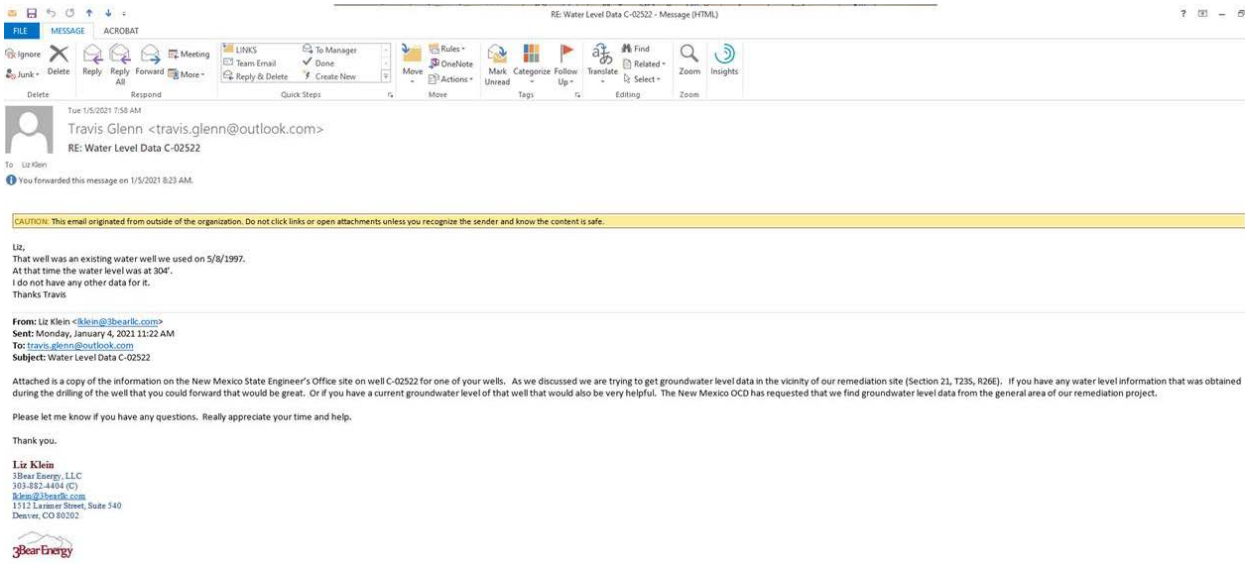
From: Liz Klein
To: Hamlet, Robert, EMNRD
Cc: Bratcher, Mike, EMNRD; Eads, Cristina, EMNRD
Bcc: Mike Solomon; Scott Spicher
Subject: RE: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903
Date: Tuesday, January 5, 2021 8:37:00 AM
Attachments: C02522 PODS.pdf
Importance: High

Below is an email from Glenn's Water Well Service. Glenn's Water Well Service drilled the well in 1997 and below indicates that the water level in 1997 was 304'. This well is within ½ mile of our site and the data is less than 25 years old. I would like to proceed with using this information for the remediation plan. And will submit the plan today.

Please let me know if you have any concerns or questions.

Thank you.

Liz
303-882-4404



RE: Water Level Data C-02522 - Message (HTML)

FILE MESSAGE ACROBAT

Ignore Junk Delete Reply Reply All Forward Meeting More Delete Respond
LINKS Team Email Reply & Delete To Manager Done Create New Quick Steps
Move Rules OneNote Actions Move
Mark Unread Categorize Follow Up Tags
Translate Find Related Select Editing
Zoom Zoom
Insights

Tue 1/5/2021 7:58 AM

Travis Glenn <travis.glenn@outlook.com>

RE: Water Level Data C-02522

To Liz Klein

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I do not have any other data for it.
Thanks Travis

From: Liz Klein <lklein@3bearllc.com>
Sent: Monday, January 4, 2021 11:22 AM
To: travis.glenn@outlook.com
Subject: Water Level Data C-02522

Attached is a copy of the information on the New Mexico State Engineer's Office site on well C-02522 for one of your wells. As we discussed we are trying to get groundwater level data in the vicinity of our remediation site (Section 21, T23S, R26E). If you have any water level information that was obtained during the drilling of the well that you could forward that would be great. Or if you have a current groundwater level of that well that would also be very helpful. The New Mexico OCD has requested that we find groundwater level data from the general area of our remediation project.

Please let me know if you have any questions. Really appreciate your time and help.

Thank you.

Liz Klein
3Bear Energy, LLC
303-882-4404 (C)
lklein@3bearllc.com
1512 Larimer Street, Suite 540
Denver, CO 80202

3Bear Energy

From: Hamlet, Robert, EMNRD [mailto:Robert.Hamlet@state.nm.us]
Sent: Monday, January 4, 2021 8:30 AM
To: Liz Klein <lklein@3bearllc.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>
Subject: RE: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Liz,

There are 2 wells that are less than ½ mile (2,640 feet) from the release location. C01140 has a recorded year of 1963, which is older than 25 years. C02522 doesn't have an accompanying fluid level recorded. The two options are to shoot a static fluid level on one of the wells if they haven't been P&A'd or to drill a borehole. Please, let us know your decision.

Robert Hamlet • Environmental Eng. Tech. III
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
505.748.1283 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Liz Klein <lklein@3bearllc.com>
Sent: Thursday, December 31, 2020 8:00 AM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>
Subject: [EXT] RE: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

Please let me know if you're available for a call to discuss. Thanks, Liz

---

From: Liz Klein
Sent: Monday, December 28, 2020 11:59 AM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>
Subject: RE: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903
Importance: High

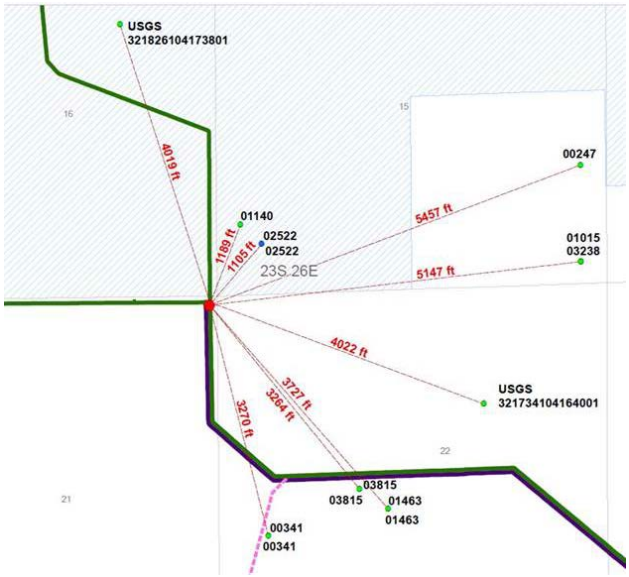
I respectfully submit the following groundwater information for consideration related to the Dark Canyon Spill location groundwater level. We understand that the OCD 2019 guidance (*Procedures for Implementation of the Spill Rule (19.15.29 NMAC)*) outlines that it is preferable that the means to determining depth to groundwater are within ½ mile of the release and that the water level information is no more than 25 years old. However, the historic and current water well information for the general vicinity, less than one mile of the spill location both up and down gradient, indicates a localized groundwater level of more than 200' in depth. As such we are requesting a case by case review to determine if the information below information is acceptable. I also spoke to Talon and they do not believe they will be able to drill to 51' due to the cobble and rejection they have encountered. Based on this information 3Bear requests that the remediation plan be submitted based on the groundwater data below and the criteria you outlined in your email dated December 21, 2020.

Please let me know if this data is acceptable and that a borehole will not be required. I can forward the relevant information for each well and/or include in the remediation plan.

Thank you for your prompt review of this information.

Liz Klein
Director, EHS Regulatory Compliance
3Bear Energy, LLC
303-882-4404 (C)
lklein@3bearllc.com
1512 Larimer Street, Suite 540
Denver, CO 80202

Well Number	Depth Well (feet)	Depth Water (feet)	Distance to Site (feet)	Year of Record
C 02522	325		1105	1997
C 01140	325	310	1189	1963
C 00341	1881	280 - 290	3270	1952
C 01463	295	265	3727	1971
USGS 3218		255.9	4019	1987
USGS 3217		230.2	4022	1956
C 01015	318	245	5147	1961
C 03238	323	245	5147	2005
C 00247	315	255	5457	1952
C 03815	400		3264	2015



From: Liz Klein
Sent: Monday, December 21, 2020 2:27 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>
Subject: Re: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

Thank you. I'll double check but thought the well info was less than 25 years old (1997) and less than a 1/2 mile from the site.

Get Outlook for iOS

From: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Sent: Monday, December 21, 2020 2:03:59 PM
To: Liz Klein <lklein@3bearllc.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>
Subject: RE: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

Liz,

When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. In the pasture area, 4 feet below the ground surface, soil contamination limits revert back to Table 1 "Closure Criteria for Soils Impacted by a Release" included in the spill rule.

A borehole will need to be completed down to 51' below ground surface to make a groundwater determination. If no groundwater is found, the release would need to be delineated/excavated to 10,000 mg/kg for chlorides. It looks like you have delineated/excavated the release for chlorides to 10,000 mg/kg.

After the borehole has been completed, upload the newly updated remediation plan to the payment portal including the 2 variance requests and the borehole drillers log. If the borehole doesn't show groundwater in the top 50' and the site characterization is complete, we can review the two variances in the remediation plan and finalize a decision.

I understand this is a deep excavation and will need to be expedited. Please, send me the P.O. Number of the remediation plan once it's been uploaded to the payment portal and I will try to review it as quickly as possible.

Please let me know if you have any further questions.

Regards,

Robert Hamlet • Environmental Eng. Tech. III
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
505.748.1283 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Sent: Monday, December 21, 2020 9:55 AM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Subject: FW: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

From: Liz Klein <lklein@3bearllc.com>
Sent: Friday, December 18, 2020 3:41 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: [EXT] 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

3Bear Energy requests review and approval of a liner variance for the Dark Canyon Produced Water Spill (NRM2034257903) that occurred on November 20th, 2020. After characterization of the area, 3Bear proposes to leave soils in place that have chloride concentrations of greater than 600 mg/kg chloride. As outlined in the example in OCD guidance dated September 6, 2019 Section V Liners Require a Variance; *After removal of contaminated soils from the uppermost four feet in an area where the depth to groundwater is between 51 and 100 feet the responsible party wishes to install a synthetic liner atop soils with a chloride concentration greater than 10,000 mg/kg and then backfill.* 3Bear has excavated all saturated soils which varied in depth from 6' to 24' and requests approval to install a synthetic liner. The soils that will be left in place below the liner have chloride concentrations between 0 and 7,200 mg/kg based on sampling to date (see attached Data Table Site Boring Results). The sampling by Talon has indicated that TPH, and BTEX are not analytes of concern for this event (please see attached laboratory report). The groundwater research indicates that the depth to groundwater in the near vicinity is 210', see attached reference groundwater information provided.

As discussed, due to boring refusals encountered at 18 to 24' bgs because of the presence of a cobble layer and attempts to test trench the impacted area to depths greater than 24' bgs no additional samples could be taken. Due to the cobble encountered and the "cave-in" of the trenches due to soil instability the area became too unstable to trench safely at greater depths. Additionally, as the trenching moved to the south a hardpan layer was encountered which indicates that vertical migration should not occur past that depth.

Based on the site characterization; we are respectfully requesting a variance to install and seat a liner at a depth of 6' bgs. which would be at a depth below the existing infrastructure to prevent any leaching. We will collect composite confirmation soil samples of the current bottom of the excavated area to document chloride levels left in place, as well as sidewall samples in conformance with the NMOCD sampling guidance in Section VII Closure Sampling Plans (September 6, 2019 Guidance). The characteristics of the site indicate that groundwater has not been impacted and the placement of a liner will prevent any potential surface water from reaching the soils greater than 600 mg/kg so no leaching will occur.

We are also requesting permission for these composite samples to only be analyzed for chlorides. The sampling by Talon has indicated that TPH, and BTEX are not analytes of concern for this event.

Due to the depth of the excavation we are concerned with both potential safety and environmental impacts of leaving the excavation open and would like to place the liner as soon as possible to reduce the safety and environmental risks associated with an open excavation. The approval of the variance will provide equal or better protection of groundwater, public health and the environment.

Please let me know if you have any questions or need additional information. 3Bear appreciates the NMOCD's continued coordination and communication on this remediation.

Thank you.

Liz Klein
Director, EHS Regulatory Compliance
3Bear Energy, LLC
303-882-4404 (C)
lklein@3bearllc.com
1512 Larimer Street, Suite 540
Denver, CO 80202

Amarillo, TX - Artesia, NM
Midland, TX - Oklahoma City, OK
San Antonio, TX - Fort Collins, CO

BORING LOG

Boring Number: B-1	Job Number: 702958.001.02	Driller/Co.: Talon/LPE Tom Evans
Site Name: Dark Canyon	LPST #	Logger: Tom Evans
Location: Carlsbad, NM	Weather:	Bit Size: 5 7/8"
Date: 3/8 - 3/10	Sample Retrieval Method: Grab	Rig Type: Reichdrill
		Drilling Method: Mud Rotary

Time	Sample Number	Sample Interval (ft)	Sample Recovery (ft)	USCS	Sample Material/Comments (include composition, moisture, hardness, grain size, color)	ODOR	PID (ppm)
		0-18'			Gravelly Loam		
		18-25'			Hard Gravels/Cobbles		
		25-50'			Hard Pan (Shale)		
		50-51'			Gravels		

APPENDIX III

C-141 Forms

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	NRM2034257903
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: 3 Bear Delaware Operating – NM, LLC	OGRID: 372603
Contact Name: Liz Klein	Contact Telephone: (303) 882-4404
Contact email: lklein@3bearllc.com	Incident # *(assigned by OCD)*
Contact mailing address 1512 Larimer St. Suite 540, Denver, CO 80202	

Location of Release Source

Latitude 32.296589 Longitude -104.289958
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Dark Canyon Valve Set	Site Type: Valve Set
Date Release Discovered: 11/20/2020	API# *(if applicable)*:

Unit Letter	Section	Township	Range	County
A	21	23S	26E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 4,000 bbls	Volume Recovered (bbls) estimated approximately 4000 bbls, based on volume of all saturated soils removed
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release: Pipe failure. Investigating cause of failure. Pipe being sent to laboratory for analysis.		

State of New Mexico
Oil Conservation Division

Incident ID	NRM2034257903
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Because the spill was greater than 25 bbls in volume this incident is considered 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 notification was given by voicemail and email by Elisabeth Klein, 3Bear Energy, on 11/20/2020 to Mike Bratcher, District 2 and emnrd-ocd-district2spills@state.nm.us.

Initial Response

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

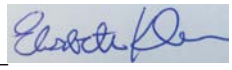
☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: Elisabeth Klein Title: Director, EHS Regulatory Compliance

Signature:  Date: 11/27/2020

email: lklein@3bearllc.com Telephone: (303) 882-4404

OCD Only

Received by: Ramona Marcus Date: 12/7/2020

APPENDIX IV

PHOTOGRAPHIC DOCUMENTATION

APPENDIX V

CORRESPONDENCE

Rebecca Pons

From: Liz Klein <lklein@3bearllc.com>
Sent: Tuesday, December 29, 2020 8:59 AM
To: Rebecca Pons
Subject: FW: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

From: Hamlet, Robert, EMNRD [mailto:Robert.Hamlet@state.nm.us]
Sent: Monday, December 21, 2020 2:04 PM
To: Liz Klein <lklein@3bearllc.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>
Subject: RE: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

Liz,

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A borehole will need to be completed down to 51' below ground surface to make a groundwater determination. If no groundwater is found, the release would need to be delineated/excavated to 10,000 mg/kg for chlorides. It looks like you have delineated/excavated the release for chlorides to 10,000 mg/kg.

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Please let me know if you have any further questions.

Regards,

Robert Hamlet • Environmental Eng. Tech. III
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
505.748.1283 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Sent: Monday, December 21, 2020 9:55 AM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Subject: FW: 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

From: Liz Klein <lklein@3bearllc.com>
Sent: Friday, December 18, 2020 3:41 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: [EXT] 3Bear Expedited Liner Variance Request - Dark Canyon Spill NRM2034257903

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associated with an open excavation. The approval of the variance will provide equal or better protection of groundwater, public health and the environment.

Please let me know if you have any questions or need additional information. 3Bear appreciates the NMOCD's continued coordination and communication on this remediation.

Thank you.

Liz Klein
Director, EHS Regulatory Compliance
3Bear Energy, LLC
303-882-4404 (C)
lklein@3bearllc.com
1512 Larimer Street, Suite 540
Denver, CO 80202

From: Hamlet, Robert, EMNRD [mailto:Robert.Hamlet@state.nm.us]
Sent: Tuesday, January 26, 2021 1:51 PM
To: Liz Klein <lklein@3bearllc.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>
Subject: RE: Review Requested: Work Plan Dark Canyon Spill NRM2034257903

Liz,

Sorry I haven't got back to you sooner, we have been doing a lot of training the last few weeks. I reviewed the Glenn's Water Well Service AAUW and only see an Approximate depth of 325'. The information in the email from Travis Glenn is only him saying that the water level depth was 304'. The OCD needs scientific data collected from a verifiable source. At this point, we can't accept the groundwater depth determination that 3Bear has provided to us.

The bottom samples at each sample location appear to be under 10,000 mg/kg. It appears that the site could be vertically delineated with a shallow borehole to 51' to allow for verification of the depth. If water is not visible after reaching bottom-hole and waiting 72 hours, we would accept the results. We would just need a copy of the driller's log. Showing scientific proof that there is no groundwater within the top 50' of material is imperative in this release. If the borehole proves no groundwater in the top 50", we would be willing to allow 3Bear to backfill the excavation to 4' below ground surface with clean material, install a liner, then backfill to surface with clean material, contour/repair surface to previous condition. Additionally, please make sure the release is horizontally delineated to 600 mg/kg on the edges. Visual identification isn't evidence of the edge of a spill, only soil samples under 600 mg/kg for chlorides.

Please, keep us informed if you intend to drill a borehole.

Regards,

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
505.748.1283 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

APPENDIX VI

Laboratory Data

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon C
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-001 **Matrix:** SOIL **Received Date:** 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	9000	300		mg/Kg	100	11/24/2020 1:10:02 PM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon S.SW
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-002 **Matrix:** SOIL **Received Date:** 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	4300	150		mg/Kg	50	11/24/2020 1:22:27 PM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon E.SW-3
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-003
Matrix: SOIL
Received Date: 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	6100	300		mg/Kg	100	11/24/2020 1:34:52 PM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon E.SW-2
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-004
Matrix: SOIL
Received Date: 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	2700	150		mg/Kg	50	11/24/2020 1:47:17 PM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon A
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-005
Matrix: SOIL
Received Date: 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	4600	150		mg/Kg	50	11/24/2020 1:59:41 PM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon B
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-006 **Matrix:** SOIL **Received Date:** 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	5000	300		mg/Kg	100	11/24/2020 2:12:06 PM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon W.SW
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-007 **Matrix:** SOIL **Received Date:** 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	260	60		mg/Kg	20	11/24/2020 11:49:56 AM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon E.SW 1
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-008
Matrix: SOIL
Received Date: 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	11/24/2020 12:02:21 PM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2011B49**
Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: Dark Canyon Source
Project: 3 Bear Energy
Collection Date: 11/23/2020
Lab ID: 2011B49-009 **Matrix:** SOIL **Received Date:** 11/24/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	6200	300		mg/Kg	100	11/24/2020 2:24:31 PM	56623

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
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S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

December 17, 2020

Rebecca Pons

Talon Artesia
408 West Texas Ave
Artesia, NM 88210
TEL:
FAX

RE: Dark Canyon SWD OrderNo.: 2012706

Dear Rebecca Pons:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/15/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2012706**
Date Reported: **12/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-1 20'
Project: Dark Canyon SWD
Collection Date: 12/14/2020 9:00:00 AM
Lab ID: 2012706-001 **Matrix:** SOIL **Received Date:** 12/15/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	6200	300		mg/Kg	100	12/16/2020 4:57:45 PM	57031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012706**
Date Reported: **12/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-1 22'
Project: Dark Canyon SWD
Collection Date: 12/14/2020 9:15:00 AM
Lab ID: 2012706-002 **Matrix:** SOIL **Received Date:** 12/15/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	8000	300		mg/Kg	100	12/16/2020 5:10:10 PM	57031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012706**
Date Reported: **12/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-1 24'
Project: Dark Canyon SWD
Collection Date: 12/14/2020 9:30:00 AM
Lab ID: 2012706-003 **Matrix:** SOIL **Received Date:** 12/15/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	7200	300		mg/Kg	100	12/16/2020 5:22:34 PM	57031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012706**
Date Reported: **12/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-3 20'
Project: Dark Canyon SWD
Collection Date: 12/14/2020 10:00:00 AM
Lab ID: 2012706-004 **Matrix:** SOIL **Received Date:** 12/15/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	2900	150		mg/Kg	50	12/16/2020 5:59:49 PM	57031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012706**
Date Reported: **12/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-3 22'
Project: Dark Canyon SWD
Collection Date: 12/14/2020 10:10:00 AM
Lab ID: 2012706-005 **Matrix:** SOIL **Received Date:** 12/15/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	5500	300		mg/Kg	100	12/16/2020 6:12:13 PM	57031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012706**
Date Reported: **12/17/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-3 24'
Project: Dark Canyon SWD
Collection Date: 12/14/2020 10:25:00 AM
Lab ID: 2012706-006 **Matrix:** SOIL **Received Date:** 12/15/2020 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	4000	150		mg/Kg	50	12/16/2020 6:24:38 PM	57031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012706**
17-Dec-20

Client: Talon Artesia
Project: Dark Canyon SWD

Sample ID: **MB-57031** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **57031** RunNo: **74032**
Prep Date: **12/16/2020** Analysis Date: **12/16/2020** SeqNo: **2612979** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-57031** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **57031** RunNo: **74032**
Prep Date: **12/16/2020** Analysis Date: **12/16/2020** SeqNo: **2612980** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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Sample Log-In Check List

Client Name: **Talon Artesia** Work Order Number: **2012706** RcptNo: 1

Received By: **Isaiah Ortiz** **12/15/2020 7:50:00 AM** I-Ox

Completed By: **Isaiah Ortiz** **12/15/2020 8:30:21 AM** I-Ox

Reviewed By: JR 12/15/20

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: SCL 12/15/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Not Present			
2	1.1	Good	Not Present			

Chain-of-Custody Record

Client: TALON LPE

Mailing Address: 408 W. TEXAS AVE. ARTESIA, NM 88210

Phone #: 575-746-8768

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 3-DAY

Project Name: DARK CANYON SWD

Project #: 702958.001.01

Project Manager: R. PONS

Sampler: M. COLLIER

On Ice: ☒ Yes ☐ No

# of Coolers: 2 0.5 +0.1 (CF) 0.6° 1.1° (°C)

Cooler Temp (including CF): 1.0 +0.1 (CF)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
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Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 702706	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12-14-20	9:00	SOIL	B-1 20'	GLASS 1	ICE/COOL	1							✓			
	9:15		B-1 22'			2										
	9:30		B-1 24'			3										
	10:00		~~B-3~~ B-3 20'			4										
	10:10		B-3 22'			5										
	10:25		B-3 24'			6										

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12-14-20	3:00pm				12/14/20	1500
12/14/20	1900				12/15/20	0750

Remarks: 3 BEAR ENERGY PRICING

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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Website: clients.hallenvironmental.com

December 16, 2020

Rebecca Pons

Talon Artesia
408 West Texas Ave
Artesia, NM 88210
TEL:
FAX

RE: Dark Canyon SWD OrderNo.: 2012602

Dear Rebecca Pons:

Hall Environmental Analysis Laboratory received 23 sample(s) on 12/11/2020 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-6 14'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 9:30:00 AM
Lab ID: 2012602-001 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	12000	600		mg/Kg	200	12/14/2020 12:09:53 PM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/12/2020 12:25:27 PM	56935
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/12/2020 12:25:27 PM	56935
Surr: DNOP	114	30.4-154		%Rec	1	12/12/2020 12:25:27 PM	56935
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/13/2020 5:48:05 AM	56929
Surr: BFB	81.2	75.3-105		%Rec	1	12/13/2020 5:48:05 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	12/13/2020 5:48:05 AM	56929
Toluene	ND	0.049		mg/Kg	1	12/13/2020 5:48:05 AM	56929
Ethylbenzene	ND	0.049		mg/Kg	1	12/13/2020 5:48:05 AM	56929
Xylenes, Total	ND	0.098		mg/Kg	1	12/13/2020 5:48:05 AM	56929
Surr: 4-Bromofluorobenzene	83.4	80-120		%Rec	1	12/13/2020 5:48:05 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-6 16'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 9:40:00 AM
Lab ID: 2012602-002 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	6800	300		mg/Kg	100	12/14/2020 12:22:18 PM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-6 18' R
Project: Dark Canyon SWD
Collection Date: 12/9/2020 9:55:00 AM
Lab ID: 2012602-003 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	6900	300		mg/Kg	100	12/14/2020 12:34:42 PM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/12/2020 12:35:04 PM	56935
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/12/2020 12:35:04 PM	56935
Surr: DNOP	113	30.4-154		%Rec	1	12/12/2020 12:35:04 PM	56935
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/13/2020 6:11:01 AM	56929
Surr: BFB	83.2	75.3-105		%Rec	1	12/13/2020 6:11:01 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	12/13/2020 6:11:01 AM	56929
Toluene	ND	0.050		mg/Kg	1	12/13/2020 6:11:01 AM	56929
Ethylbenzene	ND	0.050		mg/Kg	1	12/13/2020 6:11:01 AM	56929
Xylenes, Total	ND	0.099		mg/Kg	1	12/13/2020 6:11:01 AM	56929
Surr: 4-Bromofluorobenzene	85.2	80-120		%Rec	1	12/13/2020 6:11:01 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-8 14'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 10:30:00 AM
Lab ID: 2012602-004 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	7400	300		mg/Kg	100	12/14/2020 1:11:56 PM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/12/2020 12:44:43 PM	56935
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/12/2020 12:44:43 PM	56935
Surr: DNOP	150	30.4-154		%Rec	1	12/12/2020 12:44:43 PM	56935
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/13/2020 6:33:53 AM	56929
Surr: BFB	84.2	75.3-105		%Rec	1	12/13/2020 6:33:53 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	12/13/2020 6:33:53 AM	56929
Toluene	ND	0.048		mg/Kg	1	12/13/2020 6:33:53 AM	56929
Ethylbenzene	ND	0.048		mg/Kg	1	12/13/2020 6:33:53 AM	56929
Xylenes, Total	ND	0.097		mg/Kg	1	12/13/2020 6:33:53 AM	56929
Surr: 4-Bromofluorobenzene	86.9	80-120		%Rec	1	12/13/2020 6:33:53 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-8 16'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 10:40:00 AM
Lab ID: 2012602-005 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	2300	150		mg/Kg	50	12/14/2020 1:24:20 PM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-8 18'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 10:50:00 AM
Lab ID: 2012602-006 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	3300	150		mg/Kg	50	12/14/2020 1:36:44 PM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-8 20' R
Project: Dark Canyon SWD
Collection Date: 12/9/2020 11:00:00 AM
Lab ID: 2012602-007 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	3500	150		mg/Kg	50	12/14/2020 1:49:09 PM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	10	9.5		mg/Kg	1	12/12/2020 12:54:19 PM	56935
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/12/2020 12:54:19 PM	56935
Surr: DNOP	114	30.4-154		%Rec	1	12/12/2020 12:54:19 PM	56935
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/13/2020 6:56:51 AM	56929
Surr: BFB	81.2	75.3-105		%Rec	1	12/13/2020 6:56:51 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	12/13/2020 6:56:51 AM	56929
Toluene	ND	0.048		mg/Kg	1	12/13/2020 6:56:51 AM	56929
Ethylbenzene	ND	0.048		mg/Kg	1	12/13/2020 6:56:51 AM	56929
Xylenes, Total	ND	0.095		mg/Kg	1	12/13/2020 6:56:51 AM	56929
Surr: 4-Bromofluorobenzene	83.8	80-120		%Rec	1	12/13/2020 6:56:51 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-12 6'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 11:20:00 AM
Lab ID: 2012602-008 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	1300	61		mg/Kg	20	12/14/2020 1:37:25 AM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/12/2020 1:04:06 PM	56935
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/12/2020 1:04:06 PM	56935
Surr: DNOP	114	30.4-154		%Rec	1	12/12/2020 1:04:06 PM	56935
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/13/2020 7:19:47 AM	56929
Surr: BFB	80.9	75.3-105		%Rec	1	12/13/2020 7:19:47 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	12/13/2020 7:19:47 AM	56929
Toluene	ND	0.050		mg/Kg	1	12/13/2020 7:19:47 AM	56929
Ethylbenzene	ND	0.050		mg/Kg	1	12/13/2020 7:19:47 AM	56929
Xylenes, Total	ND	0.099		mg/Kg	1	12/13/2020 7:19:47 AM	56929
Surr: 4-Bromofluorobenzene	83.7	80-120		%Rec	1	12/13/2020 7:19:47 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-12 8'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 11:30:00 AM
Lab ID: 2012602-009 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	710	60		mg/Kg	20	12/14/2020 1:49:50 AM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-12 10'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 11:35:00 AM
Lab ID: 2012602-010 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	280	60		mg/Kg	20	12/14/2020 2:02:14 AM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-12 12'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 11:40:00 AM
Lab ID: 2012602-011 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	320	60		mg/Kg	20	12/14/2020 2:14:39 AM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-12 14'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 11:45:00 AM
Lab ID: 2012602-012 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	240	60		mg/Kg	20	12/14/2020 2:27:04 AM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-12 16'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 11:55:00 AM
Lab ID: 2012602-013 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	200	60		mg/Kg	20	12/14/2020 2:39:28 AM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-12 18'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 12:05:00 PM
Lab ID: 2012602-014 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	140	60		mg/Kg	20	12/14/2020 2:51:53 AM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: B-12 20' R
Project: Dark Canyon SWD
Collection Date: 12/9/2020 12:15:00 PM
Lab ID: 2012602-015 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	670	60		mg/Kg	20	12/14/2020 3:04:17 AM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/12/2020 1:13:56 PM	56935
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/12/2020 1:13:56 PM	56935
Surr: DNOP	116	30.4-154		%Rec	1	12/12/2020 1:13:56 PM	56935
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/13/2020 7:42:44 AM	56929
Surr: BFB	81.2	75.3-105		%Rec	1	12/13/2020 7:42:44 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	12/13/2020 7:42:44 AM	56929
Toluene	ND	0.048		mg/Kg	1	12/13/2020 7:42:44 AM	56929
Ethylbenzene	ND	0.048		mg/Kg	1	12/13/2020 7:42:44 AM	56929
Xylenes, Total	ND	0.096		mg/Kg	1	12/13/2020 7:42:44 AM	56929
Surr: 4-Bromofluorobenzene	84.3	80-120		%Rec	1	12/13/2020 7:42:44 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: E. BG 0-1'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 12:30:00 PM
Lab ID: 2012602-016 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	12/14/2020 3:16:42 AM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/12/2020 1:23:40 PM	56935
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/12/2020 1:23:40 PM	56935
Surr: DNOP	112	30.4-154		%Rec	1	12/12/2020 1:23:40 PM	56935
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/14/2020 2:49:31 AM	56929
Surr: BFB	79.3	75.3-105		%Rec	1	12/14/2020 2:49:31 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	12/14/2020 2:49:31 AM	56929
Toluene	ND	0.048		mg/Kg	1	12/14/2020 2:49:31 AM	56929
Ethylbenzene	ND	0.048		mg/Kg	1	12/14/2020 2:49:31 AM	56929
Xylenes, Total	ND	0.097		mg/Kg	1	12/14/2020 2:49:31 AM	56929
Surr: 4-Bromofluorobenzene	82.3	80-120		%Rec	1	12/14/2020 2:49:31 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: E. BG 4'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 12:35:00 PM
Lab ID: 2012602-017 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	12/14/2020 3:29:07 AM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: E. BG 10'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 12:50:00 PM
Lab ID: 2012602-018 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	59		mg/Kg	20	12/14/2020 4:06:21 AM	56965

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: E. BG 20' R
Project: Dark Canyon SWD
Collection Date: 12/9/2020 1:05:00 PM
Lab ID: 2012602-019 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	12/14/2020 4:18:45 AM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	15	9.4		mg/Kg	1	12/12/2020 1:33:25 PM	56935
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/12/2020 1:33:25 PM	56935
Surr: DNOP	141	30.4-154		%Rec	1	12/12/2020 1:33:25 PM	56935
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/14/2020 3:12:20 AM	56929
Surr: BFB	80.2	75.3-105		%Rec	1	12/14/2020 3:12:20 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.024		mg/Kg	1	12/14/2020 3:12:20 AM	56929
Toluene	ND	0.048		mg/Kg	1	12/14/2020 3:12:20 AM	56929
Ethylbenzene	ND	0.048		mg/Kg	1	12/14/2020 3:12:20 AM	56929
Xylenes, Total	ND	0.096		mg/Kg	1	12/14/2020 3:12:20 AM	56929
Surr: 4-Bromofluorobenzene	82.8	80-120		%Rec	1	12/14/2020 3:12:20 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: W. BG 0-1'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 1:20:00 PM
Lab ID: 2012602-020 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	61		mg/Kg	20	12/14/2020 4:31:09 AM	56965
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/12/2020 2:12:02 PM	56938
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/12/2020 2:12:02 PM	56938
Surr: DNOP	112	30.4-154		%Rec	1	12/12/2020 2:12:02 PM	56938
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/14/2020 3:35:10 AM	56929
Surr: BFB	80.3	75.3-105		%Rec	1	12/14/2020 3:35:10 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.025		mg/Kg	1	12/14/2020 3:35:10 AM	56929
Toluene	ND	0.050		mg/Kg	1	12/14/2020 3:35:10 AM	56929
Ethylbenzene	ND	0.050		mg/Kg	1	12/14/2020 3:35:10 AM	56929
Xylenes, Total	ND	0.10		mg/Kg	1	12/14/2020 3:35:10 AM	56929
Surr: 4-Bromofluorobenzene	83.6	80-120		%Rec	1	12/14/2020 3:35:10 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: W. BG 4'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 1:30:00 PM
Lab ID: 2012602-021 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	61		mg/Kg	20	12/14/2020 2:26:23 PM	56976

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: W. BG 10'
Project: Dark Canyon SWD
Collection Date: 12/9/2020 1:45:00 PM
Lab ID: 2012602-022 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	60		mg/Kg	20	12/14/2020 2:38:48 PM	56976

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **2012602**
Date Reported: **12/16/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia
Client Sample ID: W. BG 20' R
Project: Dark Canyon SWD
Collection Date: 12/9/2020 2:00:00 PM
Lab ID: 2012602-023 **Matrix:** SOIL **Received Date:** 12/11/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **VP**	
Chloride	ND	61		mg/Kg	20	12/14/2020 2:51:13 PM	56976
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	12/12/2020 2:41:03 PM	56938
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	12/12/2020 2:41:03 PM	56938
Surr: DNOP	116	30.4-154		%Rec	1	12/12/2020 2:41:03 PM	56938
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	12/14/2020 3:58:01 AM	56929
Surr: BFB	81.5	75.3-105		%Rec	1	12/14/2020 3:58:01 AM	56929
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.023		mg/Kg	1	12/14/2020 3:58:01 AM	56929
Toluene	ND	0.046		mg/Kg	1	12/14/2020 3:58:01 AM	56929
Ethylbenzene	ND	0.046		mg/Kg	1	12/14/2020 3:58:01 AM	56929
Xylenes, Total	ND	0.092		mg/Kg	1	12/14/2020 3:58:01 AM	56929
Surr: 4-Bromofluorobenzene	85.0	80-120		%Rec	1	12/14/2020 3:58:01 AM	56929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012602**
16-Dec-20

Client: Talon Artesia
Project: Dark Canyon SWD

Sample ID: **MB-56965** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **56965** RunNo: **73975**
Prep Date: **12/13/2020** Analysis Date: **12/13/2020** SeqNo: **2609349** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-56965** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **56965** RunNo: **73975**
Prep Date: **12/13/2020** Analysis Date: **12/13/2020** SeqNo: **2609350** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.6	90	110			

Sample ID: **MB-56976** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **56976** RunNo: **73996**
Prep Date: **12/14/2020** Analysis Date: **12/14/2020** SeqNo: **2610588** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-56976** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **56976** RunNo: **73996**
Prep Date: **12/14/2020** Analysis Date: **12/14/2020** SeqNo: **2610589** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012602**
16-Dec-20

Client: Talon Artesia
Project: Dark Canyon SWD

Sample ID: **LCS-56935**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **56935**	RunNo: **73978**
Prep Date: **12/11/2020**	Analysis Date: **12/12/2020**	SeqNo: **2609489** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	70	130			
Surr: DNOP	5.5		5.000		109	30.4	154			

Sample ID: **LCS-56938**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **56938**	RunNo: **73978**
Prep Date: **12/11/2020**	Analysis Date: **12/12/2020**	SeqNo: **2609490** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61	10	50.00	0	122	70	130			
Surr: DNOP	7.2		5.000		144	30.4	154			

Sample ID: **LCS-56944**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **56944**	RunNo: **73978**
Prep Date: **12/11/2020**	Analysis Date: **12/12/2020**	SeqNo: **2609491** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		81.9	30.4	154			

Sample ID: **LCS-56946**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **56946**	RunNo: **73978**
Prep Date: **12/11/2020**	Analysis Date: **12/12/2020**	SeqNo: **2609492** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.1	30.4	154			

Sample ID: **MB-56935**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **56935**	RunNo: **73978**
Prep Date: **12/11/2020**	Analysis Date: **12/12/2020**	SeqNo: **2609493** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		123	30.4	154			

Sample ID: **MB-56938**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **56938**	RunNo: **73978**
Prep Date: **12/11/2020**	Analysis Date: **12/12/2020**	SeqNo: **2609494** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012602**
16-Dec-20

Client: Talon Artesia
Project: Dark Canyon SWD

Sample ID: **MB-56938** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **56938** RunNo: **73978**
Prep Date: **12/11/2020** Analysis Date: **12/12/2020** SeqNo: **2609494** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		112	30.4	154			

Sample ID: **MB-56944** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **56944** RunNo: **73978**
Prep Date: **12/11/2020** Analysis Date: **12/12/2020** SeqNo: **2609495** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		88.9	30.4	154			

Sample ID: **MB-56946** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **56946** RunNo: **73978**
Prep Date: **12/11/2020** Analysis Date: **12/12/2020** SeqNo: **2609496** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		93.1	30.4	154			

Sample ID: **2012602-020AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **W. BG 0-1'** Batch ID: **56938** RunNo: **73978**
Prep Date: **12/11/2020** Analysis Date: **12/12/2020** SeqNo: **2609499** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	9.6	48.12	3.618	124	15	184			
Surr: DNOP	7.3		4.812		151	30.4	154			

Sample ID: **2012602-020AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **W. BG 0-1'** Batch ID: **56938** RunNo: **73978**
Prep Date: **12/11/2020** Analysis Date: **12/12/2020** SeqNo: **2609500** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	9.3	46.64	3.618	128	15	184	0.0112	23.9	
Surr: DNOP	7.1		4.664		152	30.4	154	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012602**
16-Dec-20

Client: Talon Artesia
Project: Dark Canyon SWD

Sample ID: **lcs-56929**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **56929**	RunNo: **73970**							
Prep Date: **12/11/2020**	Analysis Date: **12/12/2020**	SeqNo: **2609030**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	72.5	106			
Surr: BFB	990		1000		99.1	75.3	105			

Sample ID: **mb-56929**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **56929**	RunNo: **73970**							
Prep Date: **12/11/2020**	Analysis Date: **12/12/2020**	SeqNo: **2609032**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.6	75.3	105			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2012602**
16-Dec-20

Client: Talon Artesia
Project: Dark Canyon SWD

Sample ID: **LCS-56929** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **56929** RunNo: **73970**
Prep Date: **12/11/2020** Analysis Date: **12/12/2020** SeqNo: **2609082** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.9	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.1	80	120			

Sample ID: **mb-56929** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **56929** RunNo: **73970**
Prep Date: **12/11/2020** Analysis Date: **12/12/2020** SeqNo: **2609084** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87		1.000		87.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Talon Artesia Work Order Number: 2012602 RcptNo: 1

Received By: **Cheyenne Cason** 12/11/2020 8:00:00 AM

Completed By: **Erin Melendrez** 12/11/2020 8:27:00 AM

Reviewed By: EM 12/11/20

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: JR 12/11/20

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good				
2	1.9	Good				
3	2.1	Good				
4	1.9	Good				

Chain-of-Custody Record

Client: TALON LPE

Mailing Address: 408 W. TEXAS AVE
ARTESIA NM 88210

Phone #: 575-746-8768

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 3 DAY

Project Name: DARK CANYON SWD

Project #: 702958.001.01

Project Manager: R. PONS

Sampler: M. COLLIER

On Ice: ☑ Yes ☐ No

# of Coolers: ~~3~~ 4

Cooler Temp(including CF): See Run (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2012602	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12-9-20	9:30	SOIL	B-6 14'	GLASS 1	ICE/COOL	-001	✓	✓					✓			
	9:40		B-6 16'			-002							✓			
	9:55		B-6 18' R			-003	✓	✓					✓			
	10:30		B-8 14'			-004	✓	✓					✓			
	10:40		B-8 16'			-005							✓			
	10:50		B-8 18'			-006							✓			
	11:00		B-8 20' R			-007	✓	✓					✓			
	11:20		B-12 6'			-008	✓	✓					✓			
	11:30		B-12 8'			-009							✓			
	11:35		B-12 10'			-010							✓			
	11:40		B-12 12'			-011							✓			
	11:45		B-12 14'			-012							✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
		M. Collier	A Cummings	-	12/10/20	1230
12/10	1900	A Cummings	COURIER		12/11/20	0800

Remarks:
* 3 BEAR ENERGY PRICING *

5.5 ± 0 = 5.5
1.9 ± 0 = 1.9
2.1 ± 0 = 2.1
1.9 ± 0 = 1.9

PG 1 OF 2

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: TALON LPE

Mailing Address: 408 W. TEXAS AVE. ARTESIA NM 88210

Phone #: 575-746-8768

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush 3-DAY

Project Name: DARK CANYON SWD

Project #: T02958.001.01

Project Manager: R. PONS

Sampler: M. COLLIER

On Ice: ☒ Yes ☐ No

# of Coolers: 4

Cooler Temp(including CF): See Below (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2012607	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12-9-20	11:55	SOIL	B-12 16'	8-GLASS 1	ICE/COOL	-013							✓			
	12:05		B-12 18'			-014							✓			
	12:15		B-12 20'R			-015	✓	✓					✓			
	12:30		E.BG 0-1'			-016	✓	✓					✓			
	12:35		E.BG 4'			-017							✓			
	12:50		E.BG 10'			-018							✓			
	1:05		E.BG 20'R			-019	✓	✓					✓			
	1:20		W.BG 0-1'			-020	✓	✓					✓			
	1:30		W.BG 4'			-021							✓			
	1:45		W.BG 10'			-022							✓			
	2:00		W.BG 20'R			-023	✓	✓					✓			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
		M. Collier	A Cummings		12/10/20	1230
12/10	1900	A Cummings	CC	Courier	12/11/20	0800

Remarks: * 3 BEAR ENERGY PRICING *

Pg 2 of 2

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

APPENDIX I

SITE MAPS

Dark Canyon SWD

3 Bear Energy
Eddy County, NM
Bore Hole Locations

Dark Canyon SWD

B-1

W.BG

E.BG

B-3

B-6

B-8

B-12

Legend

- Bore Hole
- Dark Canyon SWD
- Impact Area/Spill Area

Google Earth

N

500 ft

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

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

COMMENTS

Action 21444

COMMENTS

Operator:			OGRID:	Action Number:	Action Type:
3BEAR FIELD SERVICES, LLC	1512 Larimer St, Suite 540	Denver, CO80202	372603	21444	C-141

Created By	Comment	Comment Date
rhamlet	C-141 Page 5 "Remediation Plan" needs to be submitted for all Remediation Plans. Future submittals will be denied without the signed/dated Remediation page.	04/26/2021

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

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

CONDITIONS

Action 21444

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
3BEAR FIELD SERVICES, LLC	1512 Larimer St, Suite 540	Denver, CO80202	372603	21444	C-141

OCD Reviewer	Condition
rhamlet	The Remediation Plan is approved with the following conditions: All floor samples 0-4' need to be below closure criteria standards of <50' depth to groundwater from Table 1 of the spill rule. All floor samples >4' need to be below closure criteria standards of 51-100' depth to groundwater from Table 1 of the spill rule. Please make sure the edges/sidewalls are delineated to 600 mg/kg for chlorides. 3/19/21 borehole showed no presence of groundwater.