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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

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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
□Yes ⊠No	Within 300 feet of any continuously flowing wat any other significant watercourse	tercourse or
⊡Yes ⊠No	Within 200 feet of any lakebed, sinkhole or a pl	laya lake
□Yes ⊠No	Within 300 feet from an occupied permanent reschool, hospital, institution or church	esidence,
∐Yes ⊠No	Within 500 feet of a spring or a private, domest well used by less than five households for dom watering purposes	
□Yes ⊠No	Within 1000 feet of any freshwater well or sprin	ıg
□Yes ⊠No	Within incorporated municipal boundaries or wi municipal freshwater well field covered under a ordinance adopted pursuant to Section 3-2703	a municipal
□Yes ⊠No	Within 300 feet of a wetland	
∐Yes ⊠No	Within the area overlying a subsurface mine	
⊡Yes ⊠No	Within an unstable area	
□Yes ⊠No	Within a 100-year floodplain	

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/I TDS	Constituent	Method	Limit			
>100 feet	Total Chlorides TPH (GRO+DRO+MRO)	EPA 300.0 or SM4500 CI B EPA SW-846 Method 8015M	20,000 mg/kg 2,500 mg/kg			
	GRO+DRO BTEX	EPA SW-846 Method 8015M EPA SW-846 Method 8021B or 8260B	1,000 mg/kg 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 L	aboratory Results
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2-19-20 Soil Sample Laboratory Results									
Sample ID	Sample	Depth	BTEX	Benzene	GRO	DRO	MRO	Total TPH	Cl
	Date	(BGS)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC		50 mg/kg	kg 10 mg/kg DRO + GRO combined = 1000 mg/kg			2500 mg/kg	20,000 mg/kg		
1	9.19.29 IVIVIA	0-1'	ND	ND	ND	ND	ND	ND	490
S-1	2/19/2020	1-2' R	ND	ND	ND	ND	ND	ND	ND
		0-1'	ND	ND	ND	350	240	590	2000
S-	n	2'	ND	ND	ND	ND	240 ND	ND	840
5	-2	3'	ND	ND	ND	ND	ND	ND	980
		0-1'	ND	ND	ND	17	ND	17	140
S-	2	2'	ND	ND	ND	ND	ND	ND	ND
5	-5	2 3' R	ND	ND	ND	ND	ND	ND	ND
		0-1'	ND	ND	ND	26	ND	26	2500
		2'	ND	ND	ND	ND 20	ND	ND 20	72
S-	-4	3'	ND	ND	ND	ND	ND	ND	120
		3 4'	ND	ND	ND	ND	ND	ND	120
		4 0-1'	ND	ND	ND	ND	ND	ND	ND
		2'	ND	ND	ND	ND	ND	ND	65
S-	-5	3'	ND	ND	ND	ND	ND	ND	110
		4	ND	ND	ND	ND	ND	ND	110
			ND	ND	ND	3500	13000	16500	ND
S-	-6	2'	ND	ND	ND	ND	ND	ND	63
5	0	3' R	ND	ND	ND	ND	ND	ND	80
		0-1'	ND	ND	ND	17	ND	17	74
		2'	ND	ND	ND	ND	ND	ND	ND
S-	-7	3'	ND	ND	ND	ND	ND	ND	ND
		4'	ND	ND	ND	ND	ND	ND	61
		0-1'	ND	ND	ND	ND	ND	ND	ND
		2'	ND	ND	ND	ND	ND	ND	ND
S-	-8	3'	ND	ND	ND	ND	ND	ND	ND
		4'	ND	ND	ND	ND	ND	ND	ND
		0-1'	ND	ND	ND	290	210	500	120
S-	-9	2'	ND	ND	ND	ND	ND	ND	530
		3' R	ND	ND	ND	ND	ND	ND	950
		0-1	ND	ND	ND	37	56	93	2600
S-:	10	2'	ND	ND	ND	ND	ND	ND	150
		3' R	ND	ND	ND	ND	ND	ND	220
		0-1'	ND	ND	ND	140	110	250	260
_		2'	ND	ND	ND	ND	ND	ND	ND
S-1	11	3'	ND	ND	ND	ND	ND	ND	ND
		4'	ND	ND	ND	ND	ND	ND	ND
		0-1'	ND	ND	ND	110	87	197	180
	10	2'	ND	ND	ND	ND	ND	ND	ND
S-1	12	3'	ND	ND	ND	ND	ND	ND	ND
		4'	ND	ND	ND	ND	ND	ND	ND
В	G	0'	ND	ND	ND	ND	ND	ND	ND

ND-Analyte Not Detected

3-20-20 Confirmation Soil Sample Laboratory Results								
Semale ID	Sample	Depth	BTEX	Benzene	GRO	DRO	MRO	Total TPH
Sample ID	Date	(BGS)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NMOCD Table 1 Closure Criteria			<b>FO</b> // <b>FO</b> //	10	DRO + GRO	combined =		2500 (1
1	9.15.29 NMA	<b>^</b>	50 mg/kg	10 mg/kg	1000 mg/kg			2500 mg/kg
	9.15.29 INIVIA	L			10001	ng/kg		
S-6 A	3/20/2020	1'			ND	<b>пg/кg</b> 530	370	900

3-20-20 Confirmation Soil Sample Laboratory Resul
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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 1.0foot BGSÈ/Šaboratory analytical results from confirmation sidewall composite soil samples indicated that TPH concentrations were below NMOCD Closure Criteria.
- The ¦^{ a j j \* Ástained area on location was surface scraped and back dragged Áutilizing a backhoe.
- All ^¢&açæ\*\å 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

ND-Analyte Not Detected, -- Analyte Not Tested

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#### 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.	Digitally signed by David J. Artikes DN: comDavid J. Autom, pTalony
Adkins	CPE ou-District Manager, cmailedadkingstaloidpe.com, c=45 Oxte:2032.0131 (e=15.11-06/01)

David J. Adkins District Manager

Attachments:

Appendix ISite Maps, Karst Map, TOPO Map & Locator MapAppendix IIGroundwater Data, FEMA Flood Zone, Soil SurveyAppendix IIIInitial and Final C-141'sAppendix IVPhotographic DocumentationAppendix VLaboratory Results



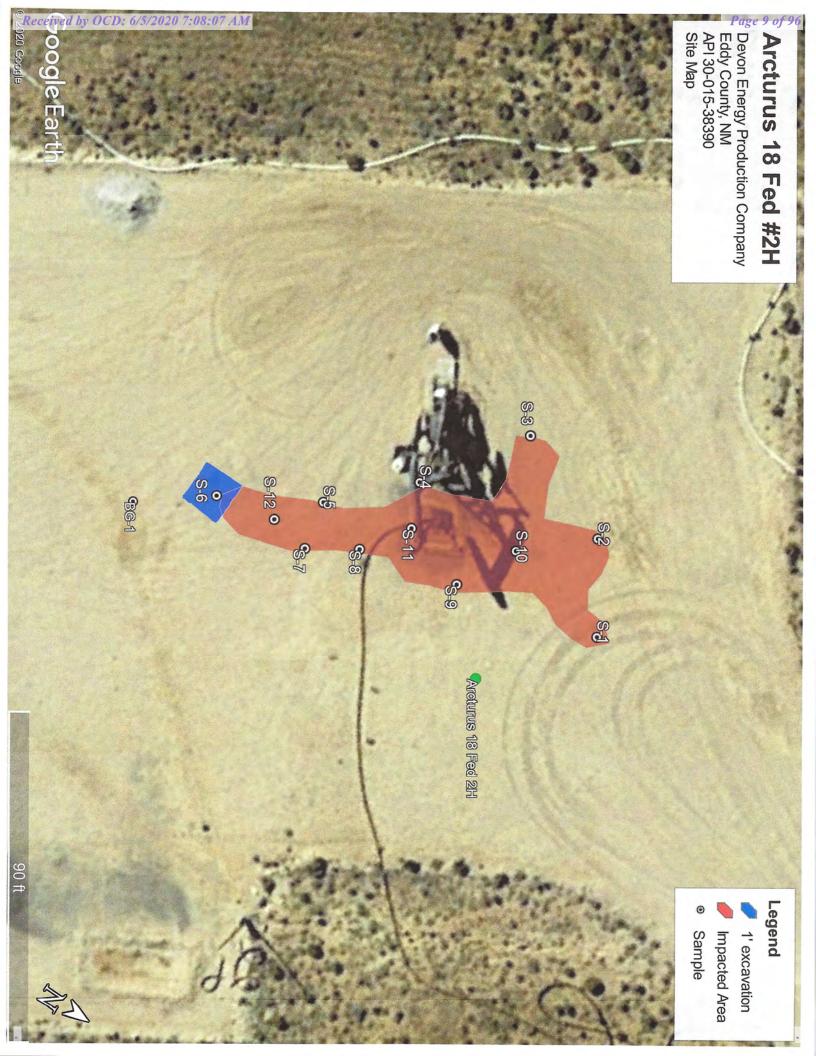
## **APPENDIX I**

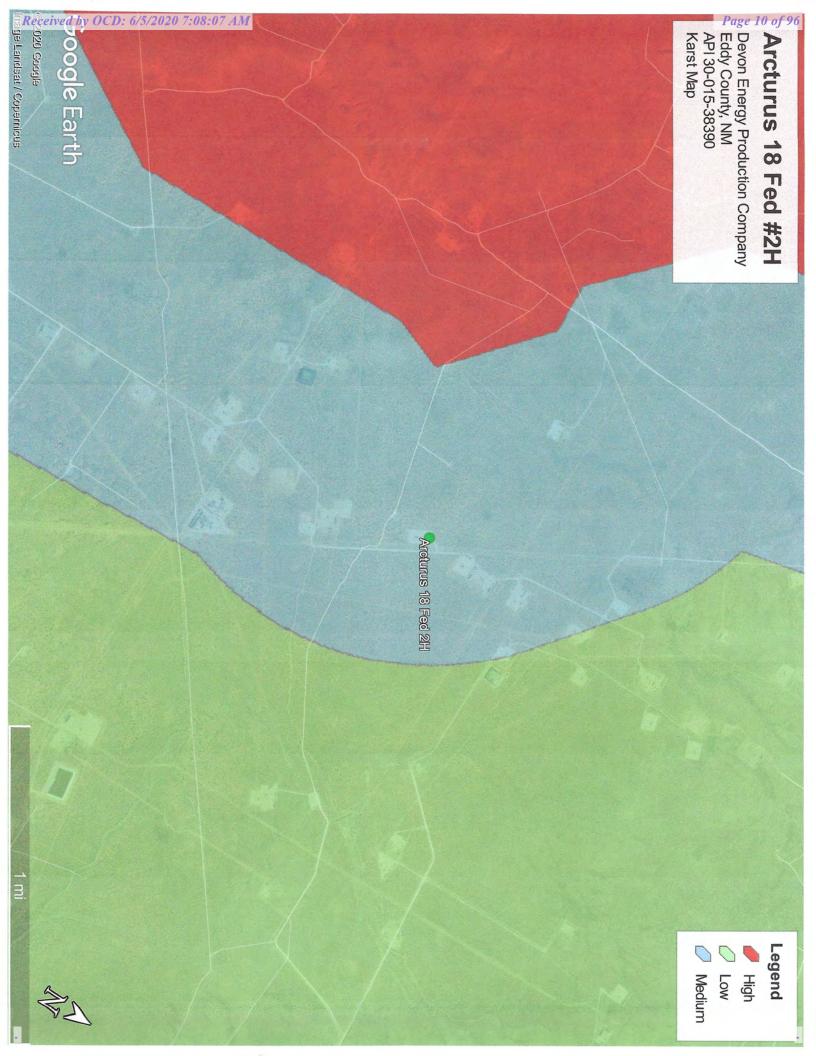
## SITE MAP

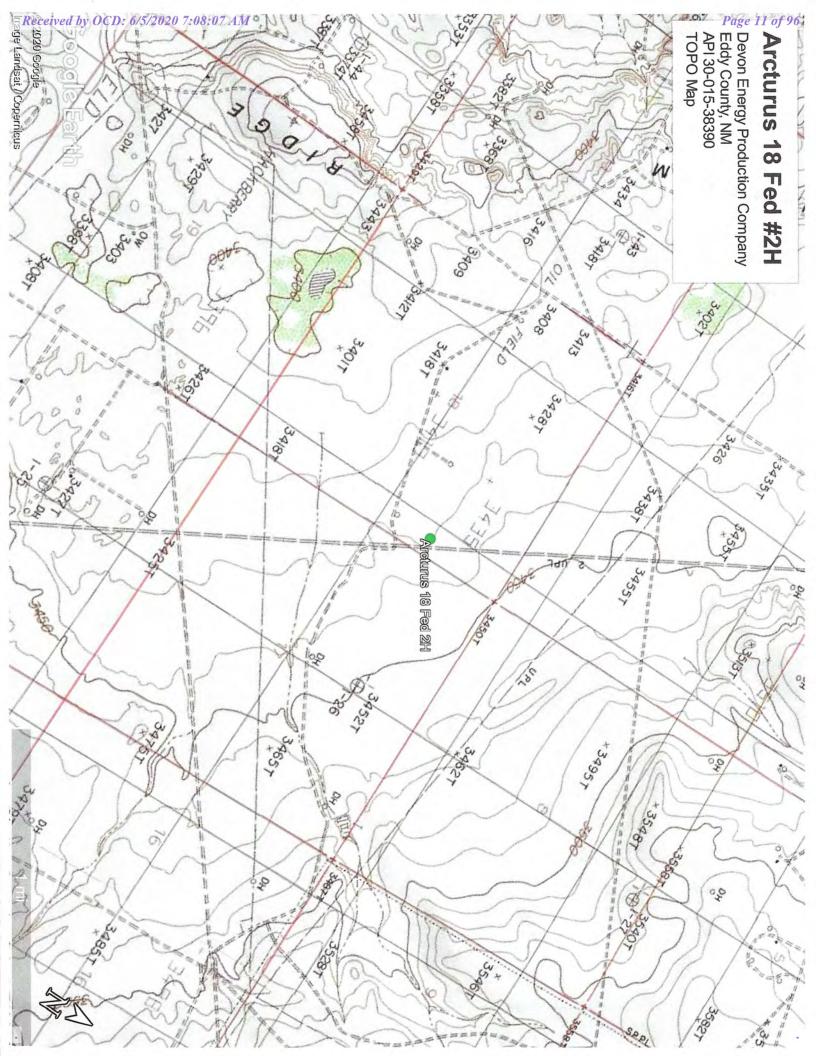
# KARST MAP

## **TOPO MAP**

## **LOCATION MAP**











# APPENDIX II

# **GROUNDWATER DATA**

## **SOIL SURVEY**

# FEMA FLOOD ZONE

Received by OCD: 6/5/2020 7:08:07 AM Page 14 of 96 2/25/2020 nmwrrs.ose.state.nm.us/nmwrrs/ReportProxy?queryData=%7B"report"%3A"waterColumn"%2C%0A"BasinDiv"%3A"true"%2C%0A Basin...

	v							tate Eng epth t	gineer o Wat	er		
(A CLW##### in the POD suffix indicates the POD has been replaced & no longer	(R=POD been rep O=orpha	placed,										
serves a water right file.)	C=the file is closed)			(quarters are 1=NW 2=NI (quarters are smallest to largest)		t to	E 3=SW 4=SE) (NAD83 UTM in meters)			(In feet)		
POD Number CP 00873 POD1 <u>Record</u> 1 <u>Count:</u> UTMNAD83 Radi	Code	CP	County (		ec Tws Rn 19 19S 311		3613147*	DistanceDe 1839 erage Depth to V Minimum De Maximum De	epth:	Water WaterColumr 180 16( 180 feet 180 feet 180 feet		
Easting (X): 60	03042.587		Northi	ng (Y): 30	614477.364		Radius: 2000	0				

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

JSDA

Ecological site: Loamy (R042XC007NM) Hydric soil rating: No

#### **Minor Components**

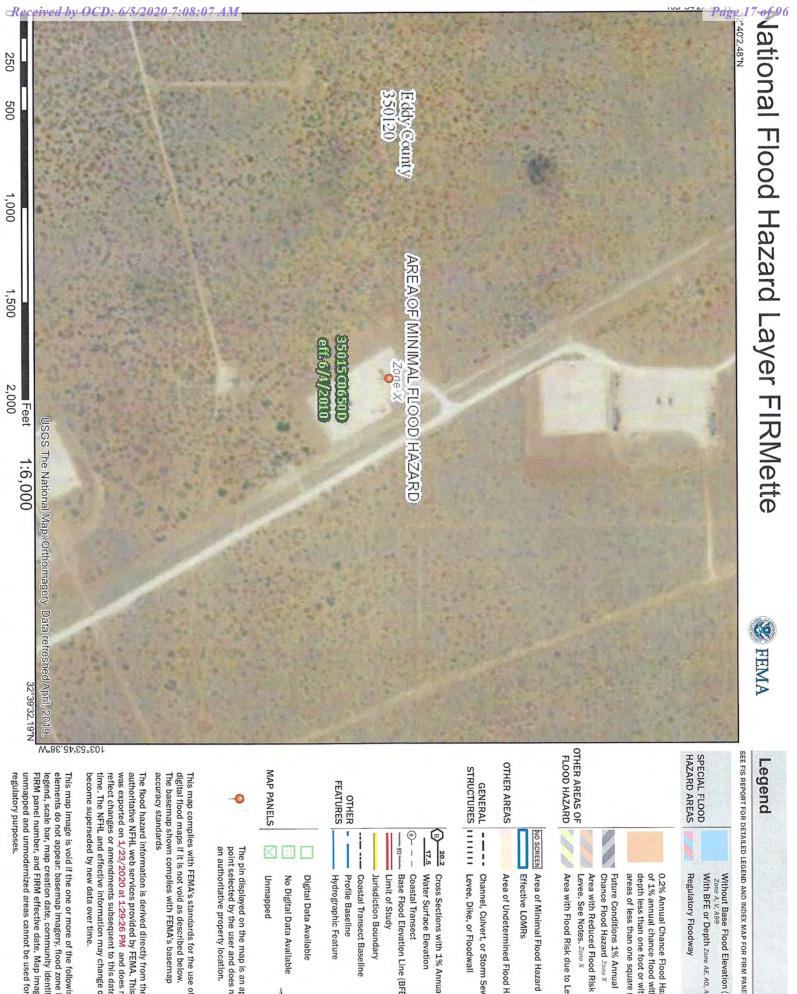
Pajarito

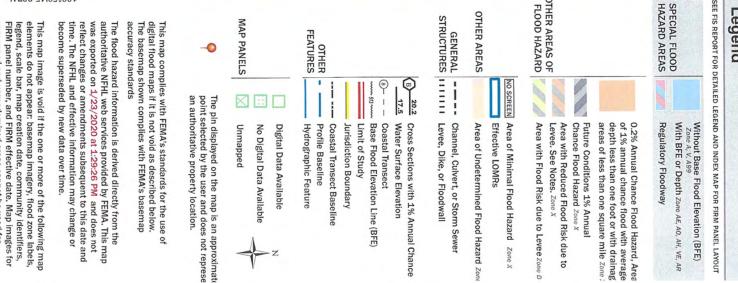
Percent of map unit: 1 percent Ecological site: Loamy Sand (R042XC003NM) Hydric soil rating: No

### **Data Source Information**

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







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# **APPENDIX III**

## FINAL C-141

Received by OCD: 6/5/2020 7:08:07 AM State of New Mexico

**Oil Conservation Division** 

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Incident ID	NRM2014240786
District RP	
Facility ID	1
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?	(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.

Page 3

- Field data
   Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-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.

Received by OCD: 6/5/ Form C-141	2020 7:08:07 AM		Page 20 of 96
Form C-141		Incident ID	NRM2014240786
Page 4	Oil Conservation Division	District RP	
		Facility ID	
		Application ID	
public health or the enviro failed to adequately invest		CD does not relieve the operator of liability should at to groundwater, surface water, human health or	I their operations have the environment. In
OCD Only Received by: Crist	ina Eads	Date: 06/05/2020	

Received by OCD: 6/5/2020 7:08:07 AM Form C-141 State of New Mexico

Oil Conservation Division

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Page	41	0590	U

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: Chris Jones

email: cjones@talonlpe.com

Signature:

Title: Project Manager

Date: 4.2.0

Telephone: 575-748-8768

OCD Only

Received by: Cristina Eads

Date: 06/05/2020

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:	D	E	N	I	Е	D	Autures	Date
			_		_			

Printed Name: Cristina Eads

oate: 08/14/2020

Title: Environmental Specialist

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# **APPENDIX IV**

## PHOTOGRAPHIC DOCUMENTATION

### **Photographic Documentation**



## Photographic Documentation





# APPENDIX V

# LABORATORY DATA

HALL ENVIRONMENTAL ANALYSIS LABORATORY

March 02, 2020 Chris Jones Talon Artesia 408 West Texas Ave Artesia, NM 88210 TEL: FAX:

RE: Arcturus 18 FED 2H

OrderNo.: 2002915

Hall Environmental Analysis Laboratory

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109

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 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,

Inder

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis	Inc.				Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	1	
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-001	Matrix: SOIL	1 0-1' 9/2020 8:00:00 AM 22/2020 9:05:00 AM					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	490	60		mg/Kg	20	2/25/2020 10:06:09 PM	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst:	CLP
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
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
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
EPA METHOD 8021B: VOLATILES						Analyst:	NSR
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

Qualifiers:	*	Value exceeds Maximum Contaminant Level	В	Analyte detected in the associated Method Blank	
The second	D	Sample Diluted Due to Matrix			
			E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 1 of 54
	S	% Recovery outside of range due to dilution or matrix	ALC .	Reporting Linit	1 450 1 01 5 1

Analytical Report

Hall Environmental	Analysis	Laboratory,	Inc.
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Lab Order 2002915 Date Reported: 3/2/2020

CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-002	Client Sample ID: S-1 2' R           Collection Date: 2/19/2020 8:05:00           Matrix: SOIL         Received Date: 2/22/2020 9:05:00					9/2020 8:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	ND	60		mg/Kg	20	2/25/2020 11:07:53 PM	50663
EPA METHOD 8015M/D: DIESEL RANC	SE ORGANICS					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	
EPA METHOD 8015D: GASOLINE RAN	GE					Applyot	NOD

						00041
EPA METHOD 8015D: GASOLINE RANGE					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
EPA METHOD 8021B: VOLATILES					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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 2 of 54
S	S	% Recovery outside of range due to dilution or matrix		stoporting minit	0

Surr: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

Surr: 4-Bromofluorobenzene

EPA METHOD 8021B: VOLATILES

**Analytical Report** 

Hall Environmenta	l Analysis	Laboratory,	Inc.
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Lab Order 2002915

2/27/2020 7:08:16 PM

2/26/2020 12:11:35 AM 50628

2/26/2020 12:11:35 AM 50628

2/26/2020 12:11:35 AM 50628

2/26/2020 12:11:35 AM 50628

2/26/2020 12:11:35 AM

2/26/2020 12:11:35 AM

2/26/2020 12:11:35 AM

50641

50628

50628

50628

Analyst: NSB

Analyst: NSB

Han Environmental Anal	nc.				Date Reported: 3/2/2020	)	
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-003	Matrix: SOIL			on Dat	e: 2/1	2 0-1' 19/2020 8:15:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride	2000	60		mg/Kg	20	Analyst: 2/25/2020 11:20:14 PM	
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS					Analyst:	BRM
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	350 240	9.5 47		mg/Kg mg/Kg	1 1	2/27/2020 7:08:16 PM 2/27/2020 7:08:16 PM	50641 50641

148

ND

79.9

ND

ND

ND

ND

88.7

55.1-146

66.6-105

0.023

0.047

0.047

0.093

80-120

4.7

S

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	F	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded			
	ND		J	Analyte detected below quantitation limits	
		Not Detected at the Reporting Limit	Р	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 3 of 54
	S	% Recovery outside of range due to dilution or matrix			e

Analytical Report

Hall Environmental	Analysis	Laboratory, Inc.	
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Lab Order 2002915 Date Reported: 3/2/2020

CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-004	Matrix: SOIL			n Date	e: 2/1	2 2' 9/2020 8:20:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual U	nits	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	840	60	m	g/Kg	20	2/25/2020 11:32:34 PM	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS			2.2		Analyst:	
Diesel Range Organics (DRO)	ND	9.5	m	g/Kg	1	2/26/2020 11:57:44 AM	
Motor Oil Range Organics (MRO)	ND	47		g/Kg	1	2/26/2020 11:57:44 AM	
Surr: DNOP	96.8	55.1-146	%	Rec	1	2/26/2020 11:57:44 AM	50641
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSR
Gasoline Range Organics (GRO)	ND	5.0	m	g/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	
							SOLU

Gasonne 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	
EPA METHOD 8021B: VOLATILES					Analyst:	NSB	
Benzene	ND	0.025	mg/Kg	1	2/26/2020 12:34:37 AM		
Toluene	ND	0.050	mg/Kg	1	2/26/2020 12:34:37 AM		
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	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	F	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	Ĩ	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	p	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 4 of 54
	S	% Recovery outside of range due to dilution or matrix	ite.	Reporting Ennie	rage i or bi

**Analytical Report** 

Hall Environmenta	l Analysis	Laboratory,	Inc.
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EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

Surr: 4-Bromofluorobenzene

EPA METHOD 8021B: VOLATILES

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Lab Order 2002915 Date Reported: 3/2/2020

2/26/2020 12:21:12 PM 50641

2/26/2020 12:57:40 AM 50628

Analyst: NSB

Analyst: NSB

CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-005	Client Sample ID: S-2 3'           Collection Date: 2/19/2020 8:25:00 AN           Matrix: SOIL         Received Date: 2/22/2020 9:05:00 AN					5
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	JMT
Chloride	980	60	mg/Kg	20	2/25/2020 11:44:55 PM	50663
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				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	
Surr: DNOP	134	55.1-146	%Rec	1	2/26/2020 12:21:12 DM	

134

ND

79.7

ND

ND

ND

ND

89.8

55.1-146

66.6-105

0.024

0.048

0.048

0.096

80-120

4.8

%Rec

mg/Kg

%Rec

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

1

1

1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
and the second	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	Ĩ	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	р	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 5 of 54
	S	% Recovery outside of range due to dilution or matrix	100	coporting Linut	

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: 2002915-006	Matrix: SOIL			ion Dat	e: 2/1	3 0-1' 9/2020 8:35:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride	140	60		malka	20	Analyst:	
EPA METHOD 8015M/D: DIESEL RANGE	1	00		mg/Kg	20	2/25/2020 11:57:15 PM	
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	17 ND 141	9.5 47 55.1-146		mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/26/2020 12:44:37 PM 2/26/2020 12:44:37 PM 2/26/2020 12:44:37 PM	50641 50641
EPA METHOD 8015D: GASOLINE RANGE		- 60 V XQ		101100			50641
Gasoline Range Organics (GRO) Surr: BFB	ND 78.7	4.8 66.6-105		mg/Kg %Rec	1 1	Analyst: 2/26/2020 1:20:40 AM 2/26/2020 1:20:40 AM	<b>NSB</b> 50628 50628
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene Toluene Ethylbenzene Xylenes, Total	ND ND ND ND	0.024 0.048 0.048 0.096		mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1 1	2/26/2020 1:20:40 AM 2/26/2020 1:20:40 AM 2/26/2020 1:20:40 AM 2/26/2020 1:20:40 AM	50628 50628 50628 50628
Surr: 4-Bromofluorobenzene	88.3	80-120		%Rec	1	2/26/2020 1:20:40 AM	50628

Qualifiers:	D H	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	B E	Analyte detected in the associated Method Blank Value above quantitation range	
		Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit	1	Analyte detected below quantitation limits	
	POL	Practical Quanitative Limit	P.	Sample pH Not In Range	Dage ( - CE
		% Recovery outside of range due to dilution or matrix	RL	Reporting Limit	Page 6 of 54

Surr: 4-Bromofluorobenzene

Analytical Report Lab Order 2002915

Hall Environmental	Analysis	Laboratory,	Inc.
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Date Reported: 3/2/2020

CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-007	Matrix: SOIL			te: 2/1	3 2' 19/2020 8:40:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	IMT
Chloride	ND	60	mg/Kg	20	2/26/2020 12:09:36 AM	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst	
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
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	0.00.00
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
EPA METHOD 8021B: VOLATILES						
Benzene	ND	0.024	mg/Kg	1	Analyst:	
Toluene	ND	0.048	mg/Kg	1	2/26/2020 1:43:40 AM 2/26/2020 1:43:40 AM	50628 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 A Bromofluggehause						00020

91.9

80-120

%Rec

1

2/26/2020 1:43:40 AM

50628

<b>Oualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank	
Sec. Constants	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	р	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 7 of 54
	S	% Recovery outside of range due to dilution or matrix		Reporting Emilt	

Hall Environmental Analysis Laboratory, J					Analytical ReportLab Order 2002915Inc.Date Reported: 3/2/2020					
Matrix: SOIL	Client Sample ID: S-3 3' R Collection Date: 2/19/2020 8:45:00 AM Received Date: 2/22/2020 9:05:00 AM									
Result	RL	Qual Units	DF	Date Analyzed	Batch					
ND	60	ma/Ka	20	Contraction of the second s						
EORGANICS		ingrig	20		50663					
ND ND 96.4	9.5 47 55.1-146	mg/Kg mg/Kg %Rec	1 1 1	2/26/2020 1:31:40 PM 2/26/2020 1:31:40 PM	50641 50641					
GE	0.011 - 020	101100			50641					
ND 80.7	4.8 66.6-105	mg/Kg %Rec	1 1	Analyst: 2/26/2020 2:06:39 AM 2/26/2020 2:06:39 AM	NSB 50628 50628					
				Analyst:	NSB					
ND ND ND 91.0	0.024 0.048 0.048 0.095 80-120	mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1 1	2/26/2020 2:06:39 AM 2/26/2020 2:06:39 AM 2/26/2020 2:06:39 AM 2/26/2020 2:06:39 AM	50628 50628 50628 50628 50628					
	Matrix: SOIL Result ND SE ORGANICS ND 96.4 GE ND 80.7 ND 80.7 ND 80.7	Cl Matrix: SOIL Result RL ND 60 SE ORGANICS ND 9.5 ND 47 96.4 55.1-146 GE ND 4.8 80.7 66.6-105 ND 0.024 ND 0.024 ND 0.048 ND 0.048 ND 0.095	Client Sample I Collection Dat Matrix: SOIL Received Dat Result RL Qual Units ND 60 mg/Kg SE ORGANICS ND 9.5 mg/Kg 96.4 55.1-146 %Rec GE ND 4.8 mg/Kg 80.7 66.6-105 %Rec ND 0.024 mg/Kg ND 0.048 mg/Kg	Client Sample ID: S           Collection Date: 2/1           Matrix: SOIL         Received Date: 2/2           Result         RL         Qual         Units         DF           ND         60         mg/Kg         20           SE ORGANICS         ND         9.5         mg/Kg         1           ND         47         mg/Kg         1           96.4         55.1-146         %Rec         1           GE         ND         4.8         mg/Kg         1           MD         0.024         mg/Kg         1           ND         0.024         mg/Kg         1           ND         0.048         mg/Kg         1           ND         0.048         mg/Kg         1           ND         0.095         mg/Kg         1	Lab Order 2002915 Date Reported: 3/2/2020         Client Sample ID: S-3 3' R Collection Date: 2/19/2020 8:45:00 AM Matrix: SOIL         Result       RL Qual       Units       DF       Date Analyzed         ND       60       mg/Kg       20       2/26/2020 1:31:40 PM         SE ORGANICS       Analyst: ND       MD       47       mg/Kg       1       2/26/2020 1:31:40 PM         SE       ND       48       mg/Kg       1       2/26/2020 1:31:40 PM         MD       9.5       mg/Kg       1       2/26/2020 1:31:40 PM         MD       47       mg/Kg       1       2/26/2020 1:31:40 PM         MD       48       mg/Kg       1       2/26/2020 1:31:40 PM         MD       4.8       mg/Kg       1       2/26/2020 1:31:40 PM         MD       4.8       mg/Kg       1       2/26/2020 1:31:40 PM         MD       4.8       mg/Kg       1       2/26/2020 2:06:39 AM         MD       4.8       mg/Kg       1       2/26/2020 2:06:39 AM         MD       0.024       mg/Kg       1       2/26/2020 2:06:39 AM         MD       0.048       mg/Kg       1       2/26/2020 2:06:39 AM         MD       0.048					

Qualifiers:	D Sar H Ho ND No PQL Pra	alue exceeds Maximum Contaminant Level. mple Diluted Due to Matrix Iding times for preparation or analysis exceeded of Detected at the Reporting Limit actical Quanitative Limit Recovery outside of range due to dilution or matrix	B E J P RL	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits Sample pH Not In Range Reporting Limit	Page 8 of 54
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**Analytical Report** 

	С					Lab Order <b>2002915</b> Date Reported: <b>3/2/2020</b>			
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								
Result	RL	Qual	Units	DF	Date Analyzed	Batch			
2500	150		mg/Kg	50	Analyst: 2/27/2020 2:04:04 PM				
ORGANICS 26 ND 91.9	9.0 45 55.1-146		mg/Kg mg/Kg %Rec	1 1	Analyst: 2/28/2020 8:52:55 AM 2/28/2020 8:52:55 AM	50641 50641			
ND 80.5	5.0 66.6-105		mg/Kg %Rec	1 1	Analyst: 2/26/2020 2:29:38 AM	50641 NSB 50628 50628			
ND ND ND ND	0.025 0.050 0.050 0.10		mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1	Analyst: 2/26/2020 2:29:38 AM 2/26/2020 2:29:38 AM 2/26/2020 2:29:38 AM 2/26/2020 2:29:38 AM	A COURT OF			
	2500 DRGANICS 26 ND 91.9 ND 80.5 ND ND ND ND	2500 150 DRGANICS 26 9.0 ND 45 91.9 55.1-146 ND 5.0 80.5 66.6-105 ND 0.025 ND 0.050 ND 0.050 ND 0.10	2500 150 DRGANICS 26 9.0 ND 45 91.9 55.1-146 ND 5.0 80.5 66.6-105 ND 0.025 ND 0.050 ND 0.050 ND 0.10	2500 150 mg/Kg DRGANICS 26 9.0 mg/Kg ND 45 mg/Kg 91.9 55.1-146 %Rec ND 5.0 mg/Kg 80.5 66.6-105 %Rec ND 0.025 mg/Kg ND 0.050 mg/Kg ND 0.050 mg/Kg ND 0.050 mg/Kg ND 0.10 mg/Kg	2500 150 mg/Kg 50 DRGANICS 26 9.0 mg/Kg 1 ND 45 mg/Kg 1 91.9 55.1-146 %Rec 1 ND 5.0 mg/Kg 1 80.5 66.6-105 %Rec 1 ND 0.025 mg/Kg 1 ND 0.050 mg/Kg 1 ND 0.050 mg/Kg 1 ND 0.10 mg/Kg 1	Analyst:           2500         150         mg/Kg         50         2/27/2020 2:04:04 PM           DRGANICS         Analyst:           26         9.0         mg/Kg         1         2/28/2020 8:52:55 AM           ND         45         mg/Kg         1         2/28/2020 8:52:55 AM           91.9         55.1-146         %Rec         1         2/28/2020 8:52:55 AM           ND         45         mg/Kg         1         2/28/2020 8:52:55 AM           91.9         55.1-146         %Rec         1         2/26/2020 2:29:38 AM           ND         5.0         mg/Kg         1         2/26/2020 2:29:38 AM           80.5         66.6-105         %Rec         1         2/26/2020 2:29:38 AM           ND         0.025         mg/Kg         1         2/26/2020 2:29:38 AM           ND         0.050         mg/Kg         1         2/26/2020 2:29:38 AM           ND         0.10         mg/Kg			

D H ND PQL	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix	B E	<u> 2000 10 12 10 10 10 10 10 10 10 10 10 10 10 10 10 </u>		
	ND	the beleered at the Reporting Limit	Р	Analyte detected below quantitation limits Sample pH Not In Range	D 0 00
			RL	Reporting Limit	Page 9 of 54

Hall Environmental Analysi	Inc. Analytical Report Lab Order 2002915 Date Reported: 3/2/2020						
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-010	Matrix: SOIL	Client Sample ID: S-4 2' Collection Date: 2/19/2020 9:05:00 AM Received Date: 2/22/2020 9:05:00 AM					
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS Chloride	72	60			Analyst		
EPA METHOD 8015M/D: DIESEL RANG		00	mg/Kg	20	2/26/2020 1:11:19 AM	50663	
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 119	9.7 48 55.1-146	mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/26/2020 2:18:50 PM 2/26/2020 2:18:50 PM 2/26/2020 2:18:50 PM	50641 50641	
EPA METHOD 8015D: GASOLINE RANG	GE		101100			50641	
Gasoline Range Organics (GRO) Surr: BFB	ND 77.4	4.8 66.6-105	mg/Kg %Rec	1 1	Analyst: 2/26/2020 3:15:31 AM 2/26/2020 3:15:31 AM	NSB 50628 50628	
EPA METHOD 8021B: VOLATILES					Analyst:	NSB	
Benzene Toluene Ethylbenzene	ND ND ND	0.024 0.048 0.048	mg/Kg mg/Kg mg/Kg	1 1 1	2/26/2020 3:15:31 AM 2/26/2020 3:15:31 AM 2/26/2020 3:15:31 AM	50628 50628 50628	
Xylenes, Total Surr: 4-Bromofluorobenzene	ND 87.1	0.096 80-120	mg/Kg %Rec	1 1	2/26/2020 3:15:31 AM 2/26/2020 3:15:31 AM	50628 50628	

Qualifiers:	H ND PQL	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Practical Quanitative Limit % Recovery outside of range due to dilution or matrix	B E J P RL	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits Sample pH Not In Range Reporting Limit	Page 10 of 54
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Hall Environmental Analysi	s Laboratory,	Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	0
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-011	Matrix: SOIL			te: 2/	4 3' 19/2020 9:10:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride	100				Analyst:	
EPA METHOD 8015M/D: DIESEL RANGE	120	60	mg/Kg	20	2/26/2020 1:23:39 AM	50663
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 98.0	9.7 48 55.1-146	mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/26/2020 2:42:21 PM 2/26/2020 2:42:21 PM 2/26/2020 2:42:21 PM	CLP 50641 50641 50641
EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB	E ND 80.7	4.9 66.6-105	mg/Kg %Rec	1	Analyst: 2/26/2020 3:38:23 AM 2/26/2020 3:38:23 AM	
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND ND	0.024 0.049 0.049 0.097	mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1	Analyst: 2/26/2020 3:38:23 AM 2/26/2020 3:38:23 AM 2/26/2020 3:38:23 AM 2/26/2020 3:38:23 AM	NSB 50628 50628 50628 50628

Qualifiers:	PQL	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Practical Quanitative Limit % Recovery outside of range due to dilution or matrix	B E J P RL	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits Sample pH Not In Range Reporting Limit	Page 11 of 54
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**Analytical Report** 

Hall Environmental Analysis	Laboratory,	Inc.			Lab Order 2002915 Date Reported: 3/2/2020	0
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-012	Matrix: SOIL			te: 2/1	4 4' 19/2020 9:15:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride	150	60	mg/Kg	20	Analyst: 2/26/2020 1:36:00 AM	JMT
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS		nigrity	20		50663
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 99.7	9.8 49 55.1-146	mg/Kg mg/Kg	1	Analyst: 2/26/2020 3:05:52 PM 2/26/2020 3:05:52 PM	CLP 50641 50641
EPA METHOD 8015D: GASOLINE RANGE		55.1-140	%Rec	1	2/26/2020 3:05:52 PM	50641
Gasoline Range Organics (GRO) Surr: BFB	ND 78.5	4.7 66.6-105	mg/Kg %Rec	1 1	Analyst: 2/26/2020 4:01:17 AM 2/26/2020 4:01:17 AM	NSB 50628 50628
EPA METHOD 8021B: VOLATILES Benzene					Analyst:	NSB
Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND 89.0	0.024 0.047 0.047 0.095 80-120	mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1 1	2/26/2020 4:01:17 AM 2/26/2020 4:01:17 AM 2/26/2020 4:01:17 AM 2/26/2020 4:01:17 AM	50628 50628 50628 50628
	00.0	00-120	%Rec	1	2/26/2020 4:01:17 AM	50628

Qu	alifiers:	*	Value exceeds Maximum Contaminant Level.	D		
		D	Sample Diluted Due to Matrix	В	Analyte detected in the associated Method Blank	
				E	Value above quantitation range	
		1.11	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits	
		ND	Not Detected at the Reporting Limit			
			Practical Quanitative Limit	P	Sample pH Not In Range	and the set of the set
				RL	Reporting Limit	Page 12 of 54
		3	% Recovery outside of range due to dilution or matrix			

Hall Environmental An	alysis Laboratory,	Inc.				Analytical Report Lab Order 2002915 Date Reported: 3/2/202	0
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-013	Matrix: SOIL		Collect		te: 2/1	5 0-1' 19/2020 9:25:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL	ND	60		mg/Kg	20	Analyst: 2/26/2020 1:48:21 AM	<b>JMT</b> 50663
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	RANGE ORGANICS ND ND 126	9.7 48 55.1-146		mg/Kg mg/Kg %Rec	1	Analyst: 2/26/2020 3:29:31 PM 2/26/2020 3:29:31 PM	50641 50641
EPA METHOD 8015D: GASOLINE Gasoline Range Organics (GRO) Surr: BFB	ND 78.6	4.6 66.6-105		mg/Kg %Rec	1	2/26/2020 3:29:31 PM Analyst: 2/26/2020 4:24:11 AM 2/26/2020 4:24:11 AM	50641 NSB 50628 50628
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total	S ND ND ND ND	0.023 0.046 0.046 0.092		mg/Kg mg/Kg mg/Kg	1 1 1	Analyst: 2/26/2020 4:24:11 AM 2/26/2020 4:24:11 AM 2/26/2020 4:24:11 AM	NSB 50628 50628 50628
Surr: 4-Bromofluorobenzene	88.4	80-120		mg/Kg %Rec	1 1	2/26/2020 4:24:11 AM 2/26/2020 4:24:11 AM	50628 50628

Qualifiers:	ND PQL	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Practical Quanitative Limit	B E J P RL	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits Sample pH Not In Range Reporting Limit	Page 13 of 54
	s	% Recovery outside of range due to dilution or matrix			1 age 15 01 54

Hall Environmental Analysis	Laboratory,	Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	0
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-014	Matrix: SOIL			te: 2/1	5 2' 19/2020 9:30:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANGE (	65	60	mg/Kg	20	Analyst: 2/26/2020 11:42:43 AM	<b>JMT</b> 50687
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 93.8	9.3 46 55.1-146	mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/26/2020 3:53:05 PM 2/26/2020 3:53:05 PM 2/26/2020 3:53:05 PM	CLP 50641 50641 50641
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	ND 79.7	4.7 66.6-105	mg/Kg %Rec	1 1	Analyst: 2/26/2020 4:47:03 AM 2/26/2020 4:47:03 AM	
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND	0.023 0.047 0.047 0.093	mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1	0.000.00000	NSB 50628 50628 50628 50628
	91.1	80-120	%Rec	1	0.00.0000	50628

Qualifiers:	*	Value and 1 M 1			1232000000000
Quanners:	-	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix		malyte detected in the associated Method Blank	
	H	Holding times for preparation or analysis exceeded	E	Value above quantitation range	
	ND	Not Detected at the Reporting Limit	1	Analyte detected below quantitation limits	
	POL	Post of October of Control of Con	Р	Sample pH Not In Range	
	A 10	Practical Quanitative Limit	RL.	Reporting Limit	Page 14 of 54
	S	% Recovery outside of range due to dilution or matrix	KL.	Reporting Limit	1 age 14 01 34

Hall Environmental Analysis	Laboratory,	Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	0
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-015	Matrix: SOIL			te: 2/	5 3' 19/2020 9:35:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride	110	60	mg/Kg	20	Analyst: 2/26/2020 12:19:46 PM	<b>JMT</b> 50687
EPA METHOD 8015M/D: DIESEL RANGE ( Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	DRGANICS ND ND	10 50	mg/Kg mg/Kg	1	Analyst: 2/26/2020 4:40:18 PM 2/26/2020 4:40:18 PM	
EPA METHOD 8015D: GASOLINE RANGE	94.6	55.1-146	%Rec	1	2/26/2020 4:40:18 PM	50641
Gasoline Range Organics (GRO) Surr: BFB	ND 80.9	4.6 66.6-105	mg/Kg %Rec	1 1	Analyst: 2/26/2020 1:44:35 PM 2/26/2020 1:44:35 PM	NSB 50628 50628
EPA METHOD 8021B: VOLATILES Benzene Toluene	ND ND	0.023	mg/Kg	1	Analyst: 2/26/2020 1:44:35 PM	50628
Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND	0.046 0.093	mg/Kg mg/Kg mg/Kg	1 1 1	2/26/2020 1:44:35 PM 2/26/2020 1:44:35 PM 2/26/2020 1:44:35 PM	50628 50628 50628
oun + Bromondorobenzene	90.6	80-120	%Rec	1	2/26/2020 1:44:35 PM	5062

Qualifiers:	D H	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded	B E I	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits	
	PQL	Not Detected at the Reporting Limit Practical Quanitative Limit % Recovery outside of range due to dilution or matrix	P RL	Sample pH Not In Range Reporting Limit	Page 15 of 54

Analytical Report

Hall Environmental Analysis Lal	poratory, Inc.
CLIENT: Talon Artesia	Client Samaly H

Lab Order 2002915 Date Reported: 3/2/2020

CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-016	Client Sample ID: S-5 4'           Collection Date: 2/19/2020 9:40:00           Matrix: SOIL         Received Date: 2/22/2020 9:05:00						
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS				-			
Chloride	120	60	mg/Kg	20	Analyst: 2/26/2020 12:32:08 PM	JMT 50687	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analyst:		
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	ND ND	9.5 47	mg/Kg	1	2/26/2020 5:03:58 PM	50641	
Surr: DNOP	88.7	55.1-146	mg/Kg %Rec	1	2/26/2020 5:03:58 PM	50641	
EPA METHOD 8015D: GASOLINE RANGE		00.1 140	76Rec	1	2/26/2020 5:03:58 PM	50641	
Gasoline Range Organics (GRO) Surr: BFB	ND 85.0	4.9 66.6-105	mg/Kg %Rec	1	Analyst: 2/26/2020 2:08:00 PM	50628	
EPA METHOD 8021B: VOLATILES		10.010	101100	4	2/26/2020 2:08:00 PM	50628	
Benzene	ND	0.004	0		Analyst:	NSB	
Toluene	ND	0.024	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		0.049	mg/Kg	1		50628	
Surr: 4-Bromofluorobenzene	ND 94.4	0.097 80-120	mg/Kg %Rec	1 1	0.000	50628 50628	

0.110		101 C C C C C C C C C C C C C C C C C C		1	ormation.
Qualifiers:	*	Value exceeds Maximum Contaminant Level,	D	Analysis dataset to the second	
	D	Sample Diluted Due to Matrix	Б	Analyte detected in the associated Method Blank	
			E	Value above quantitation range	
		Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	D		
	POL	L Practical Quanitative Limit	P	Sample pH Not In Range	
			RL	Reporting Limit	Page 16 of 54
	3	% Recovery outside of range due to dilution or matrix			

Hall Environmental Analysis	Laboratory,	Inc.			G,	Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	0
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-017	Client Sample ID: S-6 0-1'						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANGE O		60		mg/Kg	20	Analyst: 2/26/2020 12:44:29 PM	50687
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	3500 13000 0	940 4700 55.1-146	S	mg/Kg mg/Kg %Rec		Analyst: 2/27/2020 7:30:12 PM 2/27/2020 7:30:12 PM 2/27/2020 7:30:12 PM	<b>BRM</b> 50641 50641 50641
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB	ND 79.3	4.8 66.6-105		mg/Kg %Rec	1 1	Analyst: 2/26/2020 2:31:29 PM 2/26/2020 2:31:29 PM	
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND	0.024 0.048 0.048 0.096		mg/Kg mg/Kg mg/Kg mg/Kg	1 1	2/26/2020 2:31:29 PM	NSB 50628 50628 50628 50628
	88.2	80-120		%Rec	1	2/26/2020 2:31:29 PM	5062

Qualifiers;	<ul> <li>Value exceeds Maximum Contaminant Level.</li> <li>Sample Diluted Due to Matrix</li> <li>Holding times for preparation or analysis exceeded</li> <li>Not Detected at the Reporting Limit</li> <li>Practical Quanitative Limit</li> <li>% Recovery outside of range due to dilution or matrix</li> </ul>	<ul> <li>B Analyte detected in the associated Method Blank</li> <li>E Value above quantitation range</li> <li>J Analyte detected below quantitation limits</li> <li>P Sample pH Not In Range</li> <li>RL Reporting Limit</li> </ul>	Page 17 of 54
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Laboratory	, Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/202	0
Matrix: SOIL	6 2' 19/2020 9:55:00 AM				
Result	RL	Qual Units	DF	Date Analyzed	Batch
63	60	mg/Kg	20	Analyst: 2/26/2020 1:21:31 PM	<b>JMT</b> 50687
ND ND 94.6	9.2 46 55.1-146	mg/Kg mg/Kg %Pag	1 1 1	Analyst: 2/27/2020 7:52:04 PM 2/27/2020 7:52:04 PM	50641 50641
ND 82.2	4.8 66.6-105	mg/Kg %Rec	1 1 1	2/27/2020 7:52:04 PM Analyst: 2/26/2020 2:54:59 PM 2/26/2020 2:54:59 PM	50641 NSB 50628 50628
ND ND ND 89,2	0.024 0.048 0.048 0.096 80-120	mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1	Analyst: 2/26/2020 2:54:59 PM 2/26/2020 2:54:59 PM 2/26/2020 2:54:59 PM	
	Matrix: SOIL Result 63 ORGANICS ND 94.6 ND 94.6 ND 82.2 ND 82.2 ND 82.2	Matrix: SOIL         Result         RL           63         60           ORGANICS         00           ND         9.2           ND         46           94.6         55.1-146           S         66.6-105           ND         0.024           ND         0.048           ND         0.048	Client Sample I Collection Dat Matrix: SOIL Received Dat Result RL Qual Units 63 60 mg/Kg 63 60 mg/Kg 0RGANICS ND 9.2 mg/Kg ND 46 mg/Kg 94.6 55.1-146 %Rec ND 4.8 mg/Kg 82.2 66.6-105 %Rec ND 0.024 mg/Kg ND 0.048 mg/Kg ND 0.048 mg/Kg	Client Sample ID: S- Collection Date: 2/1           Matrix: SOIL         Received Date: 2/2           Result         RL         Qual         Units         DF           63         60         mg/Kg         20           ORGANICS         ND         9.2         mg/Kg         1           ND         46         mg/Kg         1           94.6         55.1-146         %Rec         1           ND         4.8         mg/Kg         1           ND         4.8         mg/Kg         1           ND         4.8         mg/Kg         1           ND         0.024         mg/Kg         1           ND         0.048         mg/Kg         1	Laboratory, Inc.       Lab Order 2002915         Date Reported: 3/2/202         Client Sample ID: S-6 2'         Collection Date: 2/19/2020 9:55:00 AM         Matrix: SOIL       Received Date: 2/2/2020 9:05:00 AM         Result       RL       Qual       Units       DF       Date Analyzed         63       60       mg/Kg       20       2/26/2020 1:21:31 PM         63       60       mg/Kg       1       2/27/2020 7:52:04 PM         94.6       55:1-146       %Rec       1       2/27/2020 7:52:04 PM         94.6       55:1-146       %Rec       1       2/26/2020 2:54:59 PM         ND       4.8       mg/Kg       1       2/26/2020 2:54:59 PM         ND       0.024       mg/Kg       1       2/26/2020 2:54:59 PM         ND       0.048       mg/Kg       1

alifiers:	<ul> <li>Value exceeds Maximum Contaminant Level.</li> <li>D Sample Diluted Due to Matrix</li> </ul>	B Analyte detected in the associated Method Blank	Simation.
	H Holding times for preparation or analysis exceeded	E Value above quantitation range	
	ND Not Detected at the Reporting Limit QL Practical Quanitative Limit	J Analyte detected below quantitation limits P Sample pH Not In Range	
	S % Recovery outside of range due to dilution or matrix	RL Reporting Limit	Page 18 of 54
	Communicative comme	RL Reporting Limit	

Analytical Report Lab Order 2002915

Hall Environmental A	nalysis	Laboratory,	Inc.

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

Qualifiers: * D H NI PQ S	Not Detected at the Reporting Limit	<ul> <li>B Analyte detected in the associated Method Blank</li> <li>E Value above quantitation range</li> <li>J Analyte detected below quantitation limits</li> <li>P Sample pH Not In Range</li> <li>RL Reporting Limit</li> </ul>	Page 19 of 54
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Hall Environmental Analys	is Laboratory,	Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	0		
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-020	Client Sample ID: S-7 0-1'           Collection Date: 2/19/2020 10:10:00 AM           Matrix: SOIL         Received Date: 2/22/2020 9:05:00 AM							
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS Chloride	74	60	mg/Kg		Analyst: 2/26/2020 1:46:13 PM			
EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	E ORGANICS 17 ND 135	9.5 48 55.1-146	mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/26/2020 6:37:50 PM 2/26/2020 6:37:50 PM 2/26/2020 6:37:50 PM	50641 50641		
EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB	<b>GE</b> ND 78.7	4.9 66.6-105	mg/Kg %Rec	1	Analyst: 2/26/2020 3:41:45 PM 2/26/2020 3:41:45 PM	50641 NSB 50630 50630		
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND ND 87.0	0.025 0.049 0.049 0.099 80-120	mg/Kg mg/Kg mg/Kg %Rec	1 1 1 1	Analyst: 2/26/2020 3:41:45 PM 2/26/2020 3:41:45 PM 2/26/2020 3:41:45 PM 2/26/2020 3:41:45 PM	199555		

Qualifiers:	* H ND PQL S	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Practical Quanitative Limit % Recovery outside of range due to dilution or matrix	B E J P RL	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits Sample pH Not In Range Reporting Limit	Page 20 of 54
	5	a Recovery outside of range due to dilution or matrix			0.000

Hall Environmental Analys	is Laboratory,	Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/202	0
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				
Analyses	Result	RL	Qual Unit	s DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG	ND	60	mg/k	g 20	Analyst 2/26/2020 2:23:15 PM	JMT 50687
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 95.0	9.8 49 55.1-146	mg/k mg/k %Re	g 1	Analyst: 2/26/2020 7:47:46 PM 2/26/2020 7:47:46 PM 2/26/2020 7:47:46 PM	CLP 50642 50642 50642
EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB	<b>GE</b> ND 83.9	5.0 66.6-105	mg/K %Red	•	Analyst: 2/26/2020 4:52:07 PM 2/26/2020 4:52:07 PM	
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND 92.9	0.025 0.050 0.050 0.099 80-120	mg/K mg/K mg/K mg/K %Rec	1 1 1 1 1 1	Analyst: 2/26/2020 4:52:07 PM 2/26/2020 4:52:07 PM 2/26/2020 4:52:07 PM 2/26/2020 4:52:07 PM 2/26/2020 4:52:07 PM	NSB 50630 50630 50630 50630

Qualifiers:	D H ND PQL	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Practical Quanitative Limit % Recovery outside of range due to dilution or matrix	B E J P RL	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits Sample pH Not In Range Reporting Limit	Page 21 of 54
	3	76 Recovery outside of range due to dilution or matrix			

Hall Environmental Analysis	Inc.				Analytical Report Lab Order 2002915 Date Reported: 3/2/202	0	
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-022	Matrix: SOIL	Client Sample ID: S-7 3' Collection Date: 2/19/2020 10:20:00 AM Received Date: 2/22/2020 9:05:00 AM					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride	ND	60		mg/Kg	20	Analyst 2/26/2020 2:35:36 PM	<b>JMT</b> 50687
EPA METHOD 8015M/D: DIESEL RANGE ( Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	DRGANICS ND ND 93.3	9.2 46 55.1-146		mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/26/2020 8:57:30 PM 2/26/2020 8:57:30 PM 2/26/2020 8:57:30 PM	CLP 50642 50642 50642
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB	ND 82.4	4.8 66.6-105		mg/Kg %Rec	1 1	Analyst: 2/26/2020 6:01:50 PM 2/26/2020 6:01:50 PM	
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND ND	0.024 0.048 0.048 0.097		mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1 1	Analyst: 2/26/2020 6:01:50 PM 2/26/2020 6:01:50 PM 2/26/2020 6:01:50 PM 2/26/2020 6:01:50 PM	NSB 50630 50630 50630 50630
	91.9	80-120		%Rec	1	2/26/2020 6:01:50 PM	50630

Qualifiers:       *       Value exceeds Maximum Contaminant Level.         D       Sample Diluted Due to Matrix         H       Holding times for preparation or analysis exceeded         ND       Not Detected at the Reporting Limit.         PQL       Practical Quanitative Limit         S       % Recovery outside of range due to dilution or matrix	B Analyte detected in the associated Method Blank E Value above quantitation range J Analyte detected below quantitation limits P Sample pH Not In Range RL Reporting Limit Page 22 of 54
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Hall Environmental Analysis	Laboratory	, Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	0	
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					
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANGE	61	60	mg/Kg	20	Analyst: 2/26/2020 2:47:57 PM	<b>JMT</b> 50687	
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 97.1	9.0 45 55.1-146	mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/26/2020 9:20:42 PM 2/26/2020 9:20:42 PM 2/26/2020 9:20:42 PM	CLP 50642 50642 50642	
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	ND 78.2	4.7 66.6-105	mg/Kg %Rec	1 1	Analyst: 2/26/2020 7:35:19 PM 2/26/2020 7:35:19 PM	10 F F 1 F	
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND 86.8	0.023 0.047 0.047 0.094 80-120	mg/Kg mg/Kg mg/Kg mg/Kg %Rec	1 1 1 1	2/26/2020 7:35:19 PM 2/26/2020 7:35:19 PM 2/26/2020 7:35:19 PM	NSB 50630 50630 50630 50630 50630	

Qualifiers:       *       Value exceeds Maximum Contaminant Level.         D       Sample Diluted Due to Matrix         H       Holding times for preparation or analysis exceeded         ND       Not Detected at the Reporting Limit         PQL       Practical Quanitative Limit         S       % Recovery outside of range due to dilution or matrix	B       Analyte detected in the associated Method Blank         E       Value above quantitation range         J       Analyte detected below quantitation limits         P       Sample pH Not In Range         RL       Reporting Limit    Page 23 of 54
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Hall Environmental Analysis	Inc.				Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	0	
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					
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride	ND	60		mg/Kg	20	Analyst: 2/26/2020 3:00:18 PM	<b>JMT</b> 50687
EPA METHOD 8015M/D: DIESEL RANGE ( Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	DRGANICS ND ND 125	10 50 55.1-146		mg/Kg mg/Kg %Rec	1	Analyst: 2/26/2020 9:43:55 PM 2/26/2020 9:43:55 PM	50642 50642
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB	ND 78.7	5.0 66.6-105	r	mg/Kg %Rec	1	2/26/2020 9:43:55 PM Analyst: 2/26/2020 7:58:40 PM	50630
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene	ND ND ND	0.025 0.050 0.050	r	ng/Kg ng/Kg ng/Kg	1 1 1	0/00/0000	50630 NSB 50630 50630 50630
Xylenes, Total Surr: 4-Bromofluorobenzene	ND 87.6	0.099 80-120		ng/Kg 6Rec	1 1	2/26/2020 7:58:40 PM	50630 50630

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.			
Quantiti's.			В	Analyte detected in the associated Method Blank	
		Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	T		
	ND	Not Detected at the Reporting Limit	- -	Analyte detected below quantitation limits	
	PQL	Practical Quanitative Limit	F	Sample pH Not In Range	
		% Recovery outside of range due to dilution or matrix	RL	Reporting Limit	Page 24 of 54

Hall Environmental Analysis	Laboratory,	Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/202	0
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-025	Client Sample ID: S-8 2'           Collection Date: 2/19/2020 10:40:00 AM           Matrix: SOIL         Received Date: 2/22/2020 9:05:00 AM					
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANGE	ND	60	mg/Kg	20	Analyst 2/26/2020 3:12:39 PM	<b>JMT</b> 50687
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 95.8	10 50 55.1-146	mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/26/2020 10:07:05 PM 2/26/2020 10:07:05 PM 2/26/2020 10:07:05 PM	CLP 50642 50642 50642
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	ND 81.2	4.7 66.6-105	mg/Kg %Rec	1 1	Analyst: 2/26/2020 8:22:04 PM 2/26/2020 8:22:04 PM	NSB 50630 50630
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND 90.7	0.023 0.047 0.047 0.094 80-120	mg/Kg mg/Kg mg/Kg mg/Kg %Rec	1 1 1 1	Analyst: 2/26/2020 8:22:04 PM 2/26/2020 8:22:04 PM 2/26/2020 8:22:04 PM 2/26/2020 8:22:04 PM 2/26/2020 8:22:04 PM	NSB 50630 50630 50630 50630 50630

					or a contraction of the
Qualifiers:	*	Value exceeds Maximum Contaminant Level.			
	D	Sample Diluted Due to Matrix	в	Analyte detected in the associated Method Blank	
			E	Value above quantitation range	
	11	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	D		
	PQL	Practical Quanitative Limit	P	Sample pH Not In Range	Land State March
	S	% Recovery outside of range due to dilution or matrix	RL	Reporting Limit	Page 25 of 54

is Laboratory,	Inc.			Analytical Report Lab Order 2002915 Date Reported: 3/2/202	0	
Matrix: SOIL	Client Sample ID: S-8 3' Collection Date: 2/19/2020 10:45:					
Result	RL	Qual Units	5 DF	Date Analyzed	Batch	
ND	60	mg/K	g 20		-	
ND ND	9.5 47	mg/K	g 1	Analyst: 2/26/2020 10:53:26 PM 2/26/2020 10:53:26 PM		
SE	4.9	mg/Kg	. 1	Analyst: 2/26/2020 8:45:27 PM	50642 <b>NSB</b> 50630	
ND ND ND ND	0.025 0.049 0.049 0.099	mg/Kg mg/Kg	1 1 1		50630 NSB 50630 50630 50630 50630	
	Matrix: SOIL Result ND E ORGANICS ND 96.3 SE ND 78.7 ND 78.7 ND ND ND ND ND	Matrix: SOIL         Result         RL           ND         60           E ORGANICS         ND         9.5           ND         9.5         ND         47           96.3         55.1-146         55           SE         ND         4.9           78.7         66.6-105         ND         0.049           ND         0.049         ND         0.049	Client Sample Collection D Matrix: SOIL Received D Result RL Qual Units ND 60 mg/Kg ND 9.5 mg/Kg 96.3 55.1-146 %Rec 96.3 55.1-146 %Rec SE ND 4.9 mg/Kg 78.7 66.6-105 %Rec ND 0.025 mg/Kg ND 0.049 mg/Kg ND 0.049 mg/Kg	Client Sample ID: S- Collection Date: 2// Received Date: 2// Received Date: 2//           Matrix: SOIL         Received Date: 2//           Result         RL         Qual         Units         DF           ND         60         mg/Kg         1           ND         9.5         mg/Kg         1           ND         47         mg/Kg         1           96.3         55.1-146         %Rec         1           SE         ND         4.9         mg/Kg         1           ND         4.9         mg/Kg         1           ND         4.9         mg/Kg         1           ND         4.9         mg/Kg         1           ND         0.025         mg/Kg         1           ND         0.049         mg/Kg         1           ND         0.049         mg/Kg         1           ND         0.049         mg/Kg         1	Lab Order 2002915         Date Reported: 3/2/202         Client Sample ID: S-8 3'         Collection Date: 2/19/2020 10:45:00 AM         Matrix: SOIL       Received Date: 2/22/2020 9:05:00 AM         Result       RL       Qual       Units       DF       Date Analyzed         ND       60       mg/Kg       20       2/26/2020 3:49:40 PM         ND       60       mg/Kg       1       2/26/2020 10:53:26 PM         ND       9.5       mg/Kg       1       2/26/2020 10:53:26 PM         ND       47       mg/Kg       1       2/26/2020 10:53:26 PM         96.3       55.1-146       %Rec       1       2/26/2020 10:53:26 PM         MD       4.9       mg/Kg       1       2/26/2020 10:53:26 PM         MD       4.9       mg/Kg       1       2/26/2020 8:45:27 PM         MD       4.9       mg/Kg       1       2/26/2020 8:45:27 PM         MD       0.025       mg/Kg       1       2/26/2020 8:45:27 PM         ND       0.049       mg/Kg       1       2/26/2020 8:45:27 PM         ND       0.049       mg/Kg       1       2/26/2020 8:45:27 PM         ND       0.049<	

*	Value grande M.			
-	value exceeds Maximum Contaminant Level.	В	Analyte detected in the according of Mather U.D.L. V.	
D	Sample Diluted Due to Matrix	F	statistic detected in the associated Method Blank	
H	Holding times for preparation or analysis and the	E		
ND	Not Detected at the Presenting Lines	1	Analyte detected below quantitation limits	
		P		
		RI		Page 26 of 54
S	% Recovery outside of range due to dilution or matrix	NO.	Reporting Linit	1 age 20 01 54
	D H ND PQL	a store de la che reporting Limit	D     Sample Diluted Due to Matrix     E       H     Holding times for preparation or analysis exceeded     J       ND     Not Detected at the Reporting Limit     P       PQL     Practical Quantitative Limit     P	D     Sample Diluted Due to Matrix     D     Manye detected in the associated Method Blank       H     Holding times for preparation or analysis exceeded     D     Not Detected at the Reporting Limit       PQL     Practical Quanitative Limit     P     Sample pH Not In Range

atrix: SOIL Result		Collect	tion Dat							
Result			veu Dat		Client Sample ID: S-8 4' Collection Date: 2/19/2020 10:50:00 AM Received Date: 2/22/2020 9:05:00 AM					
	RL	Qual	Units	DF	Date Analyzed	Batch				
ND SANICS	60		mg/Kg	20	Analyst: 2/26/2020 4:02:02 PM Analyst:	50687				
ND ND 99.0	9.2 46 55.1-146		mg/Kg mg/Kg %Rec	1 1 1	2/26/2020 11:16:38 PM 2/26/2020 11:16:38 PM 2/26/2020 11:16:38 PM	50642 50642 50642				
ND 79.3	4.9 66.6-105		mg/Kg %Rec	1 1	Analyst: 2/26/2020 9:08:48 PM 2/26/2020 9:08:48 PM	NSB 50630 50630				
ND ND ND ND	0.025 0.049 0.049 0.098		mg/Kg mg/Kg mg/Kg mg/Kg	1 1 1 1	2/26/2020 9:08:48 PM	NSB 50630 50630 50630 50630				
	ND 99.0 ND 79.3 ND ND ND	ND         9.2           ND         46           99.0         55.1-146           ND         4.9           79.3         66.6-105           ND         0.025           ND         0.049           ND         0.049           ND         0.098	ND         9.2           ND         46           99.0         55.1-146           ND         4.9           79.3         66.6-105           ND         0.025           ND         0.049           ND         0.049           ND         0.098	ND         9.2         mg/Kg           ND         46         mg/Kg           99.0         55.1-146         %Rec           ND         4.9         mg/Kg           79.3         66.6-105         %Rec           ND         0.025         mg/Kg           ND         0.049         mg/Kg           ND         0.098         mg/Kg	ND         9.2         mg/Kg         1           ND         46         mg/Kg         1           99.0         55.1-146         %Rec         1           ND         4.9         mg/Kg         1           ND         4.9         mg/Kg         1           79.3         66.6-105         %Rec         1           ND         0.025         mg/Kg         1           ND         0.049         mg/Kg         1           ND         0.049         mg/Kg         1           ND         0.098         mg/Kg         1	ND         9.2         mg/Kg         1         2/26/2020 11:16:38 PM           ND         46         mg/Kg         1         2/26/2020 11:16:38 PM           99.0         55.1-146         %Rec         1         2/26/2020 11:16:38 PM           99.0         55.1-146         %Rec         1         2/26/2020 11:16:38 PM           MD         4.9         mg/Kg         1         2/26/2020 9:08:48 PM           79.3         66.6-105         %Rec         1         2/26/2020 9:08:48 PM           79.3         66.6-105         %Rec         1         2/26/2020 9:08:48 PM           ND         0.025         mg/Kg         1         2/26/2020 9:08:48 PM           ND         0.049         mg/Kg         1         2/26/2020 9:08:48 PM           ND         0.098         mg/Kg         1         2/26/2020 9:08:48 PM				

Qualifiers:	PQL	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Practical Quanitative Limit % Recovery outside of range due to dilution or matrix	B E J P RL	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits Sample pH Not In Range Reporting Limit	Page 27 of 54
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Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

Hall Environmental Analysis	Laboratory,	Inc.				Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	0
CLIENT:Talon ArtesiaProject:Arcturus 18 FED 2HLab ID:2002915-028	Matrix: SOIL		Collect		te: 2/1	9 0-1' 19/2020 10:55:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANGE (	120 ORGANICS	60		mg/Kg	20	Analyst: 2/26/2020 4:14:23 PM	<b>JMT</b> 50687
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	290 210 127	9.3 47 55.1-146		mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/27/2020 8:14:02 PM 2/27/2020 8:14:02 PM 2/27/2020 8:14:02 PM	BRM 50642 50642 50642
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	ND 79.8	4.8 66.6-105		mg/Kg %Rec	1 1	Analyst: 2/26/2020 9:32:07 PM 2/26/2020 9:32:07 PM	NSB 50630 50630
Benzene	ND	0.024		mg/Kg	1	Analyst: 2/26/2020 9:32:07 PM	NSB

ND

ND

ND

89.5

0.048

0.048

0.096

80-120

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

2/26/2020 9:32:07 PM

50630

50630

50630

50630

50630

Qualifiers:	*	Value exceeds Maximum Contaminant Level.			- A_A		
and and and a set	D	Sample Diluted Due to Matrix	В	Analyte detected in the associated Method Blank			
			E	Value above quantitation range			
		Holding times for preparation or analysis exceeded		Analyte detected below quantitation limits			
		Not Detected at the Reporting Limit	P				
		Practical Quanitative Limit % Recovery outside of range due to dilution or matrix		Sample pH Not In Range	Page 28 of 54		
			RL	Reporting Limit			

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

Analytical Report Lab Order 2002915

2/26/2020 9:55:23 PM

50630

50630

50630

50630

50630

Hall Environmental Analysis			Lab Order 2002915 Date Reported: 3/2/2020				
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-029	Matrix: SOIL			ion Dat	e: 2/		
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANGE	530 ORGANICS	60		mg/Kg	20	Analyst 2/26/2020 4:26:44 PM	50687
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 96.7	10 50 55.1-146	6 m ()	mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/27/2020 12:02:56 AM 2/27/2020 12:02:56 AM 2/27/2020 12:02:56 AM	50642 50642
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB	ND 79.3	4.9 66.6-105		mg/Kg %Rec	1	Analyst: 2/26/2020 9:55:23 PM 2/26/2020 9:55:23 PM	NSB 50630 50630
EPA METHOD 8021B: VOLATILES Benzene	ND	0.024			2	Analyst:	NSB

ND

ND

ND

ND

89.1

0.024

0.049

0.049

0.097

80-120

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%Rec

1

1

1

1

1

Owner	*	17.1			S232 3.135 5.11
Qualifiers:	÷.	Value exceeds Maximum Contaminant Level.	В	4	
	D	Sample Diluted Due to Matrix	Б	Analyte detected in the associated Method Blank	
			E	Value above quantitation range	
	NID	Holding times for preparation or analysis exceeded		Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	D		
		Practical Quanitative Limit	P	Sample pH Not In Range	and the second as a second
		% Recovery outside of range due to dilution or matrix	RL	Reporting Limit	Page 29 of 54

Xylenes, Total

Surr: 4-Bromofluorobenzene

**Analytical Report** Lab Order 2002915

2/26/2020 10:18:39 PM 50630

2/26/2020 10:18:39 PM 50630

2/26/2020 10:18:39 PM 50630

mg/Kg

%Rec

1

1

Hall Environmental Analysis	Laboratory,	Inc.			Lab Order 2002915 Date Reported: 3/2/2020	)
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-030	Matrix: SOIL			te: 2/1	9 3' R 19/2020 11:05:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANGE	950	60	mg/Kg	20	Analyst: 2/26/2020 4:39:05 PM	<b>JMT</b> 50687
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND ND 97.0	10 50 55.1-146	mg/Kg mg/Kg %Rec	1 1 1	Analyst: 2/27/2020 12:26:02 AM 2/27/2020 12:26:02 AM 2/27/2020 12:26:02 AM	CLP 50642 50642 50642
EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB	ND 76.8	4.9 66.6-105	mg/Kg %Rec	1	Analyst: 2/26/2020 10:18:39 PM 2/26/2020 10:18:39 PM	NSB 50630 50630
EPA METHOD 8021B: VOLATILES Benzene Toluene	ND ND	0.025 0.049	mg/Kg mg/Kg	1	Analyst: 2/26/2020 10:18:39 PM	
Ethylbenzene Xvlenes Totol	ND	0.049	mg/Kg	1	0.000.0000	50630

ND

86.5

0.099

80-120

Qualifiers:	D H ND PQL	Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Practical Quanitative Limit % Recovery outside of range due to dilution or matrix	B E J P RL	Analyte detected in the associated Method Blank Value above quantitation range Analyte detected below quantitation limits Sample pH Not In Range Reporting Limit	Page 30 of 54
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Hall Environmental Anal	ysis 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			ion Dat	te: 2/1	10 0-1' 19/2020 11:15:00 AM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS Chloride	2600	150		mg/Kg	50	Analyst: 2/27/2020 2:16:25 PM	-
EPA METHOD 8015M/D: DIESEL RA Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	NGE ORGANICS 37 56 115	9.9 49 55.1-146		mg/Kg mg/Kg	1	Analyst: 2/27/2020 12:49:08 AM 2/27/2020 12:49:08 AM	10000
EPA METHOD 8015D: GASOLINE RA Gasoline Range Organics (GRO) Surr: BFB		4.8		%Rec mg/Kg %Rec	1 1 1		50630
EPA METHOD 8021B: VOLATILES Benzene Toluene	ND ND	0.024		mg/Kg	1	Analyst: 2/26/2020 10:41:54 PM	50630
Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND 90.7	0.048 0.097 80-120	ı r	mg/Kg mg/Kg mg/Kg %Rec	1 1 1	2/26/2020 10:41:54 PM 2/26/2020 10:41:54 PM	50630 50630 50630 50630

Qualifiers:	<ul> <li>Value exceeds Maximum Contaminant Level.</li> <li>Sample Diluted Due to Matrix</li> <li>Holding times for preparation or analysis exceeded</li> <li>ND Not Detected at the Reporting Limit</li> <li>PQL Practical Quanitative Limit</li> <li>% Recovery outside of range due to dilution or matrix</li> </ul>	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 Page 31 of 54
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**Analytical Report** 

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2002915

Date Reported: 3/2/2020

CLIENT: Talon Artesia		Client Sample ID: S-10 2'					
Project: Arcturus 18 FED 2H			Collecti	on Date	e: 2/1	9/2020 11:20:00 AM	
Lab ID: 2002915-032	Matrix: SOIL		Receiv	ed Date	e: 2/2	2/2020 9:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst;	JMT
Chloride	150	60		mg/Kg	20	2/26/2020 5:28:28 PM	50702
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					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
EPA METHOD 8015D: GASOLINE RAN	GE					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
EPA METHOD 8021B: VOLATILES						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. D Sample Diluted Due to Matrix
- н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Analytical Report Lab Order 2002915

# Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/2/2020

11.00

CLIENT: Talon Artesia		Client Sample ID: S-10 3' R						
Project: Arcturus 18 FED 2H			Collection	Date:	2/1	19/2020 11:25:00 AM	JMT 50702 CLP 50642	
Lab ID: 2002915-033	Matrix: SOIL	÷ 4	Received	Date:	2/2	22/2020 9:05:00 AM		
Analyses	Result	RL	Qual Un	its I	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS						Analyst:	JMT	
Chloride	220	60	mg	/Kg	20	2/26/2020 5:40:50 PM	50702	
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst:	CLP	
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	%F	Rec	1	2/27/2020 1:35:33 AM	50642	
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB	
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	%F	Rec	1	2/27/2020 12:14:36 AM	50630	
EPA METHOD 8021B: VOLATILES						Analyst:	NSB	
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	%F	Rec	1	2/27/2020 12:14:36 AM	50630	

<b>Oualifiers</b> :	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
. Watercare	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	D
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 33 of 54
	S	% Recovery outside of range due to dilution or matrix			

Hall Environmental Analysis	s Laboratory,	Inc.			1	Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-034	Matrix: SOIL		F. 1997 (1997	on Dat	<b>e:</b> 2/1	11 0-1' 9/2020 11:50:00 AM 2/2020 9:05:00 AM	1
Analyses	Result	RL	Qual 1	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	260	60		mg/Kg	20	2/26/2020 6:17:52 PM	50702
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					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
EPA METHOD 8015D: GASOLINE RANG	GE					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
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.023	1	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	1	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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	D 04 054
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 34 of 54
	S	% Recovery outside of range due to dilution or matrix		100 C	

**Analytical Report** Lab Order 2002915

### Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/2/2020

CLIENT: Talon Artesia		CI	ient Sample II	D: S-	11 2'	
Project: Arcturus 18 FED 2H			Collection Dat	e: 2/1	9/2020 11:55:00 AM	
Lab ID: 2002915-035	Matrix: SOIL		Received Dat	e: 2/2	22/2020 9:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	JMT
Chloride	ND	60	mg/Kg	20	2/26/2020 6:30:13 PM	50702
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				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
EPA METHOD 8015D: GASOLINE RAN	GE				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
EPA METHOD 8021B: VOLATILES					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 н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- E Value above quantitation range
- 1 Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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**Analytical Report** 

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2002915

Hall Environmental Analysi	s Laboratory,	Inc.		1	Date Reported: 3/2/2020	)
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-036	Matrix: SOIL	(		e: 2/1	11 3' 9/2020 12:00:00 PM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batcl
EPA METHOD 300.0: ANIONS					Analyst:	JMT
Chloride	ND	60	mg/Kg	20	2/26/2020 6:42:33 PM	50702
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analyst	CLP
Diesel Range Organics (DRO)	ND	8.9	mg/Kg	1	2/27/2020 2:44:53 AM	5064
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
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	NSB
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	5063
EPA METHOD 8021B: VOLATILES					Analyst	NSB

Gasoline Marige Organics (GRO)	ND	4.9	ing/kg		ZIZ11ZUZU 1.24.00 AW	50630
Surr: BFB	76.9	66.6-105	%Rec	1	2/27/2020 1:24:06 AM	50630
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
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>Oualifiers:</b>	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	н	Holding times for preparation or analysis exceeded

- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е 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

Hall Environmental	Analysis	Laboratory,	Inc.

Date Reported: 3/2/2020

CLIENT:Talon ArtesiaProject:Arcturus 18 FED 2HLab ID:2002915-037	Matrix: SOIL	Client Sample ID: S-11 4' Collection Date: 2/19/2020 12:05:00 PM Received Date: 2/22/2020 9:05:00 AM					
Analyses	Result	RL	Qual L	Jnits	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	JMT
Chloride	ND	60	r	ng/Kg	20	2/26/2020 6:54:54 PM	50702
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst:	CLP
Diesel Range Organics (DRO)	ND	9.3	n	ng/Kg	1	2/27/2020 3:08:02 AM	50642
Motor Oil Range Organics (MRO)	ND	46	n	ng/Kg	1	2/27/2020 3:08:02 AM	50642
Surr: DNOP	94.3	55.1-146	9	%Rec	1	2/27/2020 3:08:02 AM	50642
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	'n	ng/Kg	1	2/27/2020 1:47:10 AM	50630
Surr: BFB	76.8	66.6-105	9	%Rec	1	2/27/2020 1:47:10 AM	50630
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024	r	ng/Kg	1	2/27/2020 1:47:10 AM	50630
Toluene	ND	0.048	r	ng/Kg	1	2/27/2020 1:47:10 AM	50630
Ethylbenzene	ND	0.048	n	ng/Kg	1	2/27/2020 1:47:10 AM	50630
Xylenes, Total	ND	0.096	r	ng/Kg	1	2/27/2020 1:47:10 AM	50630
Surr: 4-Bromofluorobenzene	87.0	80-120	9	%Rec	1	2/27/2020 1:47:10 AM	50630

<b>Oualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
*	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	D 27 CEA
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 37 of 54
	S	% Recovery outside of range due to dilution or matrix			

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: 2002915-038	Matrix: SOIL		Collect		e: 2/1	12 0-1' 9/2020 1:00:00 PM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	180	60		mg/Kg	20	2/26/2020 7:07:14 PM	50702
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					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
EPA METHOD 8015D: GASOLINE RANG	E					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
EPA METHOD 8021B: VOLATILES						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

<b>Oualifiers:</b>	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit

- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysi	s Laboratory,	Inc.				Analytical Report Lab Order 2002915 Date Reported: 3/2/2020	)
CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-039	Matrix: SOIL			on Dat	e: 2/1	12 2' 9/2020 1:05:00 PM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst	JMT
Chloride	ND	60		mg/Kg	20	2/26/2020 7:19:36 PM	50702
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS					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
EPA METHOD 8015D: GASOLINE RAN	GE					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
EPA METHOD 8021B: VOLATILES						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

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
200000000	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 39 of 54
	S	% Recovery outside of range due to dilution or matrix			

**Analytical Report** Lab Order 2002915

## Hall Environmental Analysis Laboratory, Inc.

Date Reported: 3/2/2020

CLIENT: Talon Artesia Project: Arcturus 18 FED 2H Lab ID: 2002915-040	Client Sample ID: S-12 3'Collection Date: 2/19/2020 1:10:00 PMMatrix: SOILReceived Date: 2/22/2020 9:05:00 AN								
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						Analyst:	JMT		
Chloride	ND	60		mg/Kg	20	2/26/2020 7:31:58 PM	50702		
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					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		
EPA METHOD 8015D: GASOLINE RANGE						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		
EPA METHOD 8021B: VOLATILES						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		

<b>Oualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	Н	Holding times for preparation or analysis exceeded	1	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	р	Sample pH Not In Range	D 10 . C . 1
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 40 of 54
	S	% Recovery outside of range due to dilution or matrix			

Surr: 4-Bromofluorobenzene

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: 2002915-041	Client Sample ID: S-12 4'           Collection Date: 2/19/2020 1:15:00 PM           Matrix: SOIL         Received Date: 2/22/2020 9:05:00 AM									
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS						Analyst:	JMT			
Chloride	ND	60		mg/Kg	20	2/26/2020 7:44:18 PM	50702			
EPA METHOD 8015M/D: DIESEL RANGE O	ORGANICS					Analyst:	BRM			
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			
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB			
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			
EPA METHOD 8021B: VOLATILES						Analyst:	NSB			
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			

91.8

80-120

%Rec

1

2/27/2020 11:20:33 AM 50631

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range	
	PQL	Practical Quanitative Limit	RL	Reporting Limit	Page 41 of 54
	S	% Recovery outside of range due to dilution or matrix			

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: 2002915-042	Matrix: SOIL			n Date	: 2/1	3 9/2020 1:45:00 PM 22/2020 9:05:00 AM	
Analyses	Result	RL	Qual U	nits	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	JMT
Chloride	ND	60	m	g/Kg	20	2/26/2020 7:56:39 PM	50702
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS					Analyst:	BRM
Diesel Range Organics (DRO)	ND	9.6	m	g/Kg	1	2/26/2020 4:00:38 PM	50643
Motor Oil Range Organics (MRO)	ND	48	m	g/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
EPA METHOD 8015D: GASOLINE RANGI	Ē					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	m	g/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
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.024	m	g/Kg	1	2/27/2020 12:31:05 PM	50631
Toluene	ND	0.049	m	g/Kg	1	2/27/2020 12:31:05 PM	50631
Ethylbenzene	ND	0.049	m	g/Kg	1	2/27/2020 12:31:05 PM	50631
Xylenes, Total	ND	0.097	m	g/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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
8	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	PQL	Practical Quanitative 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.

Client: Project:	Talon Arte Arcturus 1	esia 18 FED 2H	(								
Sample ID: MB-5	0663	SampTy	/pe: m	blk	Tes	tCode: E	PA Method	300.0: Anior	IS		
Client ID: PBS		Batch	ID: 50	663	1	RunNo: 6	6788				
Prep Date: 2/25	5/2020	Analysis Da	ate: 2	/25/2020		SeqNo: 2	297154	Units: mg/	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID: LCS-	50663	SampTy	/pe: lcs	5	Tes	tCode: E	PA Method	300.0: Anion	IS		
Client ID: LCSS	5	Batch	ID: 50	663	ł	RunNo: 6	6788				
Prep Date: 2/25	6/2020	Analysis Da	ate: 2	25/2020	:	SeqNo: 2	297155	Units: mg/k	(g		
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: MB-5	0687	SampTy	pe: m	blk	Tes	tCode: E	PA Method	300.0: Anion	IS		
Client ID: PBS		Batch	ID: 50	687	F	RunNo: 6	6815				
Prep Date: 2/26	/2020	Analysis Da	ate: 2	26/2020	5	SeqNo: 2	298438	Units: mg/k	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID: LCS-	50687	SampTy	pe: lcs	3	Tes	tCode: E	PA Method	300.0: Anion	S		
Client ID: LCSS	1	Batch	ID: 50	687	F	RunNo: 6	6815				
Prep Date: 2/26	/2020	Analysis Da	ate: 2/	26/2020	5	SeqNo: 2	298439	Units: mg/k	g		
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: 20029	015-014AMS	SampTy	pe: m	5	Tes	tCode: E	PA Method	300.0: Anion	s		
Client ID: S-5 2		Batch	ID: 50	687		RunNo: 6					
Prep Date: 2/26	/2020	Analysis Da	ate: 2/	26/2020	S	SegNo: 2	298443	Units: mg/k	g		
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: 20029	015-014AMSD	SampTy	pe: ms	sd	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: S-5 2		Batch	ID: 50	687	F	RunNo: 6	6815				
Prep Date: 2/26	/2020	Analysis Da	ite: 2/	26/2020	S	SeqNo: 2	298444	Units: mg/K	g		
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 н
- Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- В 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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WO#: 2002915

02-Mar-20

2002915

WO#:

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Result

14

1.5

15.00

02-Mar-20 **Client:** Talon Artesia **Project:** Arcturus 18 FED 2H Sample ID: MB-50702 SampType: mblk TestCode: EPA Method 300.0: Anions Client ID: PBS Batch ID: 50702 RunNo: 66815 Prep Date: 2/26/2020 Analysis Date: 2/26/2020 SeqNo: 2298468 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Chloride ND 1.5 Sample ID: LCS-50702 SampType: Ics TestCode: EPA Method 300.0: Anions Client ID: LCSS Batch ID: 50702 RunNo: 66815 Prep Date: 2/26/2020 Analysis Date: 2/26/2020 SeqNo: 2298469 Units: mg/Kg

PQL SPK value SPK Ref Val %REC LowLimit

0

92.8

HighLimit

110

90

%RPD

**RPDLimit** 

Qual

Qualifiers:

Analyte

Chloride

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

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RL Reporting Limit

Talon Artesia

Client:

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

Project: Arctury	us 18 FED 2H
Sample ID: LCS-50681	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 50681 RunNo: 66803
Prep Date: 2/26/2020	Analysis Date: 2/26/2020 SeqNo: 2297105 Units: %Rec
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: MB-50681	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 50681 RunNo: 66803
Prep Date: 2/26/2020	Analysis Date: 2/26/2020 SeqNo: 2297106 Units: %Rec
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: MB-50641	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 50641 RunNo: 66801
Prep Date: 2/25/2020	Analysis Date: 2/26/2020 SeqNo: 2297210 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10
Motor Oil Range Organics (MRO)	ND 50
Surr: DNOP	13 10.00 129 55.1 146
Sample ID: LCS-50641	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 50641 RunNo: 66801
Prep Date: 2/25/2020	Analysis Date: 2/26/2020 SeqNo: 2297211 Units: mg/Kg
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: LCS-50643	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 50643 RunNo: 66803
Prep Date: 2/25/2020	Analysis Date: 2/26/2020 SeqNo: 2297433 Units: mg/Kg
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: 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

Diesel Range Organics (DRO)

Qualifiers:

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

Result

ND

PQL

10

Analyte detected in the associated Method Blank В E

HighLimit

%RPD

Value above quantitation range T

Analyte detected below quantitation limits P

Sample pH Not In Range RL Reporting Limit

SPK value SPK Ref Val %REC LowLimit

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RPDLimit

Qual

2002915

02-Mar-20

WO#:

Client:

**Project:** 

Sample ID: MB-50643

Client ID: PBS

Talon Artesia

Arcturus 18 FED 2H

SampType: MBLK

Batch ID: 50643

с.				WO#:	2002915 02-Mar-20
estCode: E RunNo: 6		8015M/D: Die	esel Rang	e Organics	
	297434	Units: mg/K	g		
SeqNo: 2					Sec. 1
SeqNo: 2 al %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

onent ib. 1 bg	Dalo	and. 50	1043		Runivo: 6	6803					
Prep Date: 2/25/2020	Analysis Date: 2/26/2020			3	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	1.		- 7.5						
Surr: DNOP	12		10.00		120	55.1	146	-			
Sample ID: 2002915-001AMS	Samp	Type: M	S	Tes	stCode: E	PA Method	8015M/D: Di	esel Rang	e Organics		
Client ID: S-1 0-1'	Batc	h ID: 50	641	1	RunNo: 6	6801					
Prep Date: 2/25/2020	Analysis [	Date: 2/	/26/2020		SeqNo: 2	297592	Units: mg/M	(g			
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: 2002915-001AMS	D Samp	Гуре: М	SD	Tes	tCode: E	PA Method	8015M/D: Di	esel Rana	e Organics		
Client ID: S-1 0-1'	Batc	h ID: 50	641		RunNo: 6						
Prep Date: 2/25/2020	Analysis D	Date: 2/	/26/2020	:	SeqNo: 2	297593	Units: mg/M	g			
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	SampT	Type: MS	3	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics		
Client ID: S-7 2'	Batcl	h ID: 50	642		RunNo: 6				Jan		
Prep Date: 2/25/2020	Analysis D	Date: 2/	26/2020		SeqNo: 2		Units: mg/K	q			
Analyte	Result	PQL	SPK value	SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	45	9.5	47.39	0	93.9	47.4	136	Jord D	To Dennit	Quar	
Surr: DNOP	4.5		4.739		95.1	55.1	146				
Sample ID: 2002915-021AMSI	D SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	e Organice		
Client ID: S-7 2'	Batch	h ID: 50	642		RunNo: 6				guines		
Prep Date: 2/25/2020	Analysis D				SeqNo: 2		Units: mg/K	a			
Analyte	Result	PQL		SPK Ref Val		LowLimit	HighLimit	%RPD	DDDI imit	0	
Diesel Range Organics (DRO)	41	8.8	44.13	0	93.5	47.4	136	7.55	RPDLimit 43.4	Qual	
Surr: DNOP	4.2		4.413		95.1	55.1	146	0	40.4		
Sample ID: MB-50642	SampT	ype: ME	SI K	Tes	tCode: FR	PA Method	8015M/D: Die	eol Para	Organias	-	
Client ID: PBS	10.00	n ID: 506			RunNo: 66		OUTOWID. DIE	sei Kailge	organics		
Prep Date: 2/25/2020	Analysis D				SeqNo: 22		Units: mg/K	a			
								P. 13. 14.	Action -		
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

н Holding times for preparation or analysis exceeded ND

Not Detected at the Reporting Limit PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix В Analyte detected in the associated Method Blank

Е 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 H

Page	73	of 96

QC SUMMART REFORT	WO#:	2002915
Hall Environmental Analysis Laboratory, Inc.	₩ 0π.	02-Mar-20
		02 11100 20

Client: Talon A Project: Arcturu	Artesia Is 18 FED 2H	
Sample ID: MB-50642 Client ID: PBS Prep Date: 2/25/2020	SampType: MBLK Batch ID: 50642 Analysis Date: 2/26/2020	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 66801 SeqNo: 2299275 Units: mg/Kg
Analyte	Result PQL SPK value S	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	ND 10 ND 50 11 10.00	113 55.1 146
Sample ID: LCS-50642	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 50642	RunNo: 66801
Prep Date: 2/25/2020	Analysis Date: 2/26/2020	SeqNo: 2299276 Units: mg/Kg
Analyte	Result PQL SPK value S	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
Prep Date: 2/26/2020 Analyte Surr: DNOP	Analysis Date: 2/27/2020 Result PQL SPK value \$ 5.1 5.000	SeqNo: <b>2299849</b> Units: <b>%Rec</b> SPK Ref Val <u>%REC</u> LowLimit HighLimit <u>%RPD</u> RPDLimit Qual 101 55.1 146
Sample ID: MB-50685 Client ID: PBS	SampType: MBLK Batch ID: 50685	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 66879
Prep Date: 2/26/2020	Analysis Date: 2/27/2020	SeqNo: 2299850 Units: %Rec
Analyte Surr: DNOP	Result PQL SPK value S	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 115 55.1 146
Sample ID: MB-50766 Client ID: PBS	SampType: <b>MBLK</b> Batch ID: <b>50766</b>	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 66883
Prep Date: 2/28/2020	Analysis Date: 2/28/2020	SeqNo: 2302390 Units: %Rec
Analyte		SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	8.7 10.00	86.6 55.1 146
Sample ID: LCS-50766	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 50766	RunNo: 66883
Prep Date: 2/28/2020	Analysis Date: 2/28/2020	SeqNo: 2302393 Units: %Rec
Analyte	Result PQL SPK value S	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
- Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit н
- ND
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Value above quantitation range E
- Analyte detected below quantitation limits Sample pH Not In Range J
- Р
- Reporting Limit

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RL

Client ID: PBS

## OC SIIMMARV DEDODT F

Batch ID: 50628

Page	74	of	<i><b>06</b></i>
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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.					2002915 02-Mar-20	
Client:	Talon A	Artesia				
Project:	Arcturu	s 18 FED 2H				
Sample ID: m	b-50628	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range			

RunNo: 66771

Prep Date: 2/24/2020	Analysis Date: 2/25/2020	SeqNo: 2296862 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 850 1000	85.0 66.6 105
Sample ID: Ics-50628	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: 50628	RunNo: 66771
Prep Date: 2/24/2020	Analysis Date: 2/25/2020	SeqNo: 2296863 Units: mg/Kg
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: MB-50657	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: 50657	RunNo: 66806
Prep Date: 2/25/2020	Analysis Date: 2/26/2020	SeqNo: 2297867 Units: %Rec
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: Ics-50657	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: 50657	RunNo: 66806
Prep Date: 2/25/2020	Analysis Date: 2/26/2020	SeqNo: 2297868 Units: %Rec
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: mb-50630	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: 50630	RunNo: 66806
Prep Date: 2/24/2020	Analysis Date: 2/26/2020	SeqNo: 2297873 Units: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	ND 5.0	
Surr: BFB	820 1000	81.6 66.6 105
Sample ID: Ics-50630	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: 50630	RunNo: 66806
Prep Date: 2/24/2020	Analysis Date: 2/26/2020	SeqNo: 2297874 Units: mg/Kg
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:

\*

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix D

н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix в Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits J

Р Sample pH Not In Range Page 48 of 54

RL Reporting Limit

## QC SUMMARY REPORT Hal

C SUMMARI KEFURI	WO#:	2002915
Ill Environmental Analysis Laboratory, Inc.		02-Mar-20

Client: Talon Ar Project: Arcturus	tesia 18 FED 2H								
Sample ID: 2002915-020ams	SampType: MS	3	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID: S-7 0-1'	Batch ID: 50	630	F	RunNo: 6	6806				
Prep Date: 2/24/2020	Analysis Date: 2/	26/2020	5	SeqNo: 2	297876	Units: mg/H	٨g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	21 4.6 830	22.98 919.1	0	93.6 89.8	69.1 66.6	142 105			
Sample ID: 2002915-020amsc	SampType: MS	SD	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID: S-7 0-1'	Batch ID: 50	630	F	RunNo: 6	6806				
Prep Date: 2/24/2020	Analysis Date: 2/	26/2020	5	SeqNo: 2	297877	Units: mg/k	٨g		
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: mb-50631	SampType: ME	BLK	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID: PBS	Batch ID: 50	631	F	RunNo: 6	6878				
Prep Date: 2/24/2020	Analysis Date: 2/	27/2020	5	SeqNo: 2	299731	Units: mg/k	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 820	1000		82.5	66.6	105			
Sample ID: Ics-50631	SampType: LC	S	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID: LCSS	Batch ID: 50	631	F	RunNo: 6	6878				
Prep Date: 2/24/2020	Analysis Date: 2/	27/2020	5	SeqNo: 2	299732	Units: mg/k	٢g		
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			Guui
Surr: BFB	940	1000		93.9	66.6	105	T.		
Sample ID: 2002915-040ams	SampType: MS	5	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: S-12 3'	Batch ID: 50	631	F	RunNo: 6	6878				
Prep Date: 2/24/2020	Analysis Date: 2/	27/2020	S	SeqNo: 2	299734	Units: mg/k	٢g		
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	I SampType: MS	D	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: S-12 3'	Batch ID: 50			RunNo: 6					
Prep Date: 2/24/2020	Analysis Date: 2/			SeqNo: 2		Units: mg/k	۲g		
							5		

#### Qualifiers:

\*

- D
- Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix Holding times for preparation or analysis exceeded Not Detected at the Reporting Limit Practical Quanitative Limit н

ND

PQL

S % Recovery outside of range due to dilution or matrix В Analyte detected in the associated Method Blank

Е Value above quantitation range

Analyte detected below quantitation limits 1

- Р Sample pH Not In Range
- RL Reporting Limit

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### **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc. 2

WO#:	2002915
	02-Mar-20

Client:	Talon Artesia	
Project:	Arcturus 18 FED 2H	

Sample ID: 2002915-040amsd	SampT	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range					
Client ID: S-12 3'	Batch ID: 50631			RunNo: 66878						
Prep Date: 2/24/2020	Analysis D	ate: 2/	27/2020	S	SeqNo: 2	299735	Units: mg/K	g		
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:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range J
  - Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

## QC SUMMARY REPORT Hall

ll Environmental Analysis Laboratory, Inc.		02-Mar-20
II Further and the state of the	W 0#.	2002915
SUMMARI REFURI	WO#:	2002915

Client: Project:	Talon Art Arcturus		н								
Sample ID: mb	-50628	Samp	Гуре: М	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID: PB:	S	Batc	h ID: 50	628	100	RunNo: 6	6771				
Prep Date: 2/2	24/2020	Analysis E	Date: 2/	25/2020		SegNo: 2		Units: mg/k	(a		
								1.1.1.1.1.			
Analyte Benzene		Result ND	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene		ND	0.025								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.050								
Surr: 4-Bromofluo	rohenzene	0.94	0.10	1.000		93.7	00	400			
	TODENZENE	0.94	_	1.000		93.7	80	120	_		
Sample ID: LCS	S-50628	SampT	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCS	SS	Batcl	h ID: 50	628	F	RunNo: 6	6771				
Prep Date: 2/2	24/2020	Analysis E	Date: 2/	25/2020	5	SeqNo: 2	296911	Units: mg/k	٢g		
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-Bromofluo	robenzene	0.95		1.000		95.1	80	120			
Sample ID: 200	2915-001ams	SampT	ype: MS		Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: S-1	0-1'	Batch	h ID: 50	528		RunNo: 6					
Prep Date: 2/2	24/2020	Analysis D	Date: 2/	25/2020	5	SeqNo: 2	296914	Units: mg/M	(g		
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-Bromofluo	robenzene	0.87		0.9443	1.20	92.2	80	120			
Sample ID: 200	2915-001amsd	SampT	ype: MS	D	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: S-1	0-1'	Batch	h ID: 50	528	F	RunNo: 6	6771				
Prep Date: 2/2	24/2020	Analysis D	Date: 2/	25/2020	5	SeqNo: 2	296915	Units: mg/K	g		
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-Bromofluo	robenzene	0.90		0.9785		91.6	80	120	0	0	

Qualifiers:

Value exceeds Maximum Contaminant Level
 Sample Diluted Due to Matrix
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 PQL Practical Quantitative Limit
 Set Determine the table of the set of dilution on more

S % Recovery outside of range due to dilution or matrix В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

- Р 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 An Project: Arcturus	rtesia 18 FED 2	Н								
Sample ID: MB-50657	Samp	Type: MI	BLK	Tes	stCode: E	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batc	h ID: 50	657	F	RunNo: 6	6806				
Prep Date: 2/25/2020	Analysis (	Date: 2/	26/2020		SeqNo: 2	297906	Units: %Re	c		
Analyte							( Balat tanti	0/ 000	DDDU	0.1
Surr: 4-Bromofluorobenzene	Result 0.95	PQL	1.000	SPK Ref Val	%REC 95.2	LowLimit 80	HighLimit 120	%RPD	RPDLimit	Qual
Sample ID: LCS-50657	Samp	Type: LC	s	Tes	stCode: E	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batc	h ID: 50	657	F	RunNo: 6	6806				
Prep Date: 2/25/2020	Analysis [	Date: 2/	26/2020	5	SeqNo: 2	297907	Units: %Re	c		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2	I QL	1.000	OF ICITIES Var	116	80	120	/0INF D	KFDLIIIII	Qual
Sample ID: mb-50630	Samp	Type: MI	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS		h ID: 50			RunNo: 6					
Prep Date: 2/24/2020	Analysis [		127		SeqNo: 2		Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025	of it value	of Render var	MILO	LOWENIN	riigiteittit			Quai
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: LCS-50630	Samp	Type: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batc	h ID: 50	630	F	RunNo: 6	6806				
Prep Date: 2/24/2020	Analysis [	Date: 2/	26/2020	5	SeqNo: 2	297913	Units: mg/K	g		
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	Samp	Type: MS	8	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: S-7 2'	Batc	h ID: 50	630	F	RunNo: 6	6806				
Prep Date: 2/24/2020	Analysis [			5	SeqNo: 2	297916	Units: mg/K	g		
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			
Delizene		12 10 Mar	0.0000	0.01417	91.6	75.7	123			
Toluene	0.92	0.049	0.9862	0.01417	01.0	10.7				
	0.92 0.94	0.049	0.9862	0.01417	95.4	74.3	126			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix
 H Holding times for preparation or analysis e

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

 ND
 Not Detected at the Reporting Limit

 PQL
 Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 52 of 54

## QC SUMMARY REPORT Hall Er

UMIMARY REPORT	WO#:	2002915
Invironmental Analysis Laboratory, Inc.	WO#.	2002915
any nonmental Analysis Laboratory, Inc.		02-Mar-20

Client: Talon Art Project: Arcturus	tesia 18 FED 2	н								
Sample ID: 2002915-021ams	Samp	Type: MS	3	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: S-7 2'	Batc	h ID: 50	630	F	RunNo: 6	6806				
Prep Date: 2/24/2020	Analysis E	Date: 2/	26/2020	ę	SeqNo: 2	297916	Units: mg/M	(a		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92	1 QL	0.9862	or it iter var	92.8	80	120	76RPD	RPDLIMIL	Qual
Sample ID: 2002915-021amsd	Samp	ype: MS	SD	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: S-7 2'	Batc	h ID: 50	630	F	RunNo: 6	6806				
Prep Date: 2/24/2020	Analysis E			5	SeqNo: 2	297917	Units: mg/K	g		
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	-, and
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: mb-50631	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batch	h ID: 50	631	F	RunNo: 6	6878				
Prep Date: 2/24/2020	Analysis D	ate 2/	27/2020	5	SegNo: 2	299780	Units: mg/K	a		
							onito. Ingri	.9		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene Xvlonce, Totol	ND	0.050								
Xylenes, Total Surr: 4-Bromofluorobenzene	ND	0.10	4 000							
Sull: 4-Bromotiuoropenzene	0.89		1.000		89.2	80	120			
	-					Ç.				
Sample ID: LCS-50631		ype: LC			tCode: EF	A Method	8021B: Volat	iles		
		ype: LC				A Method	8021B: Volat	iles		
Sample ID: LCS-50631 Client ID: LCSS		n ID: 50	631	F	tCode: EF	PA Method 8878	8021B: Volat Units: mg/K			
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020	Batch	n ID: <b>50</b> 0 Date: <b>2/</b>	631 27/2020	F	tCode: EF RunNo: 66 SeqNo: 22	PA Method 8878			RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020 Analyte	Batch Analysis D	n ID: 500 Date: 2/	631 27/2020	R	tCode: EF RunNo: 66 SeqNo: 22	PA Method 5878 299781	Units: mg/K	g	RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020 Analyte Benzene	Batch Analysis D Result	n ID: <b>50</b> Date: <b>2/</b> PQL	531 27/2020 SPK value	R S SPK Ref Val	tCode: EF RunNo: 66 SeqNo: 2: %REC	PA Method 5878 299781 LowLimit	Units: <b>mg/K</b> HighLimit 120	g	RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020	Batch Analysis D <u>Result</u> 0.89	n ID: <b>50</b> Date: <b>2</b> /2 PQL 0.025	531 27/2020 SPK value 1.000	R SPK Ref Val 0	tCode: EF RunNo: 66 SeqNo: 2: %REC 88.6	PA Method 5878 299781 LowLimit 80	Units: <b>mg/K</b> HighLimit	g	RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020 Analyte Benzene Foluene Ethylbenzene	Batch Analysis D Result 0.89 0.93	Date: 2/2 PQL 0.025 0.050	531 27/2020 SPK value 1.000 1.000	F S SPK Ref Val 0 0	Code: EF RunNo: 66 SeqNo: 2 %REC 88.6 93.0	PA Method 5878 299781 LowLimit 80 80	Units: <b>mg/K</b> HighLimit 120 120	g	RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020 Analyte Benzene Foluene Ethylbenzene	Batch Analysis D Result 0.89 0.93 0.95	Date: 2/2 PQL 0.025 0.050 0.050	531 27/2020 SPK value 1.000 1.000 1.000	R S SPK Ref Val 0 0 0	Code: EF RunNo: 66 SeqNo: 22 %REC 88.6 93.0 94.8	24 Method 5878 299781 LowLimit 80 80 80	Units: <b>mg/K</b> HighLimit 120 120 120	g	RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020 Analyte Benzene Foluene Ethylbenzene Kylenes, Total	Batch Analysis D Result 0.89 0.93 0.95 2.9 0.93	Date: 2/2 PQL 0.025 0.050 0.050	531 27/2020 SPK value 1.000 1.000 1.000 3.000 1.000	F S SPK Ref Val 0 0 0 0	Code: EF RunNo: 66 SeqNo: 22 %REC 88.6 93.0 94.8 95.5 93.1	24 Method 5878 299781 LowLimit 80 80 80 80 80 80 80	Units: mg/K HighLimit 120 120 120 120	<b>9</b> %RPD	RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020 Analyte Benzene Foluene Ethylbenzene Kylenes, Total Surr: 4-Bromofluorobenzene	Batch Analysis D Result 0.89 0.93 0.95 2.9 0.93 SampT	PQL 0.025 0.050 0.050 0.10	531 27/2020 SPK value 1.000 1.000 3.000 1.000	R SPK Ref Val 0 0 0 0 0 Test	Code: EF RunNo: 66 SeqNo: 22 %REC 88.6 93.0 94.8 95.5 93.1	PA Method 5878 299781 LowLimit 80 80 80 80 80 80 80	Units: mg/K HighLimit 120 120 120 120 120 120	<b>9</b> %RPD	RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020 Analyte Benzene Foluene Ethylbenzene Kylenes, Total Surr: 4-Bromofluorobenzene Sample ID: 2002915-041ams	Batch Analysis D Result 0.89 0.93 0.95 2.9 0.93 SampT	PQL 0.025 0.050 0.050 0.050 0.10 ype: MS	531 27/2020 SPK value 1.000 1.000 3.000 1.000 531	R SPK Ref Val 0 0 0 0 0 Tesi R	tCode: EF RunNo: 66 SeqNo: 23 %REC 88.6 93.0 94.8 95.5 93.1 tCode: EF	PA Method 3878 299781 LowLimit 80 80 80 80 80 80 80 80 80 80	Units: mg/K HighLimit 120 120 120 120 120 8021B: Volat	iles	RPDLimit	Qual
Sample ID: LCS-50631 Client ID: LCSS Prep Date: 2/24/2020 Analyte Benzene Toluene Ethylbenzene Kylenes, Total Surr: 4-Bromofluorobenzene Sample ID: 2002915-041ams Client ID: S-12 4'	Batch Analysis D Result 0.89 0.93 0.95 2.9 0.93 SampT Batch	PQL 0.025 0.050 0.050 0.10 ype: MS 1D: 506 pate: 2/:	531 27/2020 SPK value 1.000 1.000 3.000 1.000 5331 27/2020	R SPK Ref Val 0 0 0 0 0 Tesi R	tCode: EF RunNo: 66 SeqNo: 22 %REC 88.6 93.0 94.8 95.5 93.1 tCode: EF RunNo: 66 SeqNo: 22	PA Method 3878 299781 LowLimit 80 80 80 80 80 80 80 80 80 80	Units: mg/K HighLimit 120 120 120 120 120 8021B: Volat	iles	RPDLimit	Qual

#### Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix в Analyte detected in the associated Method Blank

Value above quantitation range E

J Analyte detected below quantitation limits P Sample pH Not In Range RL Reporting Limit

Page 53 of 54

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory

<b>NEFURI</b>	WO#:	2002915
Analysis Laboratory, Inc.		02-Mar-20

Client:	Talon Artesia
<b>Project:</b>	Arcturus 18 FED 2H

Sample ID: 2002915-041ams	Samp	Type: MS	6	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: S-12 4'	Batc	h ID: 50	631	F	RunNo: 6	6878				
Prep Date: 2/24/2020	Analysis [	Date: 2/	27/2020	s	SeqNo: 2	299784	Units: mg/M	(g		
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			
Foluene	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			
(ylenes, 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	I Samp	Гуре: МS	SD.	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: S-12 4'	Batc	h ID: 50	631	F	RunNo: 6	6878				
Prep Date: 2/24/2020	Analysis [	Date: 2/	27/2020	S	SeqNo: 2	299785	Units: mg/K	g		
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	
Foluene	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	
(ylenes, 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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

Page 54 of 54

RL Reporting Limit

### Received by OCD: 6/5/2020 7:08:07 AM

HALL ENVIRONMENTAL ANALYSIS LABORATORY		4901 Hawkins NE verque, NM 87109 4X: 505-345-4107	Sam	iple Log-In C	heck List
Client Name: TALON ARTESIA	Work Order Number: 2	002915		RcptNo	1
Received By: Yazmine Garduno 2/	22/2020 9:05:00 AM		sfamin lifnaut		
Completed By: Isaiah Ortiz			I-O	*	
Reviewed By: 32 2/24/20					
Chain of Custody					
1. Is Chain of Custody sufficiently complete?	Y	'es 🗹	No 🗌	Not Present	
2. How was the sample delivered?	<u>c</u>	ourier			
Log In					
3. Was an attempt made to cool the samples?	Y	es 🗹	No 🗌	NA 🗌	
4. Were all samples received at a temperature of >	0° C to 6.0°C Y	es 🔽	No 🗌	NA 🗆	
5. Sample(s) in proper container(s)?	Y	es 🔽	No 🗌		
6. Sufficient sample volume for indicated test(s)?	Y	es 🗹	No 🗌		
7. Are samples (except VOA and ONG) properly pre	eserved? Ye	es 🗹	No 🗌		
8. Was preservative added to bottles?	Ye	es 🗌	No 🗹	NA 🗌	
9. Received at least 1 vial with headspace <1/4" for	AQ VOA? Ye	es 🗌	No 🗌	NA 🔽	1
0. Were any sample containers received broken?	Y	es 🗆	No 🗹 🗍	# of preserved	1
1. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Ye	es 🗹	No 🗌		>12 unless noted)
2. Are matrices correctly identified on Chain of Cust	ody? Ye	es 🗹	No 🗌	Adjusted?	
3. Is it clear what analyses were requested?	Ye		No 🗌	1	462/24/20
<ol> <li>Were all holding times able to be met? (If no, notify customer for authorization.)</li> </ol>	Ye	es 🗹	No 🗌	Checked by	10 4011
pecial Handling (if applicable)					
5. Was client notified of all discrepancies with this of	order? Y	es 🗌	No 🗌	NA 🗹	
Person Notified: By Whom: Regarding: Client Instructions:	Date J	∍Mail ∏ Phone	e 🗌 Fax	In Person	
16. Additional remarks:	norte i tamé a sa s	an panto francisco de la Andrea de La Antre Santo de La Andrea de La An Antre Santo de La Andrea de La Andr	n an triange		]
17. <u>Cooler Information</u> Cooler No. Temp °C Condition Seat Ir 1 5.2 Good	itact Seal No Sea	Date Sign	ned By		

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0110	>	Chain-oi-custouy record					T	HALL	Z			ENVIRONMENIAL	
Client: Tay and LPC	No CPC		X Standard	D Rush			A	ANALYSIS	YS1		ABO	LABORATORY	2
			Project Name	ai			5	www.hallenvironmental.com	lenviro	nment	al.com		
Mailing Address: 408 M. TEXAS	ess: 40%	M. TEXAS AUE	ARCTURUS	US 18 FED	0 2H	490	4901 Hawkins NE		Albug	nerqu	- Albuquerque, NM 87109	7109	
			Project #:			Tel.	. 505-345-3975	5-3975	Fax		505-345-4107	20	
Phone #: 515-746 -8768	- 962-51	8168	TEOT44.	303.01				A	Analysis Request	s Req	uest		
email or Fax#.	њ.		Project Manager	iger:		1923			*OS		(jue		
QA/QC Package:	ge:	□ Level 4 (Full Validation)	CHRIS T	TONES		108) s'	PCB's	SMISO	'*Od		edA\fn		· · · · · ·
Accreditation		□ Az Comoliance	2	5	COLLER		(1.	278	NOS		ara əsə	~ ~ ~ ~	
			On Ice:		D No.		709		3' V	(AC	_		
DEDD (Tvpe)			# of Coolers: 3	5	0.5210120	1.0	po	_		_	1.1		
			Cooler Temp(including cf)	(including CE): -2	6-0-3-1-		цţә						
			Container	Preservative	HEALNO,	1000	M) 80	A RAS	560 (V	S) 027	o listo ATo		
Date Time	e Matrix	Sample Name	Type and #	Type	ğ	_	Э	-	_	_	_		T
R-19.20 8:00m	Dan Soil	5-1 6-1	GLASS 1	166 6000	100-	>		-			2		
8:05~		1	_		-002		-		+		+		
8,150		5-2 0-1			-003	_					-		
8:200	-	1.1.2			-00-								
8.2%	-				-005	_					-		
8:35	2				-006				-	_	-		
8. Hom		1.1			100-			-		_	+		
8.45	500				-008		-				-		
	500	H 0-			-000-				+	_	+		
9:05					-010-			-			-		
9'.100-	-	5-4 3'		_	110-			-		_	7		
2.19.20 9:150	San Seil	S-4 4'.	GLASS L	106 000	210-	7		_	_	_	>		
FA	8	0	Received by	Via:	Date Time $2 \frac{2}{2} $	Remarks: P.G. 10F4	0F4						
F	6	Relinquished by:	Received by:	Via:	Date Time								
	818		they !!	10.11.000									

	2n-10-1	Chain-of-Custody Record	minoretini					HALL		TAN	DN	<b>ENVIRONTRUM</b>	
Client: Tato	TRIAN UPE		X Standard	🗆 Rush				<b>ANA</b>	N.	NH	AL	ANALYSIS LABORATORY	ÚR/
			Project Name:	ö				www.]	www.hallenvironmental.com	ronme	ntal.co	E C	÷
Mailing Address: 408 W. TEXAS	55: 408 W.	AUE	ARCTURUS	US IS FED	HC	490	11 Hawk	dins NE	dlA - 3	nquerc	ue, N	4901 Hawkins NE - Albuquerque, NM 87109	
			Project #:			Tel.	I. 505-3	505-345-3975		Fax 505-345-4107	5-345	4107	
Phone #: 51	575-746-87	- 2768	TBOJA4.	303.01					Analy	Analysis Request	dues		
email or Fax#:			Project Manager:	iger:			1		⁺OS	-	(tuə		
QA/QC Package: M Standard		Level 4 (Full Validation)	CHRIS J	JONES			bCB,	SINISO.	'₽04'		edAytr	Sa	
A sound it officer			2		COLLER				201			01-3	
T NFI AC		הומוסר היומו		3	CI No	_	1.00	OL 9	_	(VC		an	
			# of Coolers:	12	5.260):5.2		-	018				47	
			Cooler Temp	Cooler Temp(Inditiong.ct).	2/29/ 45-02			8 A	-			7	
			Container	Preservative	A HEAL No.	VX3T 99:H3	94 180 M) 80	d sHA	3 AA2	s) 020	270 (S	өтө⊺	
Date Time	Matrix	Sample Name	Type and #	Type	11700	-		Ы		-	_		
2-19-20 9.250	Soil	5-5 0-1'	(JASS 1	ICE ICOLD	- 015	>-	-		+	+	+	2-	
5:30		5-5 2'			- 014		_		_	+			
9. 26.		5-5 3'			- 015					-	_	-	
6. nv.		'H 2-2			910-		_	_	_				
G' 50.					L 10 -					_			
6166.					- 018								
NE INOD					- 019		_		_		_		
10.104		10			- 020						_		
10:150		1.3			- 021		-		-				
10: 200-					- 022				-		-		_
10.25					- 023	-			-	+	4		
2-19-20 10:35	Soit	5-8 0-1'	64.055 1	166   0010	- 024	2			_	_	_	2	
	Relinquishe	04	Received by	Via:	2	Remarks: P.6, 2 or 4	s: Lory						
Date: Time:	Relinquished	ind b	Rectined by:	Via:	Date Time P 2 2 2 2								

Of		
Client Thun CE	C Rush	ANALYSIS LABORATORY
		www.hallenvironmental.com
Mailing Address: 408 W. TEXAS AUE	ARCTURUS 18 FED 2H 4901 Hawkins NE - Albuquerque, NM 87109	buquerque, NM 87109
	Tel. 505-345-3975	Fax 505-345-4107
Phone #. 515-746 -8768	700744.303.01	ysis Requ
email or Fax#:	(0)	
QA/QC Package:	CB,2 1 MF (805	edA
K Standard Devel 4 (Full Validation)	CHRIS JONES	/jue
ï	(1.1) (1.1) (282	)SƏ. (
	D-Yes DNo 201 01 01 13	(AO 19)
D EDD (Type)	2 52 (b) 52 40 BB (c) cide od 310	orm (i-Ve
	15L other ot	∆O' mei Diito
Date Time Matrix Sample Name	Container Preservative HEAL No. Container Preservative ZOD 2015 BTEL 801 PC (M PAH's b) Type and # Type	8260 (V 8270 (S Total Cd Total Cd
0 [0:404 Set		
10:45		
a	- 027	
5-9	-028	
5-9	-029	
5.9	- 036	
s-lo o.	- 031	
01-5	- 0.32	
01-5	- 0.33	
5-11 0-1	- 0.34	
( II:55a   S-11 2 <sup>1</sup>	- 035	
Ser S-11	- 036	
Time: Relinquishe	B	
9	Date Time	
NX. Orbi Ande	1 that and rece also Blose	

### Received by OCD: 6/5/2020 7:08:07 AM

Chain-of-Custody Record	Turn-Around Time:	HALL ENVIRONMENTAL
Client	🕅 Standard 🗆 🗆 Rush	
	Project Name:	www.hallenvironmental.com
Mailing Address: 408 w.TEXAS AUE	ARCTURUS 18 FED 2H	- Albuqu
		Tel. 505-345-3975 Fax 505-345-4107 Analysis Reruest
Phone #: 515-746 -8768	700744.303.01	
email or Fax#:	Project Manager:	/OS ! ! !
ige:		VAbs SIMIS
	CHRIS JONES	0980 ) <sub>2,</sub> F ) 2709 32 P ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (
ä	Sampler: MICHREL COLLIER	0 / 1 0 / 1 04,1 04,1
		386 03, 03, 03, 03, 03, 03, 03, 04, 04, 04, 04, 04, 04, 04, 04, 04, 04
	F of coller Tempinelining Coller Tempinelining	ро((к thoo bolt Met Met Met Met Met Met Met Met Met Me
	10	8018 Pes (Mei 8 by 1 8 by (VC 0 (VC
Dote Time Matrix Sample Name	Container Preservative HEAL No. Type and # Type 700 15	
	I'r F lean	
	-	
6 9	-020-	
1:15m   5-12 4	152	
2-19-20 1:45pm Soll BG	6425 1 100 Level -042	<u>&gt;</u>
Date: Time: Relinquished by:		Remarks:
elegar , see what lift.	2/20/20	rg. 40F4
Date: Time: Reinguished by:	Lever 2/24	
If necessary, samples submitted to Hall Environmental may be subcontracted to othe	r accredited laboratories. This serv	es as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
	190 LANO	



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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accredited retrift.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



#### Analytical Results For:

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

Received:	03/23/2020	Sampling Date:	03/20/2020
Reported:	03/24/2020	Sampling Type:	Soil
Project Name:	ARCTURUS 18 FED 2H	Sampling Condition:	Cool & Intact
Project Number:	700794.303.01	Sample Received By:	Kelly Jacobson
Project Location:	DEVON - EDDY CO NM	a service and a service of the	

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

TPH 8015M	mg/l	kg	Analyze	d 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	
DRO >C10-C28*	530	10.0	03/23/2020	ND	198	98.9	200	0.616	
EXT DRO >C28-C36	370	10.0	03/23/2020	ND					
Surrogate: 1-Chlorooctane	87.6 9	6 44.3-14	4						
Surrogate: 1-Chlorooctadecane	77.69	6 42.2-15	6						

**Cardinal Laboratories** 

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any daim ansing, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All daims, including those for negligence and any other cause whatscever 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 hereander by Cardinal, regardless of whether such claims based upon any of the above stated reasons or otherwise. Results relate only to the sample's identified above. This report shall not be reproduced except in full with written approvaled Cardinal Laborations.

Celeg D. Keena

Celey D. Keene, Lab Director/Quality Manager



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

#### **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 SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

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Celleg D. Keene

Celey D. Keene, Lab Director/Quality Manager

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District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

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## **Release Notification**

### **Responsible Party**

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

### **Location of Release Source**

Latitude	

Longitude \_\_\_\_\_\_(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner: State Federal Tribal Private (Name: \_

### Nature and Volume of Release

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

Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

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Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
🗌 Yes 🗌 No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

### **Initial Response**

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

The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name:	Title:
Signature: Kendra DeHoyos	Date:
email:	Telephone:
OCD Only	
Received by:	Date:

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Spill Volume(Bbls) Calculator Inputs in blue, Outputs in red		
Co	ntaminated S	Soil measurement
Length(Ft)	Width(Ft)	Depth(Ft)
<u>0</u>	<u>0.000</u>	<u>0.083</u>
Cubic Feet of S	Soil Impacted	<u>87.150</u>
Barrels of So	il Impacted	<u>15.53</u>
Soil T	уре	Clay/Sand
Barrels of Oi 100% Sat	0	<u>2.33</u>
Saturation	Fluid pre	esent with shovel/backhoe
Estimated Ba Relea		2.33
Free Stand		ing Fluid Only
Length(Ft)	Width(Ft)	Depth(Ft)
<u>0</u>	<u>0.000</u>	<u>0.083</u>
Standing fluid		<u>8.857</u>
Total fluids spilled		<u>11.187</u>

### Instructions

1.Input spill area measurements in feet, if less than one foot use converter below.

Select a soil type from the drop down menu.
 Select a saturation level from the drop down menu.

- - (For data gathering instructions see appendix tab)

Inches to Feet Converter		
	Inches	Feet
Length		0.000
Width		0.000
Height		0.000

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# 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?	<u>180 (</u> 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 <b>not</b> 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.

$\boxtimes$	Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
$\boxtimes$	Field data
$\boxtimes$	Data table of soil contaminant concentration data
$\boxtimes$	Depth to water determination
$\boxtimes$	Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
$\boxtimes$	Boring or excavation logs

Photographs including date and GIS information

$\langle$	Topographic/Aerial	map

Laboratory data including chain of custody

Received by OCD	: 6/5/2020 7:08:07 AM			Page 94 of 9
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plan. That plan m and methods, antic 19.15.29.12 NMA I hereby certify th regulations all ope public health or th failed to adequate addition, OCD act and/or regulations Printed Name: Signature:	Wesley Mathews	remediated, the pro- remediation. The c d release-specific p he best of my knowled otifications and perfor e OCD does not reliev rreat to groundwater, of responsibility for c	posed remediation techn closure criteria for a release arameters. dge and understand that purs rm corrective actions for rele ve the operator of liability sh surface water, human health ompliance with any other fe	ique, proposed sampling plan se are contained in Table 1 of muant to OCD rules and eases which may endanger ould their operations have or the environment. In
Keceived by:		Date:		

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Oil Conservation Division

<u>Remediation Plan Checklist</u>: Each of the following items must be included in the plan.

## **Remediation Plan**

Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation points  $\boxtimes$ Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required) Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation. Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction. Extents of contamination must be fully delineated. Contamination does not cause an imminent risk to human health, the environment, or groundwater. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. Printed Name: Wesley Mathews Title: EHS Professional Signature: Wesley Mathews Date: Wesley.Mathews@dvn.com Telephone: 575-578-6195 email: OCD Only Received by: Date: Denied Approved Approved with Attached Conditions of Approval Deferral Approved Signature: Date:

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Oil Conservation Division

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# Closure

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

Closure Report Attachment Checklist: Each of the following items must be included in the closure report. A scaled site and sampling diagram as described in 19.15.29.11 NMAC Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection) Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling) Description of remediation activities I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete. Printed Name: Wesley Mathews Title: EHS Professional Wesley Mathews \_\_\_\_\_ Date: Signature: email: Wesley.Mathews@dvn.com Telephone: 575-578-6195

OCD Only

Received by:

Date:

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

Closure Approved by:	_ Date:
Printed Name:	Title: