

Incident ID	nRM2014240786
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?

180 (ft bgs)

Did this release impact groundwater or surface water?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?

☐ Yes ☒ No

Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?

☐ Yes ☒ No

Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?

☐ Yes ☒ No

Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?

☐ Yes ☒ No

Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?

☐ Yes ☒ No

Are the lateral extents of the release within 300 feet of a wetland?

☐ Yes ☒ No

Are the lateral extents of the release overlying a subsurface mine?

☐ Yes ☒ No

Are the lateral extents of the release overlying an unstable area such as karst geology?

☐ Yes ☒ No

Are the lateral extents of the release within a 100-year floodplain?

☐ Yes ☒ No

Did the release impact areas **not** on an exploration, development, production, or storage site?

☐ Yes ☒ No

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

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

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

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

Form C-141

Page 4

State of New Mexico  
Oil Conservation Division

Incident ID	nRM2014240786
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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: Dale Woodall

Title: Env. Professional

Signature: Dale WoodallDate: 3/15/2023email: [dale.woodall@dvn.com](mailto:dale.woodall@dvn.com)

Telephone: 575-748-1838

**OCD Only**Received by: Jocelyn HarimonDate: 03/15/2023



Incident ID	nRM2014240786
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## Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Dale Woodall

Title: Env. Professional

Signature: Dale Woodall

Date: 3/15/2023

email: [dale.woodall@dmn.com](mailto:dale.woodall@dmn.com)

Telephone: 575-748-1838

### OCD Only

Received by: Jocelyn Harimon

Date: 03/15/2023

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

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

## ADDENDUM

Location name: Arcturus 18 Fed #2H

OCD Spill Number: nRM2014240786

Spill date: 1/6/2020

From: Dale Woodall, Devon Energy

Date: 3/15/2023

Since the Atkins report for the above referenced spill was written (submitted to the NM OCD on 06/08/2020), there has been an update in the status of the PODs for the location.

A review of New Mexico Office of the State Engineers (OSE) online water well database (New Mexico Office of the State Engineer (NMOSE) online water well database [https://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](https://gis.ose.state.nm.us/gisapps/ose_pod_locations/)).

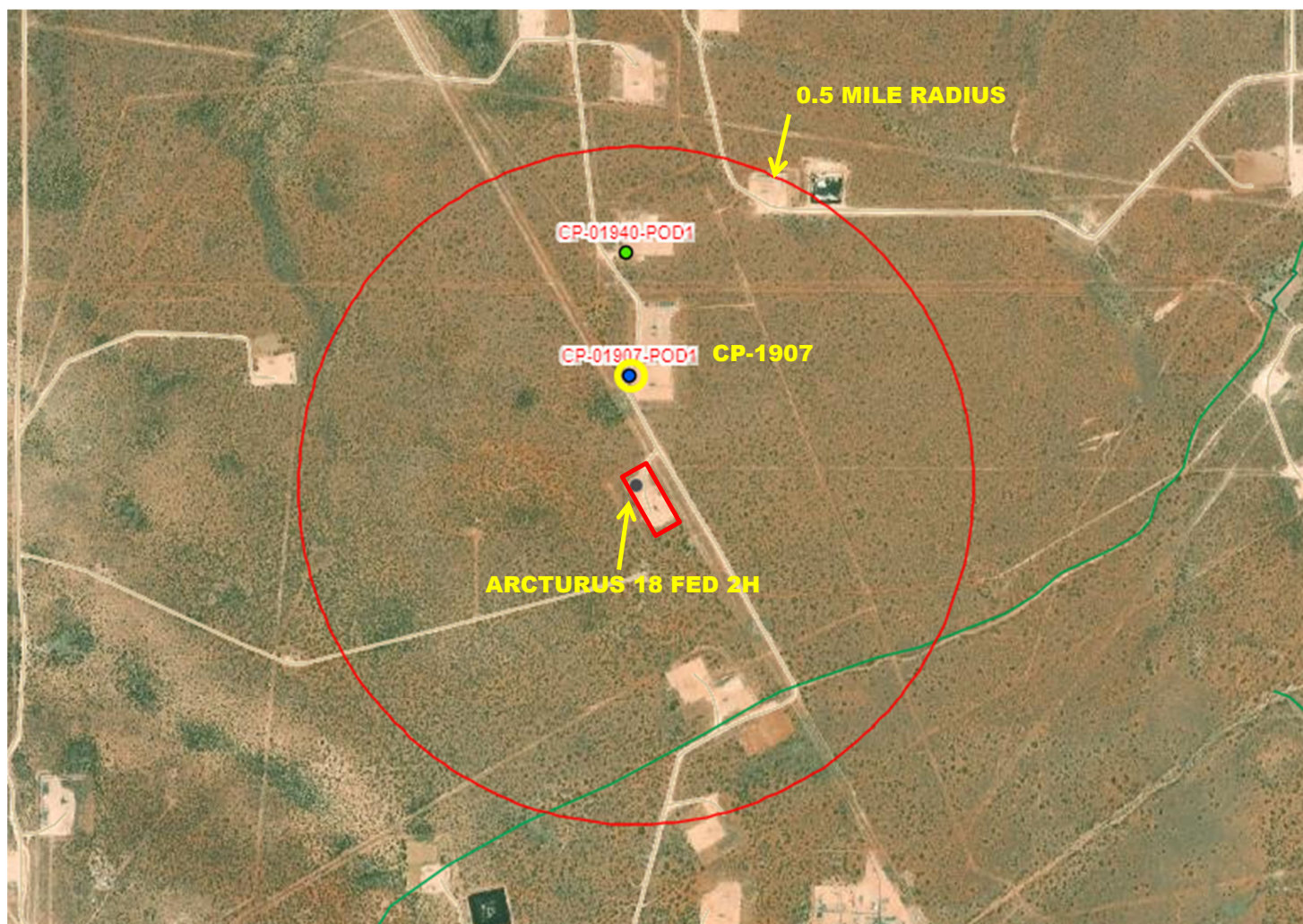
One pod location is within 0.5 miles of the location and are less than 25 years old.

CP-1907 POD 1 (installed in 2022) did not encounter groundwater at 55 feet and is 0.16 miles north of the location

The spill was remediated to criteria for DTW of less than 100 feet bgs.

Boring log of the well CP-1907 is attached.





Cp-1907- POD1 (DTW > 55 FEET) = 0.19 miles from location (7/13/2022)

**SOURCE: OSE NM POD LOCATON GIS MAP**

FIGURE 1: NM OSE POD LOCATIONS	
ARCTURUS 18 FED 2H	
32.663147° -103.901230°	
drawn by: RDW	Date: 03/2023





# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1 (TW-1)		WELL TAG ID NO. N/A		OSE FILE NO(S). CP-1907			
	WELL OWNER NAME(S) Devon Energy				PHONE (OPTIONAL) 575-748-1838			
	WELL OWNER MAILING ADDRESS 6488 7 Rivers Hwy				CITY Artesia	STATE NM	ZIP 88210	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 39	SECONDS 55.76 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SE NE NE Sec.18 T19S R31S NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 7/13/2022		DRILLING ENDED 7/13/2022		DEPTH OF COMPLETED WELL (FT) Temporary Well	BORE HOLE DEPTH (FT) ±55	DEPTH WATER FIRST ENCOUNTERED (FT) N/A	
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A	DATE STATIC MEASURED 7/13/2022, 7/1/2022	
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger						CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>	
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	55	±6.5	Boring-HSA	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO. CP-1907-POD1 TW-1	POD NO. 1	TRN NO. 726167
LOCATION 19.31.18.422	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	29	29	Sand, Medium/ Fine grained, poorly graded, Light brown	Y    ✓ N	
	29	44	15	Sand, Medium/ Fine grained, poorly graded, with caliche Light brown / white	Y    ✓ N	
	44	55	11	Sand, Medium/ Fine grained, poorly graded, Light brown	Y    ✓ N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm):    0.00	

5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION: Temporary well material removed and soil boring backfilled using drill cuttings from total depth to ten feet below ground surface(bgs), then hydrated bentonite chips ten feet bgs to surface.	
	<p style="text-align: right;">OSE DIT AUG 11 2022 PM 3:11</p> PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge, Cameron Pruitt	

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:	
	SIGNATURE OF DRILLER / PRINT SIGNEE NAME <i>Jackie D. Atkins</i> Jackie D. Atkins	DATE 8/4/2022

FOR OSE INTERNAL USE

WR-20 WELL RECORD &amp; LOG (Version 01/28/2022)

FILE NO. <i>CP-1907-P001 TW-1</i>	POD NO. <i>1</i>	TRN NO. <i>726167</i>
LOCATION <i>19.31.18.422</i>	WELL TAG ID NO. <i>_____</i>	PAGE 2 OF 2



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## Remediation and Closure Report

Arcturus 18 Federal #2H  
Eddy County, NM  
API # 30-015-38390

### Prepared For:

Devon Energy Production Company  
6488 Seven Rivers Hwy  
Artesia, NM 88210

### Prepared By:

TALON/LPE  
408 W. Texas Avenue  
Artesia, New Mexico 88210

**March 31, 2020**

Mr. Jim Amos  
**Bureau of Land Management**  
620 East Green Street  
Carlsbad, NM 88220

Mr. Mike Bratcher  
**NMOCD District 2**  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210

Subject: **Remediation and Closure Report**  
Arcturus 18 Federal #2H  
Eddy County, NM  
API # 30-015-38390

Dear Mr. Amos & Mr. Bratcher,

Devon Energy Production Company (Devon) has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above-referenced location. The incident description, soil sampling results, remedial actions, and closure requests are presented herein.

### Site Information

The Arcturus 18 Federal #2H is located approximately twenty-five (25) miles northeast of Carlsbad, New Mexico. The legal location for this release is Unit Letter H, Section 18, Township 19 South and Range 31 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.6631493 North and -103.9011417 West. A Site Map 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 Maljamar and palomas fine sand, 0 to 3 percent slopes. See [Appendix II](#) for the referenced soil survey. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is eloian and piedmont deposits, Holocene to middle Pleistocene in age. Drainage courses in this area are well drained.

### Ground Water and Site Characterization

The New Mexico Office of the State Engineer Database indicates the nearest reported depth to groundwater is 180-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater depth. This site is not located within a high potential Karst area.

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 in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29, NMAC.

Approximate Depth to Groundwater	180 Feet/BGS
----------------------------------	--------------

- |   |   |
|---|---|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 300 feet of any continuously flowing watercourse or any other significant watercourse  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 200 feet of any lakebed, sinkhole or a playa lake  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 300 feet from an occupied permanent residence, school, hospital, institution or church   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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                                 |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 1000 feet of any freshwater well or spring   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within incorporated municipal boundaries or within a defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978 |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within 300 feet of a wetland  |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within the area overlying a subsurface mine   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within an unstable area   |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Within a 100-year floodplain  |

Because the release did not occur in any of these areas and the depth to groundwater is greater than 100-feet, based upon the site characterization for this project the clean up criteria is as follows:



Table I Closure Criteria for Soils Impacted by a Release			
Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method	Limit
>100 feet	Total Chlorides	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 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

On January 6, 2020, broken bolts on the polish rod caused a stuffing box release. Approximately 0.16 barrels (bbls) of crude oil and 11.027 bbls of produced water were released onto the well pad. All fluids remained on location. A vac truck subsequently recovered 10 bbls of fluids. Site maps are presented in [Appendix I](#).

Talon mobilized personnel and equipment to begin site assessment and remediation activities. Based upon the results of our sampling results, only the impacted area in the vicinity of sample location S-6 was excavated utilizing a backhoe. Confirmation samples were collected from the sidewalls of the excavation to ensure that the NMOCD clean up criteria levels had been achieved.

## Soil Sampling

## 2-19-20 Soil Sample Laboratory Results

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	CI mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1000 mg/kg			2500 mg/kg	20,000 mg/kg
S-1	2/19/2020	0-1'	ND	ND	ND	ND	ND	ND	490
		1-2' R	ND	ND	ND	ND	ND	ND	ND
S-2		0-1'	ND	ND	ND	350	240	590	2000
		2'	ND	ND	ND	ND	ND	ND	840
		3'	ND	ND	ND	ND	ND	ND	980
S-3		0-1'	ND	ND	ND	17	ND	17	140
		2'	ND	ND	ND	ND	ND	ND	ND
		3' R	ND	ND	ND	ND	ND	ND	ND
S-4		0-1'	ND	ND	ND	26	ND	26	2500
		2'	ND	ND	ND	ND	ND	ND	72
		3'	ND	ND	ND	ND	ND	ND	120
		4'	ND	ND	ND	ND	ND	ND	150
S-5		0-1'	ND	ND	ND	ND	ND	ND	ND
		2'	ND	ND	ND	ND	ND	ND	65
		3'	ND	ND	ND	ND	ND	ND	110
		4	ND	ND	ND	ND	ND	ND	120
S-6		0-1'	ND	ND	ND	3500	13000	16500	ND
		2'	ND	ND	ND	ND	ND	ND	63
		3' R	ND	ND	ND	ND	ND	ND	80
S-7		0-1'	ND	ND	ND	17	ND	17	74
		2'	ND	ND	ND	ND	ND	ND	ND
		3'	ND	ND	ND	ND	ND	ND	ND
		4'	ND	ND	ND	ND	ND	ND	61
S-8		0-1'	ND	ND	ND	ND	ND	ND	ND
		2'	ND	ND	ND	ND	ND	ND	ND
		3'	ND	ND	ND	ND	ND	ND	ND
		4'	ND	ND	ND	ND	ND	ND	ND
S-9		0-1'	ND	ND	ND	290	210	500	120
		2'	ND	ND	ND	ND	ND	ND	530
		3' R	ND	ND	ND	ND	ND	ND	950
S-10		0-1	ND	ND	ND	37	56	93	2600
		2'	ND	ND	ND	ND	ND	ND	150
		3' R	ND	ND	ND	ND	ND	ND	220
S-11		0-1'	ND	ND	ND	140	110	250	260
		2'	ND	ND	ND	ND	ND	ND	ND
		3'	ND	ND	ND	ND	ND	ND	ND
		4'	ND	ND	ND	ND	ND	ND	ND
S-12		0-1'	ND	ND	ND	110	87	197	180
		2'	ND	ND	ND	ND	ND	ND	ND
		3'	ND	ND	ND	ND	ND	ND	ND
		4'	ND	ND	ND	ND	ND	ND	ND
BG		0'	ND	ND	ND	ND	ND	ND	ND

ND-Analyte Not Detected

## 3-20-20 Confirmation Soil Sample Laboratory Results

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
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1000 mg/kg			2500 mg/kg
S-6 A Composite	3/20/2020	1'	--	--	ND	530	370	900

ND-Analyte Not Detected, -- Analyte Not Tested

See [Appendix V](#) for the complete report of laboratory results.

### Remedial Actions

- The impacted areas in the vicinity of S-6 was excavated to a depth of 1.0-foot BGSE. Laboratory analytical results from confirmation sidewall composite soil samples indicated that TPH concentrations were below NMOCD Closure Criteria.
- The 1' x 1' stained area on location was surface scraped and back dragged utilizing a backhoe.
- All excavated soil was transported to Lea Land, LLC, an NMOCD approved soil waste disposal facility.
- The excavated area was backfilled with clean caliche, machine compacted and contoured to match the surrounding location.
- Final C-141 is attached in [Appendix III](#)



## Closure

Based on this site characterization, remedial actions and analytical results, we request that no further actions be required and that closure with regard to the attached incident be granted.

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



Chris Jones  
Environmental Project Manager

David J. Adkins  
Digitally signed by David J. Adkins  
DN: cn=David J. Adkins, o=TALON/LPE, ou=District Manager, email=David.Adkins@talonlpe.com, c=US  
Date: 2023.03.15 16:15:11 -0500

David J. Adkins  
District Manager

### Attachments:

- Appendix I Site Maps, Karst Map, TOPO Map & Locator Map
- Appendix II Groundwater Data, FEMA Flood Zone, Soil Survey
- Appendix III Initial and Final C-141's
- Appendix IV Photographic Documentation
- Appendix V Laboratory Results



# **APPENDIX I**

**SITE MAP**

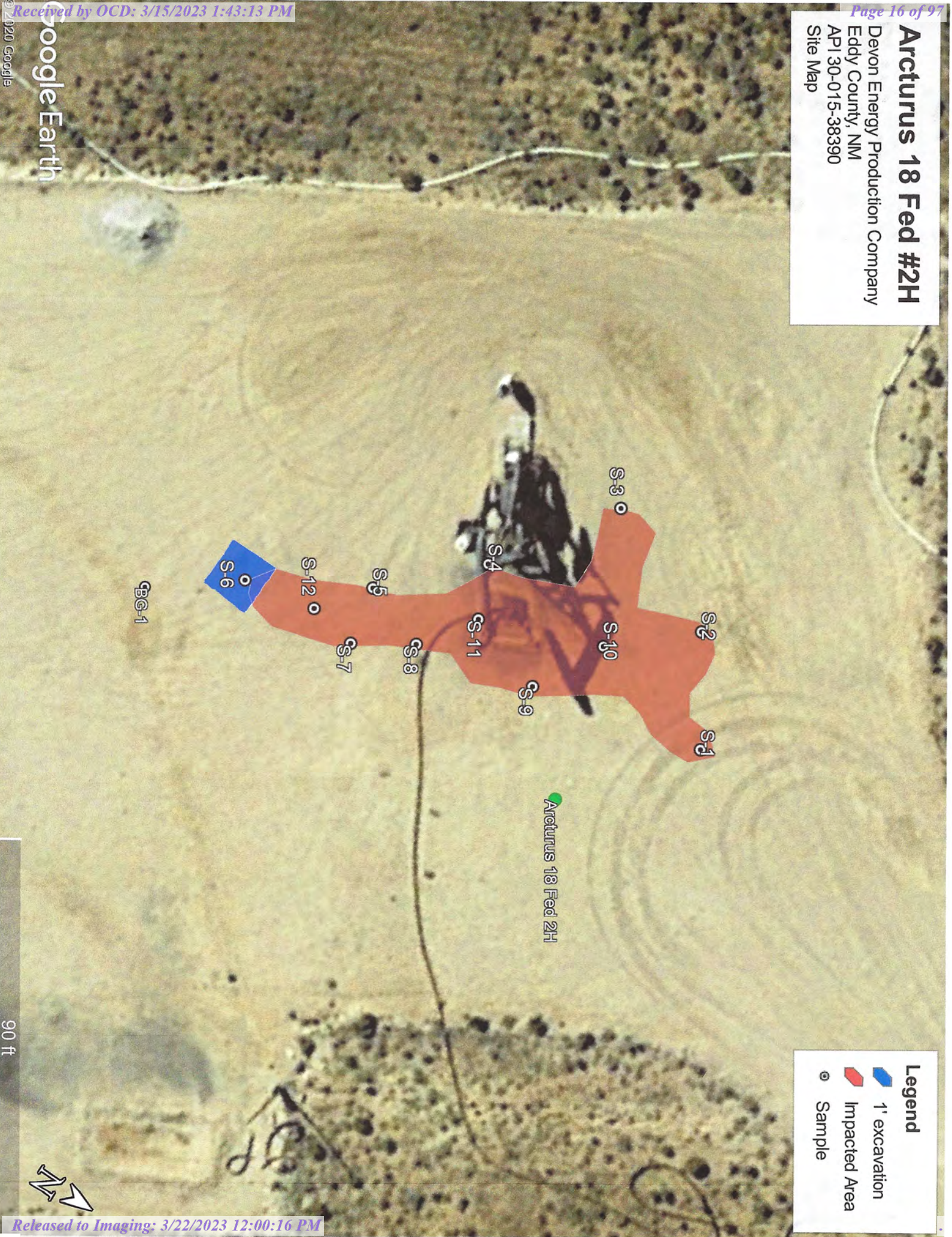
**KARST MAP**

**TOPO MAP**

**LOCATION MAP**



**Arcturus 18 Fed #2H**  
Devon Energy Production Company  
Eddy County, NM  
API 30-015-38390  
Site Map



**Legend**  
■ 1' excavation  
■ Impacted Area  
● Sample



**Arcturus 18 Fed #2H**  
Devon Energy Production Company  
Eddy County, NM  
API 30-015-38390  
Karst Map

**Legend**

	High
	Low
	Medium

Google Earth  
© 2020 Google  
Image Landsat / Copernicus

Arcturus 18 Fed 2H

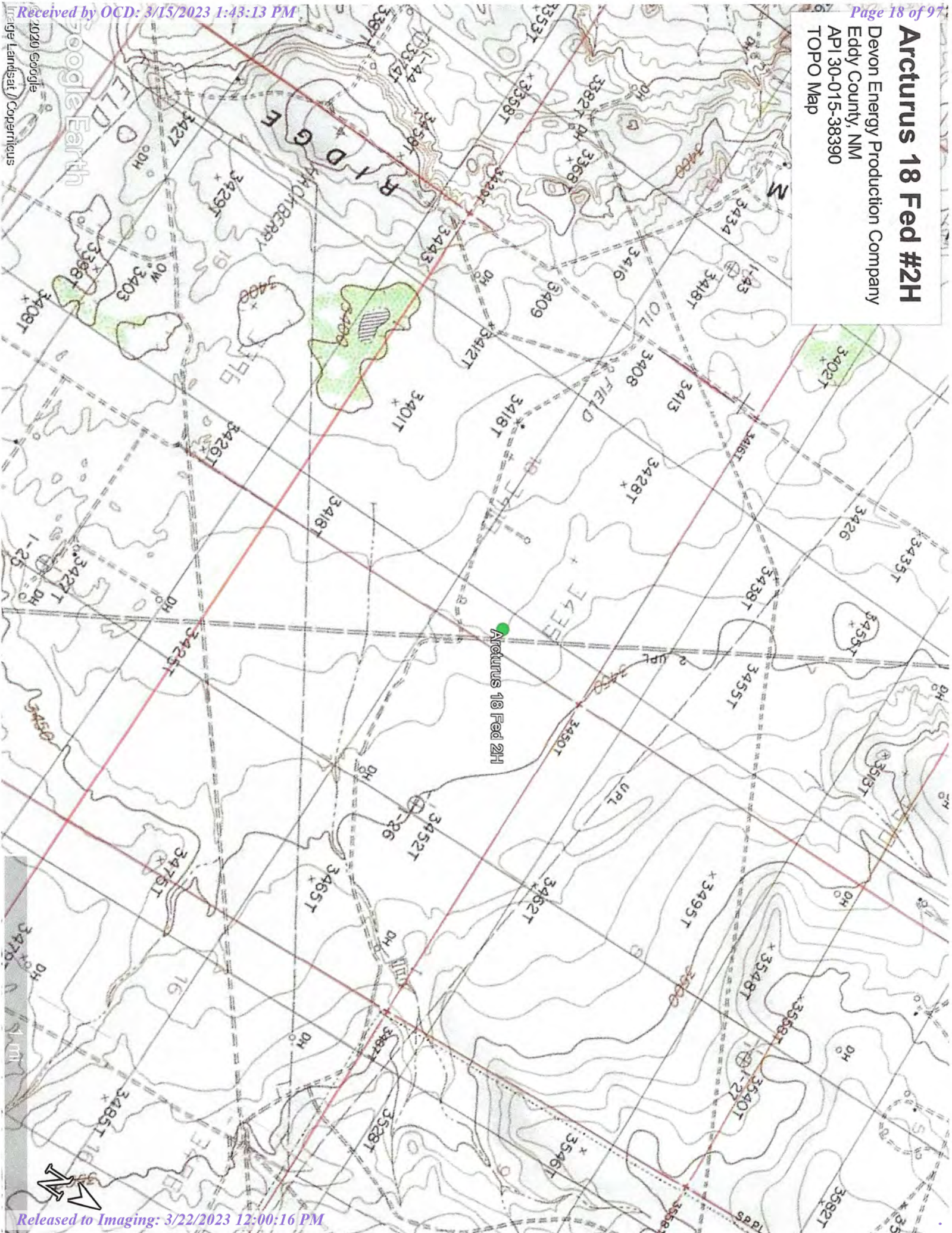
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# Arcturus 18 Fed #2H

Devon Energy Production Company  
Eddy County, NM  
API 30-015-38390  
TOPO Map

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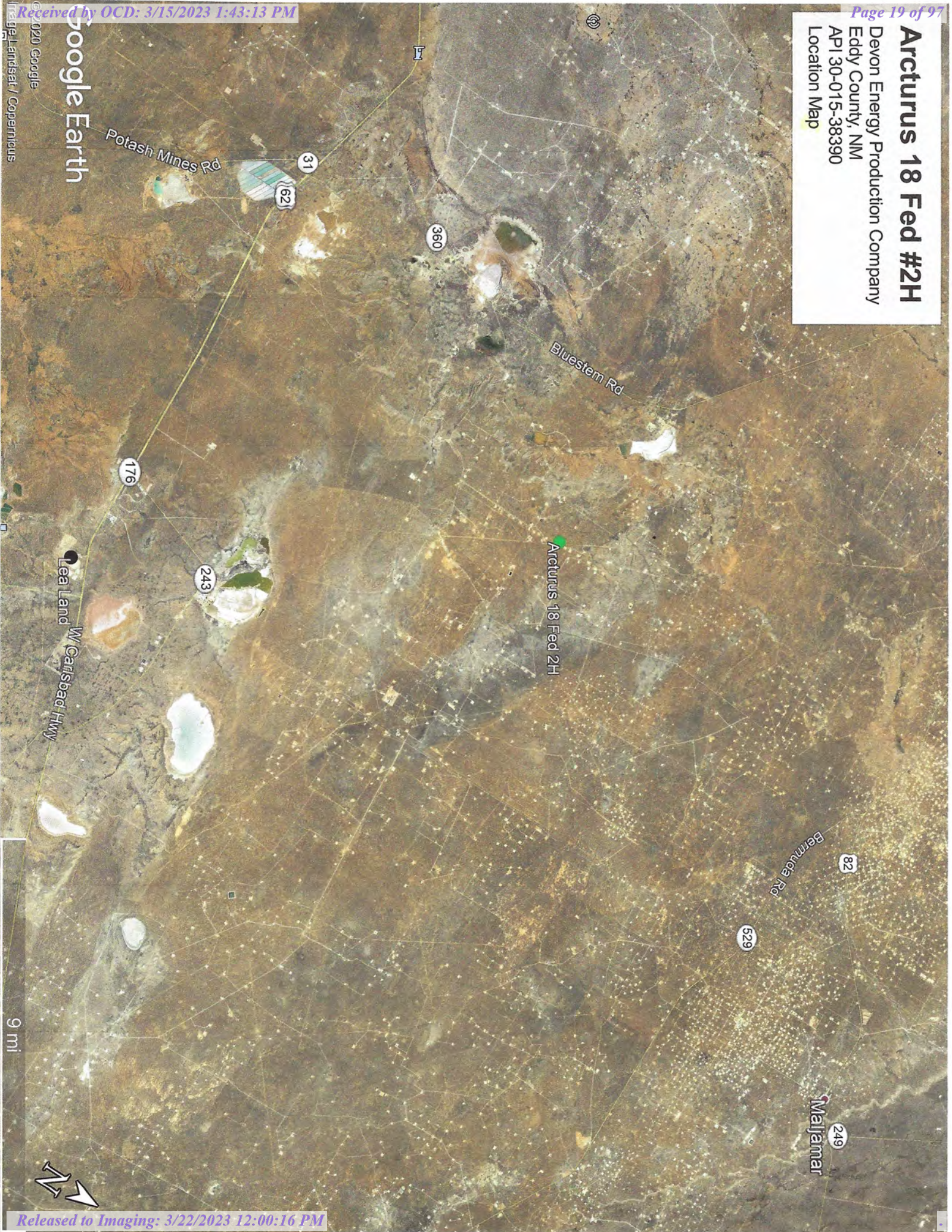


# Arcturus 18 Fed #2H

Devon Energy Production Company  
Eddy County, NM  
API 30-015-38390  
Location Map

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Google Earth  
© 2020 Google  
Imagery Landsat / Copernicus







## **APPENDIX II**

# **GROUNDWATER DATA**

# **SOIL SURVEY**

# **FEMA FLOOD ZONE**

2/25/2020

nmwrrs.ose.state.nm.us/nmwrrs/ReportProxy?queryData=%7B"report"%3A"waterColumn"%2C%0A"BasinDiv"%3A"true"%2C%0A"Basin...



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

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

(R=POD has been replaced,  
O=orphaned,

C=the file is closed)

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	Sub-basin	County	Q	Q	Q	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	WaterColumn
CP 00873 POD1		CP	LE	1	1	19	19S	31E		601772	3613147*	1839	340	180	160

Average Depth to Water: 180 feet

Minimum Depth: 180 feet

Maximum Depth: 180 feet

Record Count: 1

UTM NAD83 Radius Search (in meters):

Easting (X): 603042.587

Northing (Y): 3614477.364

Radius: 2000

\*UTM location was derived from PLSS - see Help

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

2/25/20 9:46 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



Map Unit Description: Berino loamy fine sand, 0 to 3 percent slopes—Eddy Area, New Mexico

## Eddy Area, New Mexico

### BA—Berino loamy fine sand, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 1w42  
*Elevation:* 2,000 to 5,700 feet  
*Mean annual precipitation:* 6 to 14 inches  
*Mean annual air temperature:* 57 to 70 degrees F  
*Frost-free period:* 180 to 260 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Berino and similar soils:* 99 percent  
*Minor components:* 1 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Berino

##### Setting

*Landform:* Fan piedmonts, plains  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium and/or eolian sands

##### Typical profile

*H1 - 0 to 12 inches:* loamy fine sand  
*H2 - 12 to 58 inches:* sandy clay loam  
*H3 - 58 to 60 inches:* clay loam

##### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural 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 in profile:* 40 percent  
*Salinity, maximum in profile:* Very slightly saline to slightly saline  
 (2.0 to 4.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 1.0  
*Available water storage in profile:* Moderate (about 8.4 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3e  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* B

Map Unit Description: Berino loamy fine sand, 0 to 3 percent slopes---Eddy Area, New Mexico

---

*Ecological site:* Loamy (R042XC007NM)

*Hydric soil rating:* No

#### **Minor Components**

##### **Pajarito**

*Percent of map unit:* 1 percent

*Ecological site:* Loamy Sand (R042XC003NM)

*Hydric soil rating:* No

### **Data Source Information**

Soil Survey Area: Eddy Area, New Mexico

Survey Area Data: Version 15, Sep 15, 2019



22°40'2.48"N



### Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99 With BFE or Depth Zone AE, AH, VE, AR Regulatory Floodway
----------------------------	--

0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with draining areas of less than one square mile Zone X  
Future Conditions 1% Annual Chance Flood Hazard Zone X  
Area with Reduced Flood Risk due to Levee, See Notes, Zone X  
Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD

OTHER AREAS	Area of Minimal Flood Hazard Zone X Effective LOMRs Area of Undetermined Flood Hazard Zone X Channel, Culvert, or Storm Sewer Structures Levee, Dike, or Floodwall
-------------	--

OTHER FEATURES	20.2 17.5 50 Limit of Study Coastal Transect Baseline Profile Baseline Hydrographic Feature
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MAP PANELS	Digital Data Available No Digital Data Available Unmapped
------------	---

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/23/2020 at 1:29:26 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



## **APPENDIX III**

### **FINAL C-141**



State of New Mexico  
Oil Conservation Division

Incident ID	nRM2014240786
District RP	
Facility ID	
Application ID	

**Site Assessment/Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release?	180 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

State of New Mexico  
Oil Conservation Division

Incident ID	nRM2014240786
District RP	
Facility ID	
Application ID	

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

Printed Name: Dale Woodall

Title: Env. Professional

Signature: Dale WoodallDate: 3/15/2023email: [dale.woodall@dvn.com](mailto:dale.woodall@dvn.com)

Telephone: 575-748-1838

**OCD Only**

Received by: \_\_\_\_\_

Date: \_\_\_\_\_



State of New Mexico  
Oil Conservation Division

Incident ID	nRM2014240786
District RP	
Facility ID	
Application ID	

## Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Dale Woodall

Title: Env. Professional

Signature: Dale WoodallDate: 3/15/2023email: [dale.woodall@dvnm.com](mailto:dale.woodall@dvnm.com)

Telephone: 575-748-1838

**OCD Only**

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

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

Closure Approved by: \_\_\_\_\_

Date: 03/22/2023Printed Name: Jennifer NobuiTitle: Environmental Specialist A



## **APPENDIX IV**

# **PHOTOGRAPHIC DOCUMENTATION**

## Photographic Documentation





## Photographic Documentation





## **APPENDIX V**

# **LABORATORY DATA**



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

March 02, 2020

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

RE: Arcturus 18 FED 2H

OrderNo.: 2002915

Dear Chris Jones:

Hall Environmental Analysis Laboratory received 42 sample(s) on 2/22/2020 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](http://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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**Lab Order **2002915**

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Client Sample ID:** S-1 0-1'**Project:** Arcturus 18 FED 2H**Collection Date:** 2/19/2020 8:00:00 AM**Lab ID:** 2002915-001**Matrix:** SOIL**Received Date:** 2/22/2020 9:05:00 AM

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	490	60		mg/Kg	20	2/25/2020 10:06:09 PM	50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	2/26/2020 10:00:39 AM	50641
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/26/2020 10:00:39 AM	50641
Surr: DNOP	127	55.1-146		%Rec	1	2/26/2020 10:00:39 AM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/25/2020 10:39:09 PM	50628
Surr: BFB	83.3	66.6-105		%Rec	1	2/25/2020 10:39:09 PM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	2/25/2020 10:39:09 PM	50628
Toluene	ND	0.049		mg/Kg	1	2/25/2020 10:39:09 PM	50628
Ethylbenzene	ND	0.049		mg/Kg	1	2/25/2020 10:39:09 PM	50628
Xylenes, Total	ND	0.099		mg/Kg	1	2/25/2020 10:39:09 PM	50628
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	1	2/25/2020 10:39:09 PM	50628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-1 2' R

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 8:05:00 AM

Lab ID: 2002915-002

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	2/25/2020 11:07:53 PM	50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	2/26/2020 11:10:47 AM	50641
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/26/2020 11:10:47 AM	50641
Surr: DNOP	96.8	55.1-146		%Rec	1	2/26/2020 11:10:47 AM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/25/2020 11:48:27 PM	50628
Surr: BFB	82.7	66.6-105		%Rec	1	2/25/2020 11:48:27 PM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	2/25/2020 11:48:27 PM	50628
Toluene	ND	0.049		mg/Kg	1	2/25/2020 11:48:27 PM	50628
Ethylbenzene	ND	0.049		mg/Kg	1	2/25/2020 11:48:27 PM	50628
Xylenes, Total	ND	0.099		mg/Kg	1	2/25/2020 11:48:27 PM	50628
Surr: 4-Bromofluorobenzene	92.4	80-120		%Rec	1	2/25/2020 11:48:27 PM	50628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Client Sample ID:** S-2 0-1'**Project:** Arcturus 18 FED 2H**Collection Date:** 2/19/2020 8:15:00 AM**Lab ID:** 2002915-003**Matrix:** SOIL**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	2000	60		mg/Kg	20	2/25/2020 11:20:14 PM	50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	350	9.5		mg/Kg	1	2/27/2020 7:08:16 PM	50641
Motor Oil Range Organics (MRO)	240	47		mg/Kg	1	2/27/2020 7:08:16 PM	50641
Surr: DNOP	148	55.1-146	S	%Rec	1	2/27/2020 7:08:16 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/26/2020 12:11:35 AM	50628
Surr: BFB	79.9	66.6-105		%Rec	1	2/26/2020 12:11:35 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	2/26/2020 12:11:35 AM	50628
Toluene	ND	0.047		mg/Kg	1	2/26/2020 12:11:35 AM	50628
Ethylbenzene	ND	0.047		mg/Kg	1	2/26/2020 12:11:35 AM	50628
Xylenes, Total	ND	0.093		mg/Kg	1	2/26/2020 12:11:35 AM	50628
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	2/26/2020 12:11:35 AM	50628

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 Quantitative 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

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-2 2'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 8:20:00 AM

Lab ID: 2002915-004

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	840	60		mg/Kg	20	2/25/2020 11:32:34 PM	50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/26/2020 11:57:44 AM	50641
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/26/2020 11:57:44 AM	50641
Surr: DNOP	96.8	55.1-146		%Rec	1	2/26/2020 11:57:44 AM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/26/2020 12:34:37 AM	50628
Surr: BFB	82.0	66.6-105		%Rec	1	2/26/2020 12:34:37 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	2/26/2020 12:34:37 AM	50628
Toluene	ND	0.050		mg/Kg	1	2/26/2020 12:34:37 AM	50628
Ethylbenzene	ND	0.050		mg/Kg	1	2/26/2020 12:34:37 AM	50628
Xylenes, Total	ND	0.099		mg/Kg	1	2/26/2020 12:34:37 AM	50628
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	2/26/2020 12:34:37 AM	50628

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 Quantitative 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

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-2 3'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 8:25:00 AM

Lab ID: 2002915-005

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	980	60		mg/Kg	20	2/25/2020 11:44:55 PM	50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/26/2020 12:21:12 PM	50641
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/26/2020 12:21:12 PM	50641
Surr: DNOP	134	55.1-146		%Rec	1	2/26/2020 12:21:12 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 12:57:40 AM	50628
Surr: BFB	79.7	66.6-105		%Rec	1	2/26/2020 12:57:40 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	2/26/2020 12:57:40 AM	50628
Toluene	ND	0.048		mg/Kg	1	2/26/2020 12:57:40 AM	50628
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 12:57:40 AM	50628
Xylenes, Total	ND	0.096		mg/Kg	1	2/26/2020 12:57:40 AM	50628
Surr: 4-Bromofluorobenzene	89.8	80-120		%Rec	1	2/26/2020 12:57:40 AM	50628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-3 0-1'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 8:35:00 AM

Lab ID: 2002915-006

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	140	60		mg/Kg	20	2/25/2020 11:57:15 PM	50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	17	9.5		mg/Kg	1	2/26/2020 12:44:37 PM	50641
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/26/2020 12:44:37 PM	50641
Surr: DNOP	141	55.1-146		%Rec	1	2/26/2020 12:44:37 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 1:20:40 AM	50628
Surr: BFB	78.7	66.6-105		%Rec	1	2/26/2020 1:20:40 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	2/26/2020 1:20:40 AM	50628
Toluene	ND	0.048		mg/Kg	1	2/26/2020 1:20:40 AM	50628
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 1:20:40 AM	50628
Xylenes, Total	ND	0.096		mg/Kg	1	2/26/2020 1:20:40 AM	50628
Surr: 4-Bromofluorobenzene	88.3	80-120		%Rec	1	2/26/2020 1:20:40 AM	50628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-3 2'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 8:40:00 AM

Lab ID: 2002915-007

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	2/26/2020 12:09:36 AM	50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/26/2020 1:08:09 PM	50641
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/26/2020 1:08:09 PM	50641
Surr: DNOP	96.6	55.1-146		%Rec	1	2/26/2020 1:08:09 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 1:43:40 AM	50628
Surr: BFB	81.8	66.6-105		%Rec	1	2/26/2020 1:43:40 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	2/26/2020 1:43:40 AM	50628
Toluene	ND	0.048		mg/Kg	1	2/26/2020 1:43:40 AM	50628
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 1:43:40 AM	50628
Xylenes, Total	ND	0.097		mg/Kg	1	2/26/2020 1:43:40 AM	50628
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	2/26/2020 1:43:40 AM	50628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Client Sample ID: S-3 3' R

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 8:45:00 AM

Lab ID: 2002915-008

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 12:21:56 AM	Analyst: JMT 50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/26/2020 1:31:40 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/26/2020 1:31:40 PM	50641
Surr: DNOP	96.4	55.1-146		%Rec	1	2/26/2020 1:31:40 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 2:06:39 AM	Analyst: NSB 50628
Surr: BFB	80.7	66.6-105		%Rec	1	2/26/2020 2:06:39 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 2:06:39 AM	Analyst: NSB 50628
Toluene	ND	0.048		mg/Kg	1	2/26/2020 2:06:39 AM	50628
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 2:06:39 AM	50628
Xylenes, Total	ND	0.095		mg/Kg	1	2/26/2020 2:06:39 AM	50628
Surr: 4-Bromofluorobenzene	91.0	80-120		%Rec	1	2/26/2020 2:06:39 AM	50628

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-009**Matrix:** SOIL**Client Sample ID:** S-4 0-1'**Collection Date:** 2/19/2020 8:55:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	2500	150		mg/Kg	50	2/27/2020 2:04:04 PM	Analyst: JMT 50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	26	9.0		mg/Kg	1	2/28/2020 8:52:55 AM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/28/2020 8:52:55 AM	50641
Surr: DNOP	91.9	55.1-146		%Rec	1	2/28/2020 8:52:55 AM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/26/2020 2:29:38 AM	Analyst: NSB 50628
Surr: BFB	80.5	66.6-105		%Rec	1	2/26/2020 2:29:38 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	2/26/2020 2:29:38 AM	Analyst: NSB 50628
Toluene	ND	0.050		mg/Kg	1	2/26/2020 2:29:38 AM	50628
Ethylbenzene	ND	0.050		mg/Kg	1	2/26/2020 2:29:38 AM	50628
Xylenes, Total	ND	0.10		mg/Kg	1	2/26/2020 2:29:38 AM	50628
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	2/26/2020 2:29:38 AM	50628

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Client Sample ID:** S-4 2'**Project:** Arcturus 18 FED 2H**Collection Date:** 2/19/2020 9:05:00 AM**Lab ID:** 2002915-010**Matrix:** SOIL**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	72	60		mg/Kg	20	2/26/2020 1:11:19 AM	Analyst: JMT 50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/26/2020 2:18:50 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/26/2020 2:18:50 PM	50641
Surr: DNOP	119	55.1-146		%Rec	1	2/26/2020 2:18:50 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 3:15:31 AM	Analyst: NSB 50628
Surr: BFB	77.4	66.6-105		%Rec	1	2/26/2020 3:15:31 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 3:15:31 AM	Analyst: NSB 50628
Toluene	ND	0.048		mg/Kg	1	2/26/2020 3:15:31 AM	50628
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 3:15:31 AM	50628
Xylenes, Total	ND	0.096		mg/Kg	1	2/26/2020 3:15:31 AM	50628
Surr: 4-Bromofluorobenzene	87.1	80-120		%Rec	1	2/26/2020 3:15:31 AM	50628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Project: Arcturus 18 FED 2H

Lab ID: 2002915-011

Matrix: SOIL

Client Sample ID: S-4 3'

Collection Date: 2/19/2020 9:10:00 AM

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	120	60		mg/Kg	20	2/26/2020 1:23:39 AM	Analyst: JMT 50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/26/2020 2:42:21 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/26/2020 2:42:21 PM	50641
Surr: DNOP	98.0	55.1-146		%Rec	1	2/26/2020 2:42:21 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/26/2020 3:38:23 AM	Analyst: NSB 50628
Surr: BFB	80.7	66.6-105		%Rec	1	2/26/2020 3:38:23 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 3:38:23 AM	Analyst: NSB 50628
Toluene	ND	0.049		mg/Kg	1	2/26/2020 3:38:23 AM	50628
Ethylbenzene	ND	0.049		mg/Kg	1	2/26/2020 3:38:23 AM	50628
Xylenes, Total	ND	0.097		mg/Kg	1	2/26/2020 3:38:23 AM	50628
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	1	2/26/2020 3:38:23 AM	50628

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-012**Matrix:** SOIL**Client Sample ID:** S-4 4'**Collection Date:** 2/19/2020 9:15:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	150	60		mg/Kg	20	2/26/2020 1:36:00 AM	Analyst: JMT 50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/26/2020 3:05:52 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/26/2020 3:05:52 PM	50641
Surr: DNOP	99.7	55.1-146		%Rec	1	2/26/2020 3:05:52 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/26/2020 4:01:17 AM	Analyst: NSB 50628
Surr: BFB	78.5	66.6-105		%Rec	1	2/26/2020 4:01:17 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 4:01:17 AM	Analyst: NSB 50628
Toluene	ND	0.047		mg/Kg	1	2/26/2020 4:01:17 AM	50628
Ethylbenzene	ND	0.047		mg/Kg	1	2/26/2020 4:01:17 AM	50628
Xylenes, Total	ND	0.095		mg/Kg	1	2/26/2020 4:01:17 AM	50628
Surr: 4-Bromofluorobenzene	89.0	80-120		%Rec	1	2/26/2020 4:01:17 AM	50628

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Project: Arcturus 18 FED 2H

Lab ID: 2002915-013

Matrix: SOIL

Client Sample ID: S-5 0-1'

Collection Date: 2/19/2020 9:25:00 AM

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 1:48:21 AM	Analyst: JMT 50663
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/26/2020 3:29:31 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/26/2020 3:29:31 PM	50641
Surr: DNOP	126	55.1-146		%Rec	1	2/26/2020 3:29:31 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/26/2020 4:24:11 AM	Analyst: NSB 50628
Surr: BFB	78.6	66.6-105		%Rec	1	2/26/2020 4:24:11 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.023		mg/Kg	1	2/26/2020 4:24:11 AM	Analyst: NSB 50628
Toluene	ND	0.046		mg/Kg	1	2/26/2020 4:24:11 AM	50628
Ethylbenzene	ND	0.046		mg/Kg	1	2/26/2020 4:24:11 AM	50628
Xylenes, Total	ND	0.092		mg/Kg	1	2/26/2020 4:24:11 AM	50628
Surr: 4-Bromofluorobenzene	88.4	80-120		%Rec	1	2/26/2020 4:24:11 AM	50628

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-014**Matrix:** SOIL**Client Sample ID:** S-5 2'**Collection Date:** 2/19/2020 9:30:00 AM**Received Date:** 2/22/2020 9:05:00 AM

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	65	60		mg/Kg	20	2/26/2020 11:42:43 AM	50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/26/2020 3:53:05 PM	50641
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/26/2020 3:53:05 PM	50641
Surr: DNOP	93.8	55.1-146		%Rec	1	2/26/2020 3:53:05 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/26/2020 4:47:03 AM	50628
Surr: BFB	79.7	66.6-105		%Rec	1	2/26/2020 4:47:03 AM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.023		mg/Kg	1	2/26/2020 4:47:03 AM	50628
Toluene	ND	0.047		mg/Kg	1	2/26/2020 4:47:03 AM	50628
Ethylbenzene	ND	0.047		mg/Kg	1	2/26/2020 4:47:03 AM	50628
Xylenes, Total	ND	0.093		mg/Kg	1	2/26/2020 4:47:03 AM	50628
Surr: 4-Bromofluorobenzene	91.1	80-120		%Rec	1	2/26/2020 4:47:03 AM	50628

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Project: Arcturus 18 FED 2H

Lab ID: 2002915-015

Matrix: SOIL

Client Sample ID: S-5 3'

Collection Date: 2/19/2020 9:35:00 AM

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	110	60		mg/Kg	20	2/26/2020 12:19:46 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/26/2020 4:40:18 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/26/2020 4:40:18 PM	50641
Surr: DNOP	94.6	55.1-146		%Rec	1	2/26/2020 4:40:18 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/26/2020 1:44:35 PM	Analyst: NSB 50628
Surr: BFB	80.9	66.6-105		%Rec	1	2/26/2020 1:44:35 PM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.023		mg/Kg	1	2/26/2020 1:44:35 PM	Analyst: NSB 50628
Toluene	ND	0.046		mg/Kg	1	2/26/2020 1:44:35 PM	50628
Ethylbenzene	ND	0.046		mg/Kg	1	2/26/2020 1:44:35 PM	50628
Xylenes, Total	ND	0.093		mg/Kg	1	2/26/2020 1:44:35 PM	50628
Surr: 4-Bromofluorobenzene	90.6	80-120		%Rec	1	2/26/2020 1:44:35 PM	50628

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Project: Arcturus 18 FED 2H

Lab ID: 2002915-016

Matrix: SOIL

Client Sample ID: S-5 4'

Collection Date: 2/19/2020 9:40:00 AM

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	120	60		mg/Kg	20	2/26/2020 12:32:08 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/26/2020 5:03:58 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/26/2020 5:03:58 PM	50641
Surr: DNOP	88.7	55.1-146		%Rec	1	2/26/2020 5:03:58 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/26/2020 2:08:00 PM	Analyst: NSB 50628
Surr: BFB	85.0	66.6-105		%Rec	1	2/26/2020 2:08:00 PM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 2:08:00 PM	Analyst: NSB 50628
Toluene	ND	0.049		mg/Kg	1	2/26/2020 2:08:00 PM	50628
Ethylbenzene	ND	0.049		mg/Kg	1	2/26/2020 2:08:00 PM	50628
Xylenes, Total	ND	0.097		mg/Kg	1	2/26/2020 2:08:00 PM	50628
Surr: 4-Bromofluorobenzene	94.4	80-120		%Rec	1	2/26/2020 2:08:00 PM	50628

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

<b>Qualifiers:</b>	*	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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**Lab Order **2002915**

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-017**Matrix:** SOIL**Client Sample ID:** S-6 0-1'**Collection Date:** 2/19/2020 9:50:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 12:44:29 PM	50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	3500	940		mg/Kg	100	2/27/2020 7:30:12 PM	50641
Motor Oil Range Organics (MRO)	13000	4700		mg/Kg	100	2/27/2020 7:30:12 PM	50641
Surr: DNOP	0	55.1-146	S	%Rec	100	2/27/2020 7:30:12 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 2:31:29 PM	50628
Surr: BFB	79.3	66.6-105		%Rec	1	2/26/2020 2:31:29 PM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 2:31:29 PM	50628
Toluene	ND	0.048		mg/Kg	1	2/26/2020 2:31:29 PM	50628
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 2:31:29 PM	50628
Xylenes, Total	ND	0.096		mg/Kg	1	2/26/2020 2:31:29 PM	50628
Surr: 4-Bromofluorobenzene	88.2	80-120		%Rec	1	2/26/2020 2:31:29 PM	50628

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

<b>Qualifiers:</b>	*	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 Quantitative 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

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## Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Project: Arcturus 18 FED 2H

Lab ID: 2002915-018

Matrix: SOIL

Client Sample ID: S-6 2'

Collection Date: 2/19/2020 9:55:00 AM

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	63	60		mg/Kg	20	2/26/2020 1:21:31 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/27/2020 7:52:04 PM	Analyst: BRM 50641
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/27/2020 7:52:04 PM	50641
Surr: DNOP	94.6	55.1-146		%Rec	1	2/27/2020 7:52:04 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 2:54:59 PM	Analyst: NSB 50628
Surr: BFB	82.2	66.6-105		%Rec	1	2/26/2020 2:54:59 PM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 2:54:59 PM	Analyst: NSB 50628
Toluene	ND	0.048		mg/Kg	1	2/26/2020 2:54:59 PM	50628
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 2:54:59 PM	50628
Xylenes, Total	ND	0.096		mg/Kg	1	2/26/2020 2:54:59 PM	50628
Surr: 4-Bromofluorobenzene	89.2	80-120		%Rec	1	2/26/2020 2:54:59 PM	50628

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

<b>Qualifiers:</b>		*	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 Quantitative Limit	RL	Reporting Limit
	S		% Recovery outside of range due to dilution or matrix		

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## Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Project: Arcturus 18 FED 2H

Lab ID: 2002915-019

Matrix: SOIL

Client Sample ID: S-6 3' R

Collection Date: 2/19/2020 10:00:00 AM

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	80	60		mg/Kg	20	2/26/2020 1:33:52 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/26/2020 6:14:26 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/26/2020 6:14:26 PM	50641
Surr: DNOP	96.2	55.1-146		%Rec	1	2/26/2020 6:14:26 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 3:18:11 PM	Analyst: NSB 50628
Surr: BFB	85.8	66.6-105		%Rec	1	2/26/2020 3:18:11 PM	50628
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 3:18:11 PM	Analyst: NSB 50628
Toluene	ND	0.048		mg/Kg	1	2/26/2020 3:18:11 PM	50628
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 3:18:11 PM	50628
Xylenes, Total	ND	0.097		mg/Kg	1	2/26/2020 3:18:11 PM	50628
Surr: 4-Bromofluorobenzene	95.9	80-120		%Rec	1	2/26/2020 3:18:11 PM	50628

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Client Sample ID:** S-7 0-1'**Project:** Arcturus 18 FED 2H**Collection Date:** 2/19/2020 10:10:00 AM**Lab ID:** 2002915-020**Matrix:** SOIL**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	74	60		mg/Kg	20	2/26/2020 1:46:13 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	17	9.5		mg/Kg	1	2/26/2020 6:37:50 PM	Analyst: CLP 50641
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/26/2020 6:37:50 PM	50641
Surr: DNOP	135	55.1-146		%Rec	1	2/26/2020 6:37:50 PM	50641
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/26/2020 3:41:45 PM	Analyst: NSB 50630
Surr: BFB	78.7	66.6-105		%Rec	1	2/26/2020 3:41:45 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	2/26/2020 3:41:45 PM	Analyst: NSB 50630
Toluene	ND	0.049		mg/Kg	1	2/26/2020 3:41:45 PM	50630
Ethylbenzene	ND	0.049		mg/Kg	1	2/26/2020 3:41:45 PM	50630
Xylenes, Total	ND	0.099		mg/Kg	1	2/26/2020 3:41:45 PM	50630
Surr: 4-Bromofluorobenzene	87.0	80-120		%Rec	1	2/26/2020 3:41:45 PM	50630

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-021**Matrix:** SOIL**Client Sample ID:** S-7 2'**Collection Date:** 2/19/2020 10:15:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 2:23:15 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/26/2020 7:47:46 PM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/26/2020 7:47:46 PM	50642
Surr: DNOP	95.0	55.1-146		%Rec	1	2/26/2020 7:47:46 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/26/2020 4:52:07 PM	Analyst: NSB 50630
Surr: BFB	83.9	66.6-105		%Rec	1	2/26/2020 4:52:07 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	2/26/2020 4:52:07 PM	Analyst: NSB 50630
Toluene	ND	0.050		mg/Kg	1	2/26/2020 4:52:07 PM	50630
Ethylbenzene	ND	0.050		mg/Kg	1	2/26/2020 4:52:07 PM	50630
Xylenes, Total	ND	0.099		mg/Kg	1	2/26/2020 4:52:07 PM	50630
Surr: 4-Bromofluorobenzene	92.9	80-120		%Rec	1	2/26/2020 4:52:07 PM	50630

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Client Sample ID:** S-7 3'**Project:** Arcturus 18 FED 2H**Collection Date:** 2/19/2020 10:20:00 AM**Lab ID:** 2002915-022**Matrix:** SOIL**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 2:35:36 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/26/2020 8:57:30 PM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/26/2020 8:57:30 PM	50642
Surr: DNOP	93.3	55.1-146		%Rec	1	2/26/2020 8:57:30 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 6:01:50 PM	Analyst: NSB 50630
Surr: BFB	82.4	66.6-105		%Rec	1	2/26/2020 6:01:50 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 6:01:50 PM	Analyst: NSB 50630
Toluene	ND	0.048		mg/Kg	1	2/26/2020 6:01:50 PM	50630
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 6:01:50 PM	50630
Xylenes, Total	ND	0.097		mg/Kg	1	2/26/2020 6:01:50 PM	50630
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	2/26/2020 6:01:50 PM	50630

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-023**Matrix:** SOIL**Client Sample ID:** S-7 4'**Collection Date:** 2/19/2020 10:25:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	61	60		mg/Kg	20	2/26/2020 2:47:57 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	2/26/2020 9:20:42 PM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/26/2020 9:20:42 PM	50642
Surr: DNOP	97.1	55.1-146		%Rec	1	2/26/2020 9:20:42 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/26/2020 7:35:19 PM	Analyst: NSB 50630
Surr: BFB	78.2	66.6-105		%Rec	1	2/26/2020 7:35:19 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.023		mg/Kg	1	2/26/2020 7:35:19 PM	Analyst: NSB 50630
Toluene	ND	0.047		mg/Kg	1	2/26/2020 7:35:19 PM	50630
Ethylbenzene	ND	0.047		mg/Kg	1	2/26/2020 7:35:19 PM	50630
Xylenes, Total	ND	0.094		mg/Kg	1	2/26/2020 7:35:19 PM	50630
Surr: 4-Bromofluorobenzene	86.8	80-120		%Rec	1	2/26/2020 7:35:19 PM	50630

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-024**Matrix:** SOIL**Client Sample ID:** S-8 0-1'**Collection Date:** 2/19/2020 10:35:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 3:00:18 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/26/2020 9:43:55 PM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/26/2020 9:43:55 PM	50642
Surr: DNOP	125	55.1-146		%Rec	1	2/26/2020 9:43:55 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/26/2020 7:58:40 PM	Analyst: NSB 50630
Surr: BFB	78.7	66.6-105		%Rec	1	2/26/2020 7:58:40 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	2/26/2020 7:58:40 PM	Analyst: NSB 50630
Toluene	ND	0.050		mg/Kg	1	2/26/2020 7:58:40 PM	50630
Ethylbenzene	ND	0.050		mg/Kg	1	2/26/2020 7:58:40 PM	50630
Xylenes, Total	ND	0.099		mg/Kg	1	2/26/2020 7:58:40 PM	50630
Surr: 4-Bromofluorobenzene	87.6	80-120		%Rec	1	2/26/2020 7:58:40 PM	50630

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-025**Matrix:** SOIL**Client Sample ID:** S-8 2'**Collection Date:** 2/19/2020 10:40:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 3:12:39 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/26/2020 10:07:05 PM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/26/2020 10:07:05 PM	50642
Surr: DNOP	95.8	55.1-146		%Rec	1	2/26/2020 10:07:05 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/26/2020 8:22:04 PM	Analyst: NSB 50630
Surr: BFB	81.2	66.6-105		%Rec	1	2/26/2020 8:22:04 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.023		mg/Kg	1	2/26/2020 8:22:04 PM	Analyst: NSB 50630
Toluene	ND	0.047		mg/Kg	1	2/26/2020 8:22:04 PM	50630
Ethylbenzene	ND	0.047		mg/Kg	1	2/26/2020 8:22:04 PM	50630
Xylenes, Total	ND	0.094		mg/Kg	1	2/26/2020 8:22:04 PM	50630
Surr: 4-Bromofluorobenzene	90.7	80-120		%Rec	1	2/26/2020 8:22:04 PM	50630

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-026**Matrix:** SOIL**Client Sample ID:** S-8 3'**Collection Date:** 2/19/2020 10:45:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 3:49:40 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	2/26/2020 10:53:26 PM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/26/2020 10:53:26 PM	50642
Surr: DNOP	96.3	55.1-146		%Rec	1	2/26/2020 10:53:26 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/26/2020 8:45:27 PM	Analyst: NSB 50630
Surr: BFB	78.7	66.6-105		%Rec	1	2/26/2020 8:45:27 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	2/26/2020 8:45:27 PM	Analyst: NSB 50630
Toluene	ND	0.049		mg/Kg	1	2/26/2020 8:45:27 PM	50630
Ethylbenzene	ND	0.049		mg/Kg	1	2/26/2020 8:45:27 PM	50630
Xylenes, Total	ND	0.099		mg/Kg	1	2/26/2020 8:45:27 PM	50630
Surr: 4-Bromofluorobenzene	87.5	80-120		%Rec	1	2/26/2020 8:45:27 PM	50630

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

<b>Qualifiers:</b>	*	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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Client Sample ID: S-8 4'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 10:50:00 AM

Lab ID: 2002915-027

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	ND	60		mg/Kg	20	2/26/2020 4:02:02 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/26/2020 11:16:38 PM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/26/2020 11:16:38 PM	50642
Surr: DNOP	99.0	55.1-146		%Rec	1	2/26/2020 11:16:38 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/26/2020 9:08:48 PM	Analyst: NSB 50630
Surr: BFB	79.3	66.6-105		%Rec	1	2/26/2020 9:08:48 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	2/26/2020 9:08:48 PM	Analyst: NSB 50630
Toluene	ND	0.049		mg/Kg	1	2/26/2020 9:08:48 PM	50630
Ethylbenzene	ND	0.049		mg/Kg	1	2/26/2020 9:08:48 PM	50630
Xylenes, Total	ND	0.098		mg/Kg	1	2/26/2020 9:08:48 PM	50630
Surr: 4-Bromofluorobenzene	88.8	80-120		%Rec	1	2/26/2020 9:08:48 PM	50630

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Project: Arcturus 18 FED 2H

Lab ID: 2002915-028

Matrix: SOIL

Client Sample ID: S-9 0-1'

Collection Date: 2/19/2020 10:55:00 AM

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	120	60		mg/Kg	20	2/26/2020 4:14:23 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	290	9.3		mg/Kg	1	2/27/2020 8:14:02 PM	Analyst: BRM 50642
Motor Oil Range Organics (MRO)	210	47		mg/Kg	1	2/27/2020 8:14:02 PM	50642
Surr: DNOP	127	55.1-146		%Rec	1	2/27/2020 8:14:02 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 9:32:07 PM	Analyst: NSB 50630
Surr: BFB	79.8	66.6-105		%Rec	1	2/26/2020 9:32:07 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 9:32:07 PM	Analyst: NSB 50630
Toluene	ND	0.048		mg/Kg	1	2/26/2020 9:32:07 PM	50630
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 9:32:07 PM	50630
Xylenes, Total	ND	0.096		mg/Kg	1	2/26/2020 9:32:07 PM	50630
Surr: 4-Bromofluorobenzene	89.5	80-120		%Rec	1	2/26/2020 9:32:07 PM	50630

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.**

Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia

Project: Arcturus 18 FED 2H

Lab ID: 2002915-029

Matrix: SOIL

Client Sample ID: S-9 2'

Collection Date: 2/19/2020 11:00:00 AM

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	530	60		mg/Kg	20	2/26/2020 4:26:44 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/27/2020 12:02:56 AM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/27/2020 12:02:56 AM	50642
Surr: DNOP	96.7	55.1-146		%Rec	1	2/27/2020 12:02:56 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/26/2020 9:55:23 PM	Analyst: NSB 50630
Surr: BFB	79.3	66.6-105		%Rec	1	2/26/2020 9:55:23 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 9:55:23 PM	Analyst: NSB 50630
Toluene	ND	0.049		mg/Kg	1	2/26/2020 9:55:23 PM	50630
Ethylbenzene	ND	0.049		mg/Kg	1	2/26/2020 9:55:23 PM	50630
Xylenes, Total	ND	0.097		mg/Kg	1	2/26/2020 9:55:23 PM	50630
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	2/26/2020 9:55:23 PM	50630

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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-030**Matrix:** SOIL**Client Sample ID:** S-9 3' R**Collection Date:** 2/19/2020 11:05:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	950	60		mg/Kg	20	2/26/2020 4:39:05 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/27/2020 12:26:02 AM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/27/2020 12:26:02 AM	50642
Surr: DNOP	97.0	55.1-146		%Rec	1	2/27/2020 12:26:02 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/26/2020 10:18:39 PM	Analyst: NSB 50630
Surr: BFB	76.8	66.6-105		%Rec	1	2/26/2020 10:18:39 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	2/26/2020 10:18:39 PM	Analyst: NSB 50630
Toluene	ND	0.049		mg/Kg	1	2/26/2020 10:18:39 PM	50630
Ethylbenzene	ND	0.049		mg/Kg	1	2/26/2020 10:18:39 PM	50630
Xylenes, Total	ND	0.099		mg/Kg	1	2/26/2020 10:18:39 PM	50630
Surr: 4-Bromofluorobenzene	86.5	80-120		%Rec	1	2/26/2020 10:18:39 PM	50630

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

<b>Qualifiers:</b>	*	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 Quantitative 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

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2002915

Date Reported: 3/2/2020

**CLIENT:** Talon Artesia**Project:** Arcturus 18 FED 2H**Lab ID:** 2002915-031**Matrix:** SOIL**Client Sample ID:** S-10 0-1'**Collection Date:** 2/19/2020 11:15:00 AM**Received Date:** 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							
Chloride	2600	150		mg/Kg	50	2/27/2020 2:16:25 PM	Analyst: JMT 50687
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	37	9.9		mg/Kg	1	2/27/2020 12:49:08 AM	Analyst: CLP 50642
Motor Oil Range Organics (MRO)	56	49		mg/Kg	1	2/27/2020 12:49:08 AM	50642
Surr: DNOP	115	55.1-146		%Rec	1	2/27/2020 12:49:08 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/26/2020 10:41:54 PM	Analyst: NSB 50630
Surr: BFB	80.1	66.6-105		%Rec	1	2/26/2020 10:41:54 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							
Benzene	ND	0.024		mg/Kg	1	2/26/2020 10:41:54 PM	Analyst: NSB 50630
Toluene	ND	0.048		mg/Kg	1	2/26/2020 10:41:54 PM	50630
Ethylbenzene	ND	0.048		mg/Kg	1	2/26/2020 10:41:54 PM	50630
Xylenes, Total	ND	0.097		mg/Kg	1	2/26/2020 10:41:54 PM	50630
Surr: 4-Bromofluorobenzene	90.7	80-120		%Rec	1	2/26/2020 10:41:54 PM	50630

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

<b>Qualifiers:</b>	*	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 Quantitative 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

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-10 2'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 11:20:00 AM

Lab ID: 2002915-032

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	150	60		mg/Kg	20	2/26/2020 5:28:28 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	2/27/2020 1:12:21 AM	50642
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/27/2020 1:12:21 AM	50642
Surr: DNOP	101	55.1-146		%Rec	1	2/27/2020 1:12:21 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/26/2020 11:05:10 PM	50630
Surr: BFB	79.1	66.6-105		%Rec	1	2/26/2020 11:05:10 PM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	2/26/2020 11:05:10 PM	50630
Toluene	ND	0.047		mg/Kg	1	2/26/2020 11:05:10 PM	50630
Ethylbenzene	ND	0.047		mg/Kg	1	2/26/2020 11:05:10 PM	50630
Xylenes, Total	ND	0.094		mg/Kg	1	2/26/2020 11:05:10 PM	50630
Surr: 4-Bromofluorobenzene	88.2	80-120		%Rec	1	2/26/2020 11:05:10 PM	50630

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-10 3' R

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 11:25:00 AM

Lab ID: 2002915-033

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	220	60		mg/Kg	20	2/26/2020 5:40:50 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	2/27/2020 1:35:33 AM	50642
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	2/27/2020 1:35:33 AM	50642
Surr: DNOP	125	55.1-146		%Rec	1	2/27/2020 1:35:33 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/27/2020 12:14:36 AM	50630
Surr: BFB	78.3	66.6-105		%Rec	1	2/27/2020 12:14:36 AM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	2/27/2020 12:14:36 AM	50630
Toluene	ND	0.048		mg/Kg	1	2/27/2020 12:14:36 AM	50630
Ethylbenzene	ND	0.048		mg/Kg	1	2/27/2020 12:14:36 AM	50630
Xylenes, Total	ND	0.095		mg/Kg	1	2/27/2020 12:14:36 AM	50630
Surr: 4-Bromofluorobenzene	88.0	80-120		%Rec	1	2/27/2020 12:14:36 AM	50630

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-11 0-1'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 11:50:00 AM

Lab ID: 2002915-034

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	260	60		mg/Kg	20	2/26/2020 6:17:52 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	140	9.2		mg/Kg	1	2/27/2020 1:58:37 AM	50642
Motor Oil Range Organics (MRO)	110	46		mg/Kg	1	2/27/2020 1:58:37 AM	50642
Surr: DNOP	115	55.1-146		%Rec	1	2/27/2020 1:58:37 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	2/27/2020 12:37:46 AM	50630
Surr: BFB	79.1	66.6-105		%Rec	1	2/27/2020 12:37:46 AM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	2/27/2020 12:37:46 AM	50630
Toluene	ND	0.046		mg/Kg	1	2/27/2020 12:37:46 AM	50630
Ethylbenzene	ND	0.046		mg/Kg	1	2/27/2020 12:37:46 AM	50630
Xylenes, Total	ND	0.093		mg/Kg	1	2/27/2020 12:37:46 AM	50630
Surr: 4-Bromofluorobenzene	88.9	80-120		%Rec	1	2/27/2020 12:37:46 AM	50630

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-11 2'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 11:55:00 AM

Lab ID: 2002915-035

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	2/26/2020 6:30:13 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	2/27/2020 2:21:48 AM	50642
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/27/2020 2:21:48 AM	50642
Surr: DNOP	100	55.1-146		%Rec	1	2/27/2020 2:21:48 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/27/2020 1:00:58 AM	50630
Surr: BFB	81.0	66.6-105		%Rec	1	2/27/2020 1:00:58 AM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	2/27/2020 1:00:58 AM	50630
Toluene	ND	0.050		mg/Kg	1	2/27/2020 1:00:58 AM	50630
Ethylbenzene	ND	0.050		mg/Kg	1	2/27/2020 1:00:58 AM	50630
Xylenes, Total	ND	0.10		mg/Kg	1	2/27/2020 1:00:58 AM	50630
Surr: 4-Bromofluorobenzene	91.7	80-120		%Rec	1	2/27/2020 1:00:58 AM	50630

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 Quantitative 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

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-11 3'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 12:00:00 PM

Lab ID: 2002915-036

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	2/26/2020 6:42:33 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>CLP</b>
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	2/27/2020 2:44:53 AM	50642
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/27/2020 2:44:53 AM	50642
Surr: DNOP	101	55.1-146		%Rec	1	2/27/2020 2:44:53 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/27/2020 1:24:06 AM	50630
Surr: BFB	76.9	66.6-105		%Rec	1	2/27/2020 1:24:06 AM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	2/27/2020 1:24:06 AM	50630
Toluene	ND	0.049		mg/Kg	1	2/27/2020 1:24:06 AM	50630
Ethylbenzene	ND	0.049		mg/Kg	1	2/27/2020 1:24:06 AM	50630
Xylenes, Total	ND	0.098		mg/Kg	1	2/27/2020 1:24:06 AM	50630
Surr: 4-Bromofluorobenzene	86.6	80-120		%Rec	1	2/27/2020 1:24:06 AM	50630

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-11 4'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 12:05:00 PM

Lab ID: 2002915-037

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	2/26/2020 6:54:54 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/27/2020 3:08:02 AM	50642
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/27/2020 3:08:02 AM	50642
Surr: DNOP	94.3	55.1-146		%Rec	1	2/27/2020 3:08:02 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/27/2020 1:47:10 AM	50630
Surr: BFB	76.8	66.6-105		%Rec	1	2/27/2020 1:47:10 AM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	2/27/2020 1:47:10 AM	50630
Toluene	ND	0.048		mg/Kg	1	2/27/2020 1:47:10 AM	50630
Ethylbenzene	ND	0.048		mg/Kg	1	2/27/2020 1:47:10 AM	50630
Xylenes, Total	ND	0.096		mg/Kg	1	2/27/2020 1:47:10 AM	50630
Surr: 4-Bromofluorobenzene	87.0	80-120		%Rec	1	2/27/2020 1:47:10 AM	50630

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 Quantitative 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

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-12 0-1'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 1:00:00 PM

Lab ID: 2002915-038

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	180	60		mg/Kg	20	2/26/2020 7:07:14 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	110	8.8		mg/Kg	1	2/27/2020 8:57:36 PM	50642
Motor Oil Range Organics (MRO)	87	44		mg/Kg	1	2/27/2020 8:57:36 PM	50642
Surr: DNOP	111	55.1-146		%Rec	1	2/27/2020 8:57:36 PM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/27/2020 2:10:15 AM	50630
Surr: BFB	76.0	66.6-105		%Rec	1	2/27/2020 2:10:15 AM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	2/27/2020 2:10:15 AM	50630
Toluene	ND	0.048		mg/Kg	1	2/27/2020 2:10:15 AM	50630
Ethylbenzene	ND	0.048		mg/Kg	1	2/27/2020 2:10:15 AM	50630
Xylenes, Total	ND	0.095		mg/Kg	1	2/27/2020 2:10:15 AM	50630
Surr: 4-Bromofluorobenzene	85.7	80-120		%Rec	1	2/27/2020 2:10:15 AM	50630

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-12 2'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 1:05:00 PM

Lab ID: 2002915-039

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	2/26/2020 7:19:36 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	2/27/2020 3:54:15 AM	50642
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	2/27/2020 3:54:15 AM	50642
Surr: DNOP	95.8	55.1-146		%Rec	1	2/27/2020 3:54:15 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/27/2020 2:33:20 AM	50630
Surr: BFB	76.8	66.6-105		%Rec	1	2/27/2020 2:33:20 AM	50630
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	2/27/2020 2:33:20 AM	50630
Toluene	ND	0.048		mg/Kg	1	2/27/2020 2:33:20 AM	50630
Ethylbenzene	ND	0.048		mg/Kg	1	2/27/2020 2:33:20 AM	50630
Xylenes, Total	ND	0.096		mg/Kg	1	2/27/2020 2:33:20 AM	50630
Surr: 4-Bromofluorobenzene	86.0	80-120		%Rec	1	2/27/2020 2:33:20 AM	50630

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-12 3'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 1:10:00 PM

Lab ID: 2002915-040

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	2/26/2020 7:31:58 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: CLP
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	2/27/2020 4:17:26 AM	50642
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/27/2020 4:17:26 AM	50642
Surr: DNOP	99.3	55.1-146		%Rec	1	2/27/2020 4:17:26 AM	50642
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/27/2020 10:10:03 AM	50631
Surr: BFB	79.9	66.6-105		%Rec	1	2/27/2020 10:10:03 AM	50631
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	2/27/2020 10:10:03 AM	50631
Toluene	ND	0.049		mg/Kg	1	2/27/2020 10:10:03 AM	50631
Ethylbenzene	ND	0.049		mg/Kg	1	2/27/2020 10:10:03 AM	50631
Xylenes, Total	ND	0.099		mg/Kg	1	2/27/2020 10:10:03 AM	50631
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	2/27/2020 10:10:03 AM	50631

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 Quantitative 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

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: S-12 4'

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 1:15:00 PM

Lab ID: 2002915-041

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JMT</b>
Chloride	ND	60		mg/Kg	20	2/26/2020 7:44:18 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/26/2020 3:38:28 PM	50643
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	2/26/2020 3:38:28 PM	50643
Surr: DNOP	99.6	55.1-146		%Rec	1	2/26/2020 3:38:28 PM	50643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/27/2020 11:20:33 AM	50631
Surr: BFB	82.4	66.6-105		%Rec	1	2/27/2020 11:20:33 AM	50631
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	2/27/2020 11:20:33 AM	50631
Toluene	ND	0.047		mg/Kg	1	2/27/2020 11:20:33 AM	50631
Ethylbenzene	ND	0.047		mg/Kg	1	2/27/2020 11:20:33 AM	50631
Xylenes, Total	ND	0.095		mg/Kg	1	2/27/2020 11:20:33 AM	50631
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	2/27/2020 11:20:33 AM	50631

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

<b>Qualifiers:</b>	*	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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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## Analytical Report

Lab Order 2002915

Date Reported: 3/2/2020

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Talon Artesia

Client Sample ID: BG

Project: Arcturus 18 FED 2H

Collection Date: 2/19/2020 1:45:00 PM

Lab ID: 2002915-042

Matrix: SOIL

Received Date: 2/22/2020 9:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Chloride	ND	60		mg/Kg	20	2/26/2020 7:56:39 PM	50702
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: BRM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	2/26/2020 4:00:38 PM	50643
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/26/2020 4:00:38 PM	50643
Surr: DNOP	141	55.1-146		%Rec	1	2/26/2020 4:00:38 PM	50643
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/27/2020 12:31:05 PM	50631
Surr: BFB	80.1	66.6-105		%Rec	1	2/27/2020 12:31:05 PM	50631
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	2/27/2020 12:31:05 PM	50631
Toluene	ND	0.049		mg/Kg	1	2/27/2020 12:31:05 PM	50631
Ethylbenzene	ND	0.049		mg/Kg	1	2/27/2020 12:31:05 PM	50631
Xylenes, Total	ND	0.097		mg/Kg	1	2/27/2020 12:31:05 PM	50631
Surr: 4-Bromofluorobenzene	88.7	80-120		%Rec	1	2/27/2020 12:31:05 PM	50631

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: <b>MB-50663</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50663</b>	RunNo: <b>66788</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/25/2020</b>	SeqNo: <b>2297154</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-50663</b>		SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>						
Client ID: <b>LCSS</b>		Batch ID: <b>50663</b>		RunNo: <b>66788</b>						
Prep Date: <b>2/25/2020</b>		Analysis Date: <b>2/25/2020</b>		SeqNo: <b>2297155</b>			Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.2	90	110			

Sample ID: <b>MB-50687</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50687</b>	RunNo: <b>66815</b>								
Prep Date: <b>2/26/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2298438</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-50687</b>	SampType: <b>lcs</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50687</b>	RunNo: <b>66815</b>								
Prep Date: <b>2/26/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2298439</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.9	90	110			

Sample ID: 2002915-014AMS	SampType: ms	TestCode: EPA Method 300.0: Anions								
Client ID: S-5 2'	Batch ID: 50687	RunNo: 66815								
Prep Date: 2/26/2020	Analysis Date: 2/26/2020	SeqNo: 2298443 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	91	60	30.00	65.04	87.4	50.4	161			

Sample ID: 2002915-014AMSD		SampType: msd		TestCode: EPA Method 300.0: Anions						
Client ID: S-5 2'		Batch ID: 50687		RunNo: 66815						
Prep Date: 2/26/2020		Analysis Date: 2/26/2020		SeqNo: 2298444		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	91	61	30.00	65.04	86.3	50.4	161	0.361	20	

**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 Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: <b>MB-50702</b>	SampType: <b>mblk</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50702</b>	RunNo: <b>66815</b>								
Prep Date: <b>2/26/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2298468</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-50702</b>		SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>						
Client ID: <b>LCSS</b>		Batch ID: <b>50702</b>		RunNo: <b>66815</b>						
Prep Date: <b>2/26/2020</b>		Analysis Date: <b>2/26/2020</b>		SeqNo: <b>2298469</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.8	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 Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: <b>LCS-50681</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50681</b>	RunNo: <b>66803</b>								
Prep Date: <b>2/26/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297105</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		5.000		90.3	55.1	146			

Sample ID: <b>MB-50681</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50681</b>	RunNo: <b>66803</b>								
Prep Date: <b>2/26/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297106</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		99.1	55.1	146			

Sample ID: <b>MB-50641</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50641</b>	RunNo: <b>66801</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297210</b> Units: <b>mg/Kg</b>								
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	13		10.00		129	55.1	146			

Sample ID: <b>LCS-50641</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50641</b>	RunNo: <b>66801</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297211</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	50.00	0	116	70	130			
Surr: DNOP	6.0		5.000		120	55.1	146			

Sample ID: <b>LCS-50643</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50643</b>	RunNo: <b>66803</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297433</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.00	0	110	70	130			
Surr: DNOP	5.3		5.000		106	55.1	146			

Sample ID: <b>MB-50643</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50643</b>	RunNo: <b>66803</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297434</b> Units: <b>mg/Kg</b>								
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 Quantitative 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

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## QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2002915

02-Mar-20

Client: Talon Artesia  
Project: Arcturus 18 FED 2H

Sample ID: MB-50643	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 50643	RunNo: 66803								
Prep Date: 2/25/2020	Analysis Date: 2/26/2020	SeqNo: 2297434			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	12		10.00		120	55.1	146			

Sample ID: 2002915-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: S-1 0-1'	Batch ID: 50641	RunNo: 66801								
Prep Date: 2/25/2020	Analysis Date: 2/26/2020	SeqNo: 2297592		Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	62	9.4	46.86	0	132	47.4	136			
Surr: DNOP	6.9		4.686		147	55.1	146			S

Sample ID: 2002915-001AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: S-1 0-1'		Batch ID: 50641		RunNo: 66801						
Prep Date: 2/25/2020		Analysis Date: 2/26/2020		SeqNo: 2297593		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	9.6	47.98	0	112	47.4	136	14.7	43.4	
Surr: DNOP	5.6		4.798		117	55.1	146	0	0	

Sample ID: 2002915-021AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: S-7 2'	Batch ID: 50642	RunNo: 66801								
Prep Date: 2/25/2020	Analysis Date: 2/26/2020	SeqNo: 2299249	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.5	47.39	0	93.9	47.4	136			
Surr: DNOP	4.5		4.739		95.1	55.1	146			

Sample ID: 2002915-021AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: S-7 2'		Batch ID: 50642		RunNo: 66801						
Prep Date: 2/25/2020		Analysis Date: 2/26/2020		SeqNo: 2299250		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	8.8	44.13	0	93.5	47.4	136	7.55	43.4	
Surr: DNOP	4.2		4.413		95.1	55.1	146	0	0	

Sample ID: MB-50642	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 50642		RunNo: 66801							
Prep Date: 2/25/2020	Analysis Date: 2/26/2020		SeqNo: 2299275		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

## Qualifiers:

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H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: <b>MB-50642</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50642</b>	RunNo: <b>66801</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2299275</b> Units: <b>mg/Kg</b>								
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	11		10.00		113	55.1	146			

Sample ID: <b>LCS-50642</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50642</b>	RunNo: <b>66801</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2299276</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	106	70	130			
Surr: DNOP	5.4		5.000		109	55.1	146			

Sample ID: <b>LCS-50685</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50685</b>	RunNo: <b>66879</b>								
Prep Date: <b>2/26/2020</b>	Analysis Date: <b>2/27/2020</b>	SeqNo: <b>2299849</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		101	55.1	146			

Sample ID: <b>MB-50685</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50685</b>	RunNo: <b>66879</b>								
Prep Date: <b>2/26/2020</b>	Analysis Date: <b>2/27/2020</b>	SeqNo: <b>2299850</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		115	55.1	146			

Sample ID: <b>MB-50766</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50766</b>	RunNo: <b>66883</b>								
Prep Date: <b>2/28/2020</b>	Analysis Date: <b>2/28/2020</b>	SeqNo: <b>2302390</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		86.6	55.1	146			

Sample ID: <b>LCS-50766</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50766</b>	RunNo: <b>66883</b>								
Prep Date: <b>2/28/2020</b>	Analysis Date: <b>2/28/2020</b>	SeqNo: <b>2302393</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		85.0	55.1	146			

**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 Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: <b>mb-50628</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50628</b>	RunNo: <b>66771</b>								
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/25/2020</b>	SeqNo: <b>2296862</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	850		1000		85.0	66.6	105			

Sample ID: <b>lcs-50628</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50628</b>	RunNo: <b>66771</b>								
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/25/2020</b>	SeqNo: <b>2296863</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	80	120			
Surr: BFB	960		1000		96.2	66.6	105			

Sample ID: <b>MB-50657</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50657</b>	RunNo: <b>66806</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297867</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	850		1000		85.2	66.6	105			

Sample ID: <b>lcs-50657</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50657</b>	RunNo: <b>66806</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297868</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	910		1000		91.2	66.6	105			

Sample ID: <b>mb-50630</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50630</b>	RunNo: <b>66806</b>								
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297873</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	820		1000		81.6	66.6	105			

Sample ID: <b>lcs-50630</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>50630</b>	RunNo: <b>66806</b>								
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297874</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.6	80	120			
Surr: BFB	920		1000		91.9	66.6	105			

**Qualifiers:**

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 D Sample Diluted Due to Matrix  
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 ND Not Detected at the Reporting Limit  
 PQL Practical Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: 2002915-020ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: S-7 0-1'	Batch ID: 50630	RunNo: 66806								
Prep Date: 2/24/2020	Analysis Date: 2/26/2020	SeqNo: 2297876 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.6	22.98	0	93.6	69.1	142			
Surr: BFB	830		919.1		89.8	66.6	105			

Sample ID: 2002915-020amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: S-7 0-1'		Batch ID: 50630		RunNo: 66806						
Prep Date: 2/24/2020		Analysis Date: 2/26/2020		SeqNo: 2297877		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	23.99	0	89.6	69.1	142	0.00484	20	
Surr: BFB	860		959.7		89.2	66.6	105	0	0	

Sample ID: <b>mb-50631</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50631</b>	RunNo: <b>66878</b>								
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/27/2020</b>	SeqNo: <b>2299731</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	820		1000		82.5	66.6	105			

Sample ID: <b>lcs-50631</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>						
Client ID: <b>LCSS</b>		Batch ID: <b>50631</b>		RunNo: <b>66878</b>						
Prep Date: <b>2/24/2020</b>		Analysis Date: <b>2/27/2020</b>		SeqNo: <b>2299732</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.6	80	120			
Surr: BFB	940		1000		93.9	66.6	105			

Sample ID: 2002915-040ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: S-12 3'	Batch ID: 50631	RunNo: 66878								
Prep Date: 2/24/2020	Analysis Date: 2/27/2020	SeqNo: 2299734 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.7	23.70	0	88.0	69.1	142			
Surr: BFB	850		947.9		89.5	66.6	105			

Sample ID: 2002915-040amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: S-12 3'	Batch ID: 50631	RunNo: 66878								
Prep Date: 2/24/2020	Analysis Date: 2/27/2020	SeqNo: 2299735 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

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D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative 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

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# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: 2002915-040amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: S-12 3'		Batch ID: 50631		RunNo: 66878						
Prep Date: 2/24/2020		Analysis Date: 2/27/2020		SeqNo: 2299735		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.6	23.21	0	90.7	69.1	142	0.891	20	
Surr: BFB	830		928.5		89.5	66.6	105	0	0	

### Qualifiers:

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D Sample Diluted Due to Matrix  
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ND Not Detected at the Reporting Limit  
PQL Practical Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: <b>mb-50628</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>50628</b>		RunNo: <b>66771</b>							
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/25/2020</b>		SeqNo: <b>2296910</b>		Units: <b>mg/Kg</b>					
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	0.94		1.000		93.7	80	120			

Sample ID: <b>LCS-50628</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>50628</b>		RunNo: <b>66771</b>							
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/25/2020</b>		SeqNo: <b>2296911</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.3	80	120			
Toluene	0.97	0.050	1.000	0	97.4	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	80	120			

Sample ID: 2002915-001ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: S-1 0-1'	Batch ID: 50628		RunNo: 66771							
Prep Date: 2/24/2020	Analysis Date: 2/25/2020		SeqNo: 2296914		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.024	0.9443	0	98.1	78.5	119			
Toluene	0.98	0.047	0.9443	0.01451	102	75.7	123			
Ethylbenzene	1.0	0.047	0.9443	0	107	74.3	126			
Xylenes, Total	3.0	0.094	2.833	0.02231	107	72.9	130			
Surr: 4-Bromofluorobenzene	0.87		0.9443		92.2	80	120			

Sample ID: 2002915-001amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-1 0-1'	Batch ID: 50628	RunNo: 66771								
Prep Date: 2/24/2020	Analysis Date: 2/25/2020	SeqNo: 2296915 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.024	0.9785	0	101	78.5	119	6.22	20	
Toluene	1.0	0.049	0.9785	0.01451	106	75.7	123	6.93	20	
Ethylbenzene	1.1	0.049	0.9785	0	110	74.3	126	5.89	20	
Xylenes, Total	3.3	0.098	2.935	0.02231	110	72.9	130	6.94	20	
Surr: 4-Bromofluorobenzene	0.90		0.9785		91.6	80	120	0	0	

**Qualifiers:**

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 PQL Practical Quantitative Limit  
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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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: <b>MB-50657</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50657</b>	RunNo: <b>66806</b>								
Prep Date: <b>2/25/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297906</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		95.2	80	120			

Sample ID: <b>LCS-50657</b>		SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>		Batch ID: <b>50657</b>		RunNo: <b>66806</b>						
Prep Date: <b>2/25/2020</b>		Analysis Date: <b>2/26/2020</b>		SeqNo: <b>2297907</b>		Units: <b>%Rec</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			

Sample ID: <b>mb-50630</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50630</b>	RunNo: <b>66806</b>								
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/26/2020</b>	SeqNo: <b>2297912</b>			Units: <b>mg/Kg</b>					
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	0.90		1.000		90.2	80	120			

Sample ID: <b>LCS-50630</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>50630</b>			RunNo: <b>66806</b>						
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/26/2020</b>			SeqNo: <b>2297913</b>			Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.9	80	120			
Toluene	0.94	0.050	1.000	0	93.7	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.6	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.0	80	120			

Sample ID: 2002915-021ams	SampType: MS			TestCode: EPA Method 8021B: Volatiles						
Client ID: S-7 2'	Batch ID: 50630			RunNo: 66806						
Prep Date: 2/24/2020	Analysis Date: 2/26/2020			SeqNo: 2297916			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	0.9862	0	89.3	78.5	119			
Toluene	0.92	0.049	0.9862	0.01417	91.6	75.7	123			
Ethylbenzene	0.94	0.049	0.9862	0	95.4	74.3	126			
Xylenes, Total	2.9	0.099	2.959	0.02220	96.3	72.9	130			

**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 Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: 2002915-021ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-7 2'	Batch ID: 50630	RunNo: 66806								
Prep Date: 2/24/2020	Analysis Date: 2/26/2020	SeqNo: 2297916 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		0.9862		92.8	80	120			

Sample ID: 2002915-021amsd		SampType: MSD		TestCode: EPA Method 8021B: Volatiles						
Client ID: S-7 2'		Batch ID: 50630		RunNo: 66806						
Prep Date: 2/24/2020		Analysis Date: 2/26/2020		SeqNo: 2297917		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	0.9901	0	90.0	78.5	119	1.13	20	
Toluene	0.93	0.050	0.9901	0.01417	92.4	75.7	123	1.34	20	
Ethylbenzene	0.97	0.050	0.9901	0	97.9	74.3	126	2.94	20	
Xylenes, Total	2.9	0.099	2.970	0.02220	98.2	72.9	130	2.32	20	
Surr: 4-Bromofluorobenzene	0.91		0.9901		91.7	80	120	0	0	

Sample ID: <b>mb-50631</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>50631</b>	RunNo: <b>66878</b>								
Prep Date: <b>2/24/2020</b>	Analysis Date: <b>2/27/2020</b>	SeqNo: <b>2299780</b>		Units: <b>mg/Kg</b>						
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	0.89		1.000		89.2	80	120			

Sample ID: LCS-50631		SampType: LCS		TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS		Batch ID: 50631		RunNo: 66878						
Prep Date: 2/24/2020		Analysis Date: 2/27/2020		SeqNo: 2299781		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.6	80	120			
Toluene	0.93	0.050	1.000	0	93.0	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.5	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.1	80	120			

Sample ID: 2002915-041ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-12 4'	Batch ID: 50631	RunNo: 66878								
Prep Date: 2/24/2020	Analysis Date: 2/27/2020	SeqNo: 2299784 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**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 Quantitative 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

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**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2002915

02-Mar-20

**Client:** Talon Artesia  
**Project:** Arcturus 18 FED 2H

Sample ID: 2002915-041ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-12 4'	Batch ID: 50631	RunNo: 66878								
Prep Date: 2/24/2020	Analysis Date: 2/27/2020	SeqNo: 2299784 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9452	0.01815	86.6	78.5	119			
Toluene	0.89	0.047	0.9452	0.01654	92.8	75.7	123			
Ethylbenzene	0.92	0.047	0.9452	0	97.4	74.3	126			
Xylenes, Total	2.8	0.095	2.836	0.02174	98.8	72.9	130			
Surr: 4-Bromofluorobenzene	0.89		0.9452		94.6	80	120			

Sample ID: 2002915-041amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-12 4'	Batch ID: 50631	RunNo: 66878								
Prep Date: 2/24/2020	Analysis Date: 2/27/2020	SeqNo: 2299785 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.78	0.023	0.9302	0.01815	82.3	78.5	119	6.50	20	
Toluene	0.85	0.047	0.9302	0.01654	89.3	75.7	123	5.36	20	
Ethylbenzene	0.88	0.047	0.9302	0	94.2	74.3	126	4.93	20	
Xylenes, Total	2.7	0.093	2.791	0.02174	95.3	72.9	130	5.12	20	
Surr: 4-Bromofluorobenzene	0.85		0.9302		91.7	80	120	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 Quantitative 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

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

## Sample Log-In Check List

Client Name: **TALON ARTESIA**Work Order Number: **2002915**

RcptNo: 1

Received By: **Yazmine Garduno**

2/22/2020 9:05:00 AM

Completed By: **Isaiah Ortiz**Reviewed By: **SP 2/24/20***Yazmine Garduno**ISOX*

### Chain of Custody

1. Is Chain of Custody sufficiently 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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: *Y6 2/24/20*

### Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.2	Good				



## Chain-of-Custody Record

Client: TALON UPEMailing Address: 408 W. TEXAS AVEPhone #: 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

Project Name:

Project #: ARCTURUS 18 FEB 2H

Project Manager:

Project Manager: CHRIS JONESSampler: MICHAEL COLLIEROn Ice: ☒ Yes ☐ No# of Coolers: 2 52101-S-2Cooler Temp (including CE): 2.6-0-2.6

Container Type and #

Preservative Type

HEAL No.

Date

Time

Sample Name

Matrix

Date

Time

Sample Name

Matrix

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# HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

<b>Chain-of-Custody Record</b>			
Client: TALON LFC			
Mailing Address: 408 W. TEXAS AVE			
Phone #: 515-746-8768			
email or Fax#:			
QA/QC Package: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)			
Accreditation: <input type="checkbox"/> AZ Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other			
<input type="checkbox"/> EDD (Type) _____			
Date	Time	Matrix	Sample Name
2-19-20	10:40am	SOIL	S-8 2'
	10:45am		S-8 3'
	10:50am		S-8 4'
	10:55am		S-9 0-1'
	11:00am		S-9 2'
	11:05am		S-9 3' R
	11:15am		S-10 0-1'
	11:20am		S-10 2'
	11:25am		S-10 3' R
	11:50am		S-11 0-1'
	11:55am		S-11 2'
2-19-20	12:00pm	SOIL	S-11 3'
Date: 2/20/20	Time: 1500	Relinquished by: M.L.P.R.	
Date: 2/20/20	Time: 1900	Relinquished by: [Signature]	

Turn-Around Time:	Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>	Project Name:	ACTUALS 18 FEB 2H
		Project #:	700744.303.01
		Project Manager:	CHRIS JONES
		Sampler: MICHAEL COLLIER	
		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
# of Coolers:	2	(including CP):	5210-5210
Cooler Temp	-025	HEAL No.	ZOO7915
Container Type and #	PRESS 1 ICE COLD	Preservative Type	
			-025
			-026
			-027
			-028
			-029
			-030
			-031
			-032
			-033
			-034
			-035
			-036
Received By:	[Signature]	Via:	ICE COLD
Date:	2/20/20	Date:	1800

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 noted on the analytical report.



## Chain-of-Custody Record

Turn-Around Time:		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush	
Project Name:		PROJECT 18 FEB 2H	
Project #:		700744.303.01	
Project Manager:		CHRIS JONES	
Sampler: MICHAEL COLLIER		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
# of Coolers: 2		Cooler Temp (including CP): 51.00 = 5.2	
Container Type and #		Preservative Type	
GLASS 1		ICE COOL	
HEAL No. 2002915		-037	
S-11 4'		-038	
S-12 2'		-039	
S-12 3'		-040	
S-12 4'		-041	
GLASS 1		ICE COOL	
-042			
Date		Time	
2-19-20		12:05pm	
1:00pm			
1:05pm			
1:10pm			
1:15pm			
2-19-20		1:45pm	
Matrix		Sample Name	
SOIL		S-11 4'	
		S-12 0-1'	
		S-12 2'	
		S-12 3'	
		S-12 4'	
		BLG	
Date		Time	
2/20/20		1500	
Date		Time	
2/20/20		1900	
Relinquished by:		Via:	
Michael Coll.		2/20/20 1500	
Relinquished by:		Via:	
Chris Jones		2/20/20 1900	

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

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<sub>3</sub>, PO<sub>4</sub>, SO<sub>4</sub> ☐

8260 (VOA) ☐

8270 (Semi-VOA) ☐

Total Coliform (Present/Absent) ☒

Total Chlorides ☒

Remarks:

Pg. 4 of 4

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.



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

March 24, 2020

CHRIS JONES

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: ARCTURUS 18 FED 2H

Enclosed are the results of analyses for samples received by the laboratory on 03/23/20 14:49.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

TALON LPE  
 CHRIS JONES  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received: 03/23/2020  
 Reported: 03/24/2020  
 Project Name: ARCTURUS 18 FED 2H  
 Project Number: 700794.303.01  
 Project Location: DEVON - EDDY CO NM

Sampling Date: 03/20/2020  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Kelly Jacobson

**Sample ID: S-6A 1' COMP (H000879-01)**

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/23/2020	ND	196	98.1	200	0.552	
<b>DRO &gt;C10-C28*</b>	<b>530</b>	10.0	03/23/2020	ND	198	98.9	200	0.616	
<b>EXT DRO &gt;C28-C36</b>	<b>370</b>	10.0	03/23/2020	ND					
<hr/>									
Surrogate: 1-Chlorooctane	87.6 %	44.3-144							
Surrogate: 1-Chlorooctadecane	77.6 %	42.2-156							

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

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**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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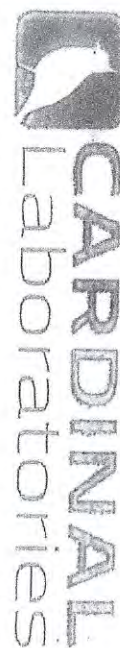
Cardinal Laboratories

\*=Accredited Analyte

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

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <b>Talon LPE</b>				P.O. #: <b>700794.303.0</b>	
Project Manager: <b>Chris Jones</b>				Company: <b>Talon LPE</b>	
Address: <b>408 W Texas Ave</b>				Attn: <b>Chris Jones</b>	
City: <b>Artesia</b>				Address:	
Phone #: <b>575-746-8768</b> Fax #:				City:	
Project #: <b>700794.303.0</b> Project Owner: <b>Devon Energy</b>				State: Zip:	
Project Location: <b>Arcturus 18 Fed 24</b>				Phone #:	
Sampler Name: <b>Brandon Sinclair</b>				Fax #:	

Lab I.D.:		Sample I.D.:		FOR LAB USE ONLY	
<b>HA00879</b>		<b>15-6A 1' comp</b>		<b>(G)RAB OR (C)OMP.</b>	
				<b># CONTAINERS</b>	
				<b>GROUNDWATER</b>	
				<b>WASTEWATER</b>	
				<b>SOIL</b>	
				<b>OIL</b>	
				<b>SLUDGE</b>	
				<b>OTHER:</b>	
				<b>ACID/BASE:</b>	
				<b>ICE / COOL</b>	
				<b>OTHER:</b>	
				<b>DATE</b>	
				<b>TIME</b>	
				<b>TPH EXT</b>	

Relinquished By: <b>W. Smith</b>		Received By: <b>JS</b>	
Date: <b>5-23-12</b>		Time: <b>14:49</b>	
Time: <b>14:49</b>		Received By: <b>JS</b>	

Delivered By: (Circle One)		Sample Condition		CHECKED BY:	
Sampler - UPS - Bus - Other: <b>4.70 / #113</b>		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		Initials: <b>JS</b>	
		No <input type="checkbox"/> Yes <input type="checkbox"/>			

REMARKS:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:	
		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:	

**Pg 1 of 1**

**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 197558

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 197558
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	3/22/2023