

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Dugan Production Corp.	OGRID 006515
Contact Name Kevin Smaka	Contact Telephone 505-325-1821 x 1049
Contact email kevin.smaka@duganproduction.com	Incident # (assigned by OCD) NCS 1828930229
Contact mailing address P.O. Box 420, Farmington, NM 87499	

Location of Release Source

Latitude 36.33985 Longitude -107.71096
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Arviso #1	Site Type gas well
Date Release Discovered	API# (if applicable) 30-045-33943

Unit Letter	Section	Township	Range	County
L	5	24N	8W	San Juan

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

Nature and Volume of Release

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

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

Cause of Release

NOTED

JUN 28 2019

DISTRICT III

45

State of New Mexico
Oil Conservation Division

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

Initial Response

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

<input type="checkbox"/> The source of the release has been stopped.	
<input type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kevin Smaka</u>	Title: <u>Regulatory Engineer</u>
Signature: _____	Date: _____
email: <u>kevin.smaka@duganproduction.com</u>	Telephone: <u>505-325-1821 x1049</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

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

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

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

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

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

State of New Mexico
Oil Conservation Division

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
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Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

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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: Kevin Smaka Title: Engineer
Signature: [Signature] Date: 6-27-19
email: _____ Telephone: 325-1821

OCD Only

Received by: OCD Date: 6/28/19

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: [Signature] Date: 7/22/19
Printed Name: Tory Title: Environmental Spec

Spill Closure Report

Arviso #1

API # 30-045-33943

Dugan Production was notified of a potential spill located at Dugan's Arviso #1 on 9/28/18. After consulting with field personnel it was determined that a reportable spill had occurred. The spilled fluid was produced water that was caused by the corrosion of a nipple on the pumping T.

To remediate the site Dugan applied 800 lbs of gypsum pearls to the affected area on the well pad and in the nearby wash. After waiting for precipitation to aid in the remedial process, fresh water was also applied to the spill site to aid in the cleanup.

After remedial activities were finished the site was sampled on 10/29/18. 4 samples were collected, 1 on the well pad, 2 in the wash area as well as 1 away from the site to check for background chlorides. These samples came back hot all with a chloride level above 2000 mg/L.

Dugan applied another 500 lbs of gypsum as well as fresh water to further remove contaminants from the soil. Samples were collected on 12/7/18. Results indicated that samples collected in the wash had reached an acceptable limit of roughly 350 mg/L. The contaminated area on the well pad was still reading above 2000 mg/L.

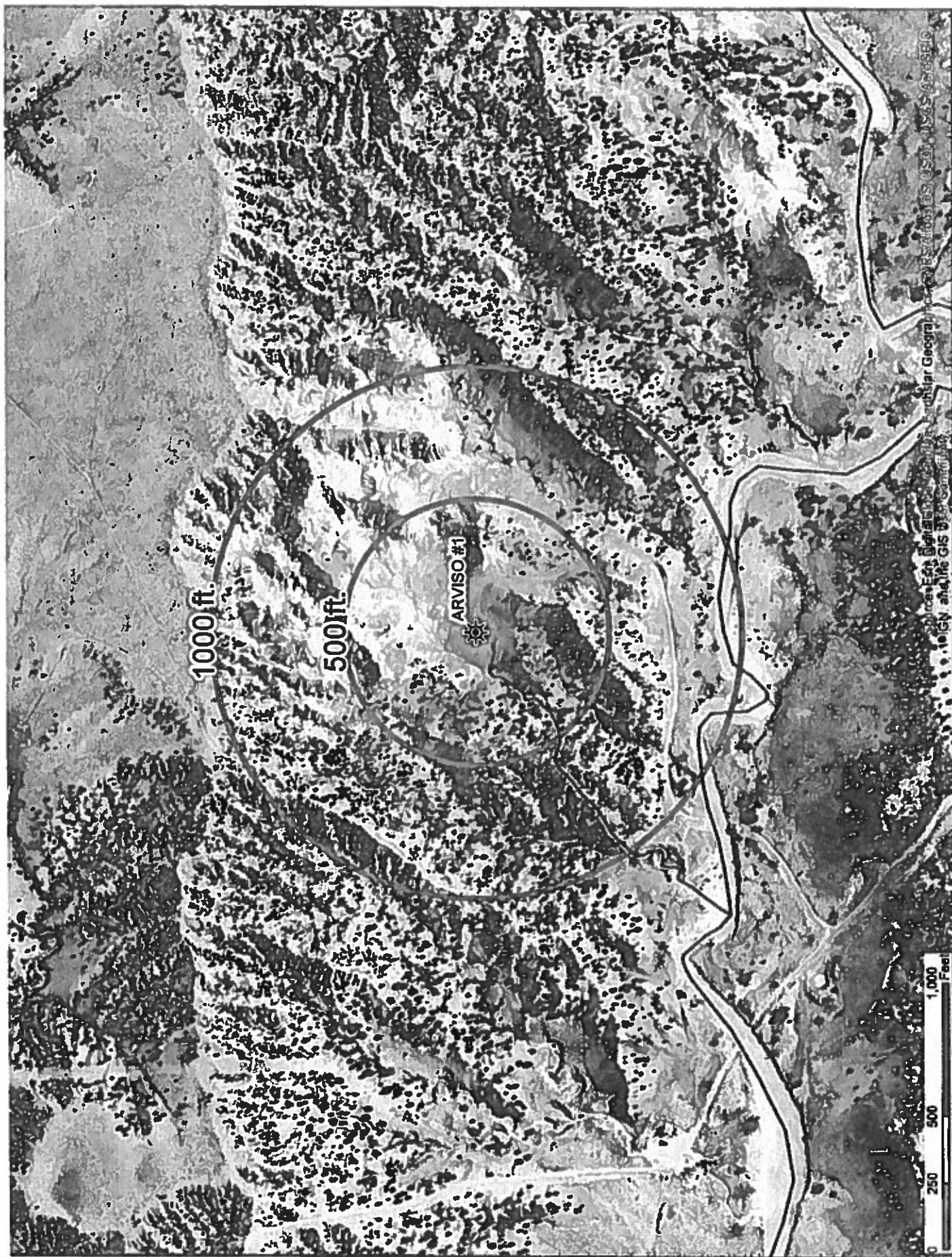
Another 200 lbs of gypsum was applied this spring. No fresh water was applied due to the rains that fell on the area. Sampling was again conducted on 6/7/2019. In this case all samples came back below 600 mg/L. At this point the spill was considered remediated and Dugan resumed normal operations at the well pad.



POD Search: **POD Hosts: San Juan**
PLSS Search: **Section(s): 1-8**

7/17/19 4:25 PM

ACTIVE & INACTIVE POINTS OF DIVERSION



Arviso #1

dugan production corp.

0 62.5 125 250 Feet



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community

Wash

National Flood Hazard Layer FIRMette



36°20'37.86"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

USGS The National Map @ 1:6,000 by 000 re-released April 2019

Legend

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

SPECIAL FLOOD HAZARD AREAS	<p>Without Base Flood Elevation (BFE) Zone A, V, AE, AH, VE, AR Regulatory Floodway</p>
OTHER AREAS OF FLOOD HAZARD	<p>0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile (Zone 2) Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levees, See Notes, Zone X Area with Flood Risk due to Levees Zone B</p>
OTHER AREAS	<p>Area of Minimal Flood Hazard Zone X Effective LOMRs Area of Undetermined Flood Hazard Zone</p>
GENERAL STRUCTURES	<p>Channel, Culvert, or Storm Sewer/ Levee, Dike, or Floodwall</p>
OTHER FEATURES	<p>Cross Sections with 1% Annual Chance Water Surface Elevation Coastal Tract Base Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary Coastal Tract Baseline Profile Baseline Hydrographic Feature</p>
MAP PANELS	<p>Digital Data Available No Digital Data Available Unmapped</p>

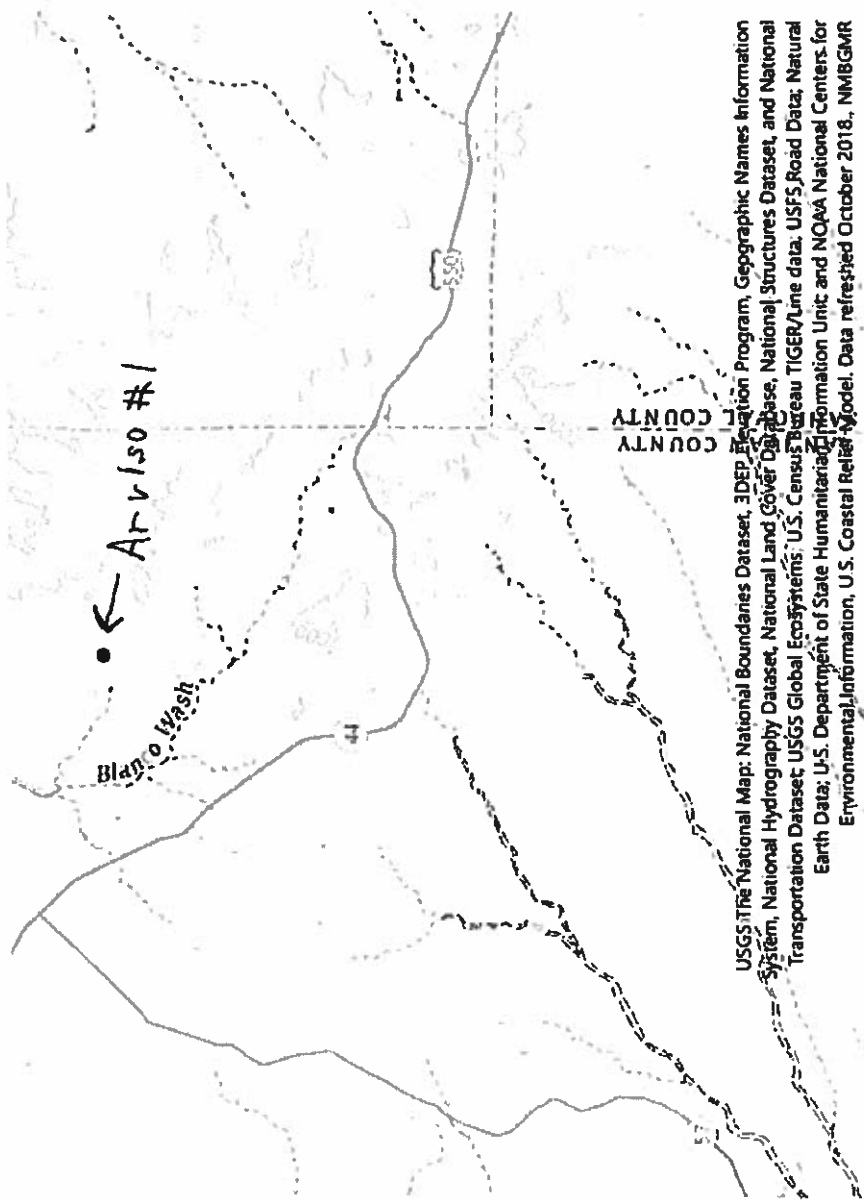


The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/18/2019 at 6:23:38 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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



Arviso #1 Spill Map





Analytical Report

Report Summary

Client: Dugan Production Corp.

Samples Received: 6/6/2019

Job Number: 06094-0177

Work Order: P906023

Project Name/Location: Arviso #1

Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Walter Hinchman', is written over a horizontal line.

Walter Hinchman, Laboratory Director

Date: 6/10/19



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc. currently holds the appropriate and available Utah TNI certification NM008792018-1 for the data reported.



Dugan Production Corp	Project Name	Arviso #1	
PO Box 420	Project Number	06094-0177	Reported:
Farmington NM, 87499	Project Manager	Mike Sandoval	06/10/19 16 08

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Arviso #1	P906023-01A	Soil	06/06/19	06/06/19	Glass Jar, 4 oz.
Arviso #1	P906023-02A	Soil	06/06/19	06/06/19	Glass Jar, 4 oz.
Arviso #1	P906023-03A	Soil	06/06/19	06/06/19	Glass Jar, 4 oz.

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5706 Highway 64, Farmington, NM 87401

Ph (505) 432-0613 Fx (505) 432-1448

24 Hour Emergency Response Phone (800) 362-1879

envirotech-inc.com

labadmin@envirotech-inc.com

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Dugan Production Corp. PO Box 420 Farmington NM, 87499	Project Name: Arviso #1 Project Number: 06094-0177 Project Manager: Mike Sandoval	Reported: 06/10/19 16:08
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**Arviso #1
P906023-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antons by 300.0/9056A									
Chloride	ND	20.0	mg/kg	1	1923030	06/07/19	06/10/19	EPA 300.0/9056A	

Background Sample

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5796 Highway 64, Farmington, NM 87401

Ph (505) 832-0415 Fax (505) 832-1845

24 Hour Emergency Response Phone (800) 362-1870





Dugan Production Corp	Project Name	Arviso #1	Reported:
PO Box 420	Project Number	06094-0177	06/10/19 16:08
Farmington NM, 87499	Project Manager	Mike Sandoval	

Arviso #1
P906023-02 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<u>Anions by 300.0/9056A</u>									
Chloride	ND	20.0	mg/kg	1	1923030	06/07/19	06/10/19	EPA 300.0/9056A	

*Background Sample
off location*

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5796 Highway 64, Farmington, NM 87401

Ph (505) 632-0015 Fax (505) 632-1068

24 Hour Emergency Response Phone (800) 343-1879





Dugan Production Corp	Project Name	Arviso #1	
PO Box 420	Project Number	06094-0177	Reported:
Farmington NM, 87499	Project Manager	Mike Sandoval	06/10/19 16:08

Arviso #1
P906023-03 (Solid)

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Anions by 300.0/9056A

Chloride	448	20.0	mg/kg	1	1923030	06/07/19	06/10/19	EPA 300.0/9056A	
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From Sample
Area #1

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8798 Highway 64, Farmington, NM 87401

Ph (505) 832-0415 Fax (505) 832-1885

24 Hour Emergency Response Phone (800) 342-1878





Dugan Production Corp PO Box 420 Farmington NM, 87499	Project Name Project Number Project Manager	Arviso #1 06094-0177 Mike Sandoval	Reported: 06/10/19 16:08
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Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1923030 - Anion Extraction EPA 300.0/9056A										
Blank (1923030-BLK1)										
Chloride	ND	20.0	mg/L							Prepared 06/07/19 0 Analyzed: 06/10/19 1
LCS (1923030-BS1)										
Chloride	234	20.0	mg/kg	25.0		102	90-110			Prepared 06/07/19 0 Analyzed: 06/10/19 1
Matrix Spike (1923030-MS1)										
Chloride	1320	20.0	mg/L	25.0	1080	98.1	80-120			Source: P906020-01 Prepared 06/07/19 0 Analyzed: 06/10/19 1
Matrix Spike Dup (1923030-MSD1)										
Chloride	1290	20.0	mg/L	25.0	1080	86.9	80-120	2.14	20	Source: P906020-01 Prepared 06/07/19 0 Analyzed: 06/10/19 1

QC Summary Report

Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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5798 Highway 64, Farmington, NM 87401

Ph (505) 633-6615 Fx (505) 633-1065

24 Hour Emergency Response Phone (505) 362-1879





Dugan Production Corp.	Project Name	Arviso #1	
PO Box 420	Project Number	06094-0177	
Farmington NM, 87499	Project Manager	Mike Sandoval	Reported: 06/10/19 16 08

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

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Ph (505) 432-0015 Fx (505) 432-1665

24 Hour Emergency Response Phone (505) 362-1879

[envirotech-inc.com](mailto:info@envirotech-inc.com)

labadmin@envirotech-inc.com

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Lab Use Only		TAT	EPA Program			
Lab WQ#	Job Number	1D	3D	RCRA	CWA	SDWA
P906023	0604-077					
Analysis and Method				State		
O by 8015	O by 8015	8021	1260	010	300.0	1
NM	CD	UT	AZ			

Additional Instructions:

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other	Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA
--	--

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above

7796 US Highway 64, Farmington, UT 87401
 1400 Scripps - 63 West 24th Street, Suite 115, Denver, CO 80201



Analytical Report

Report Summary

Client: Dugan Production Corp.

Chain Of Custody Number:

Samples Received: 12/14/2018 4:18:00PM

Job Number: 06094-0177

Work Order: P812032

Project Name/Location: Arviso #1

Report Reviewed By:

Date: 12/19/18

Walter Hinchman, Laboratory Director

Date: 12/19/18

Tim Cain, Project Manager



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc. currently holds the appropriate and available Utah TNI certification NM000792018-1 for the data reported.

5796 US Highway 64, Farmington, NM 87401

Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632 1865

Ph (970) 259-0615 Fr (800) 362 1879





Dugan Production Corp	Project Name	Arviso #1	
PO Box 420	Project Number	06094-0177	
Farmington NM, 87499	Project Manager	Mike Sandoval	Reported: 12/19/18 10 29

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Arviso #1 - 1	P812032-01A	Soil	12/14/18	12/14/18	Glass Jar, 4 oz.
Arviso #1 - 2	P812032-02A	Soil	12/14/18	12/14/18	Glass Jar, 4 oz.
Arviso #1 - 3	P812032-03A	Soil	12/14/18	12/14/18	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632 1865

Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362 1879





Dugan Production Corp. PO Box 420 Farmington NM, 87499	Project Name Project Number Project Manager	Arviso #1 06094-0177 Mike Sandoval	Reported: 12/19/18 10:29
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**Arviso #1 - 1
P812032-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Surrogate 4-Bromochlorobenzene-PID		98.0 %		50-150	1851002	12/17/18	12/17/18	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1851002	12/17/18	12/17/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1851004	12/17/18	12/18/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1851004	12/17/18	12/18/18	EPA 8015D	
Surrogate 1-Chloro-4-fluorobenzene-FID		101 %		50-150	1851002	12/17/18	12/17/18	EPA 8015D	
Surrogate n-Nonane		91.6 %		50-200	1851004	12/17/18	12/18/18	EPA 8015D	
Anions by 300.0/9056A									
Chloride	375	20.0	mg/kg	1	1851001	12/17/18	12/17/18	EPA 300.0/9056A	

*From
Sample Area #2*

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Dugan Production Corp	Project Name	Arviso #1	Reported:
PO Box 420	Project Number	06094-0177	12/19/18 10:29
Farmington NM, 87499	Project Manager	Mike Sandoval	

**Arviso #1 - 2
P812032-02 (Solid)**

Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatiles Organics by EPA 8021								
Benzene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B
Toluene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B
Ethylbenzene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B
p,m-Xylene	ND	200	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B
o-Xylene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B
Total Xylenes	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B
Total BTEX	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B
Surrogate 4-Bromochlorobenzene-PID	98.2 %	50-150			1851002	12/17/18	12/17/18	EPA 8021B
Nonhalogenated Organics by 8015								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1851002	12/17/18	12/17/18	EPA 8015D
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1851004	12/17/18	12/18/18	EPA 8015D
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1851004	12/17/18	12/18/18	EPA 8015D
Surrogate 1-Chloro-4-fluorobenzene-FID	102 %	50-150			1851002	12/17/18	12/17/18	EPA 8015D
Surrogate n-Nonane	94.6 %	50-200			1851004	12/17/18	12/18/18	EPA 8015D
Anions by 300.0/9056A								
Chloride	296	20.0	mg/kg	1	1851001	12/17/18	12/17/18	EPA 300.0/9056A

*From
Sample Area #3*

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Dugan Production Corp PO Box 420 Farmington NM, 87499	Project Name Project Number Project Manager	Arviso #1 06094-0177 Mike Sandoval	Reported: 12/19/18 10:29
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**Arviso #1 - 3
P812032-03 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1851002	12/17/18	12/17/18	EPA 8021B	
Surrogate 4-Bromochlorobenzene-PID		98.3 %		50-150	1851002	12/17/18	12/17/18	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1851002	12/17/18	12/17/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1851004	12/17/18	12/18/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1851004	12/17/18	12/18/18	EPA 8015D	
Surrogate 1-Chloro-4-fluorobenzene-FID		103 %		50-150	1851002	12/17/18	12/17/18	EPA 8015D	
Surrogate n-Nonane		103 %		50-200	1851004	12/17/18	12/18/18	EPA 8015D	
Anions by 300.0/9056A									
Chloride	2040	20.0	mg/kg	1	1851001	12/17/18	12/17/18	EPA 300.0/9056A	

From Sample Area
#1

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Dugan Production Corp PO Box 420 Farmington NM, 87499	Project Name: Arviso #1 Project Number: 06094-0177 Project Manager: Mike Sandoval	Reported: 12/19/18 10 29
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Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Batch 1851002 - Purge and Trap EPA 5030A										
Blank (1851002-BLK1)				Prepared 12/17/18 0 Analyzed 12/17/18 1						
Benzene	ND	100	ug/kg							
Toluene	ND	100	"							
Ethylbenzene	ND	100	"							
p,m-Xylene	ND	200	"							
o-Xylene	ND	100	"							
Total Xylenes	ND	100	"							
Total BTEX	ND	100	"							
Surrogate 4-Bromochlorobenzene-PID	7880		"	8000		98.5	50-150			
LCS (1851002-BS1)				Prepared 12/17/18 0 Analyzed 12/17/18 1						
Benzene	5000	100	ug/kg	5000		100	70-130			
Toluene	5030	100	"	5000		101	70-130			
Ethylbenzene	5070	100	"	5000		101	70-130			
p,m-Xylene	10400	200	"	10000		104	70-130			
o-Xylene	5060	100	"	5000		101	70-130			
Total Xylenes	15500	100	"	15000		103	70-130			
Surrogate 4-Bromochlorobenzene-PID	7860		"	8000		98.3	50-150			
Matrix Spike (1851002-MS1)				Source: P812030-01	Prepared 12/17/18 0 Analyzed 12/17/18 2					
Benzene	4590	100	ug/kg	5000	ND	91.8	54.3-133			
Toluene	4600	100	"	5000	ND	92.0	61.4-130			
Ethylbenzene	4630	100	"	5000	ND	92.6	61.4-133			
p,m-Xylene	9470	200	"	10000	ND	94.7	63.3-131			
o-Xylene	4590	100	"	5000	ND	91.8	63.3-131			
Total Xylenes	14100	100	"	15000	ND	93.8	63.3-131			
Surrogate 4-Bromochlorobenzene-PID	7900		"	8000		98.7	50-150			
Matrix Spike Dup (1851002-MSD1)				Source: P812030-01	Prepared 12/17/18 0 Analyzed 12/18/18 1					
Benzene	4990	100	ug/kg	5000	ND	99.8	54.3-133	8.32	20	
Toluene	5030	100	"	5000	ND	101	61.4-130	8.93	20	
Ethylbenzene	5090	100	"	5000	ND	102	61.4-133	9.52	20	
p,m-Xylene	10400	200	"	10000	ND	104	63.3-131	9.63	20	
o-Xylene	5030	100	"	5000	ND	101	63.3-131	9.18	20	
Total Xylenes	15500	100	"	15000	ND	103	63.3-131	9.49	20	
Surrogate 4-Bromochlorobenzene-PID	7780		"	8000		97.2	50-150			

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Dugan Production Corp	Project Name	Arviso #1	Reported:
PO Box 420	Project Number	06094-0177	12/19/18 10:29
Farmington NM, 87499	Project Manager	Mike Sandoval	

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1851002 - Purge and Trap EPA 5030A										
Blank (1851002-BLK1)										
					Prepared 12/17/18 0 Analyzed: 12/17/18 1					
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate 1-Chloro-4-fluorobenzene-FID	8.06		"	8.00		101	50-150			
LCS (1851002-BS2)										
					Prepared 12/17/18 0 Analyzed: 12/17/18 1					
Gasoline Range Organics (C6-C10)	45.4	20.0	mg/kg	50.0		90.9	70-130			
Surrogate 1-Chloro-4-fluorobenzene-FID	8.29		"	8.00		104	50-150			
Matrix Spike (1851002-MS2)										
Source: P812030-01					Prepared 12/17/18 0 Analyzed: 12/17/18 2					
Gasoline Range Organics (C6-C10)	48.3	20.0	mg/kg	50.0	ND	96.5	70-130			
Surrogate 1-Chloro-4-fluorobenzene-FID	8.18		"	8.00		102	50-150			
Matrix Spike Dup (1851002-MSD2)										
Source: P812030-01					Prepared 12/17/18 0 Analyzed: 12/17/18 2					
Gasoline Range Organics (C6-C10)	48.4	20.0	mg/kg	50.0	ND	96.9	70-130	0.347	20	
Surrogate 1-Chloro-4-fluorobenzene-FID	8.31		"	8.00		104	50-150			

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Dugan Production Corp PO Box 420 Farmington NM, 87499	Project Name Project Number Project Manager	Arviso #1 06094-0177 Mike Sandoval	Reported: 12/19/18 10:29
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Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Unit	Spike Level	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Batch 1851004 - DRO Extraction EPA 3570										
Blank (1851004-BLK1)				Prepared 12/17/18 Analyzed 12/18/18 0						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate n-Nonane	46.7		"	50.0		93.4	50-200			
LCS (1851004-BS1)				Prepared 12/17/18 Analyzed 12/18/18 0						
Diesel Range Organics (C10-C28)	460	25.0	mg/kg	500		92.0	38-132			
Surrogate n-Nonane	46.7		"	50.0		93.4	50-200			
Matrix Spike (1851004-MS1)				Source: P812030-01 Prepared 12/17/18 Analyzed 12/18/18 0						
Diesel Range Organics (C10-C28)	582	25.0	mg/kg	500	96.7	97.0	38-132			
Surrogate n-Nonane	48.6		"	50.0		97.2	50-200			
Matrix Spike Dup (1851004-MSD1)				Source: P812030-01 Prepared 12/17/18 Analyzed 12/18/18 0						
Diesel Range Organics (C10-C28)	628	25.0	mg/kg	500	96.7	106	38-132	7.66	20	
Surrogate n-Nonane	48.2		"	50.0		96.5	50-200			

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Dugan Production Corp. PO Box 420 Farmington NM, 87499	Project Name: Arviso #1 Project Number: 06094-0177 Project Manager: Mike Sandoval	Reported: 12/19/18 10:29
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Anions by 300.0/9056A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Batch 1851001 - Anion Extraction EPA 300.0/9056A										
Blank (1851001-BLK1)										
Chloride	ND	20.0	mg/kg							Prepared & Analyzed 12/17/18 I
LCS (1851001-BS1)										
Chloride	256	20.0	mg/kg	250		102	90-110			Prepared & Analyzed 12/17/18 I
Matrix Spike (1851001-MS1)										
Chloride	316	20.0	mg/kg	250	79.2	94.8	80-120			Source: P812024-01 Prepared & Analyzed 12/17/18 I
Matrix Spike Dup (1851001-MSD1)										
Chloride	321	20.0	mg/kg	250	79.2	96.8	80-120	1.57	20	Source: P812024-01 Prepared & Analyzed 12/17/18 I

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Dugan Production Corp	Project Name	Arviso #1	
PO Box 420	Project Number	06094-0177	
Farmington NM, 87499	Project Manager	Mike Sandoval	Reported: 12/19/18 10:29

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
**	Methods marked with ** are non-accredited methods.

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Lab Use Only		TAT	EPA Program			
Lab WO#	Job Number	1D	3D	RCRA	CWA	SDWA
P872932	06094-0177		X			
		Analysts and Method			State	
CD by 8015	CD by 8015	8021	1260	010	300.0	1

[illegible]

Additional Instructions:

voice in cooler

(field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or tampering with the sample location, date or

Time of collection is considered fraud and may be grounds for legal action. Sampled by: <u>12/14/18</u>		Lab Use Only	
Relinquished by: (Signature)	Date	Received by: (Signature)	Date
<u>[Signature]</u>	12-14-18	<u>[Signature]</u>	12/14/18
Relinquished by: (Signature)	Date	Received by: (Signature)	Date
<u>[Signature]</u>		<u>[Signature]</u>	
		Received on Ice: <u>Y/N</u>	
		T1	T2
		AVG Temp °C <u>12.0</u>	

[illegible]

envirotech
Analytical Laboratory

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