

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 Merrion Oil & Gas Corporation	OGRID 14634
Contact Name Philana Thompson	Contact Telephone 505-486-1171
Contact email pthompson@merrion.bz	Incident # (assigned by OCD) nVF1833048464
Contact mailing address 610 Reilly Ave Farmington, NM 87401	

Location of Release Source

Latitude 36.3769073 _____ Longitude -107.8098679 _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Federal 29 #1	Site Type Gas
Date Release Discovered 11/14/2018	API# (if applicable) 30-045-25052

Unit Letter	Section	Township	Range	County
B	29	25N	9W	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 checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 22 bbls	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" 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:

11/14/18 Pumper Frank H. was on location to turn the well on, once he turned it on he noticed that the level in the produced water tank (which was empty at the start) was significantly lower that what was expected. It was calculated that we had lost 22 bbls of produced water from the tank. A truck was ordered to immediately come and remove the remaining produced water in the tank. Upon inspection the tank had rusted through on the bottom side of the tank.

NMOC
FEB 20 2019
DISTRICT III

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Incident ID	
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Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
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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

- 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: Philana Thompson _____ Title: Regulatory Compliance Specialist _____

Signature:  _____ Date: 11/20/2018 _____

email: pthompson@merrion.bz _____ Telephone: 505-486-1171 _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	628 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input checked="" 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 checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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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: Philana Thompson Title: Regulatory Compliance Specialist

Signature:  Date: 2/14/2019

email: pthompson@merrion.bz Telephone: 505-486-1171

OCD Only

Received by: _____ Date: _____

Incident ID	
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Application ID	

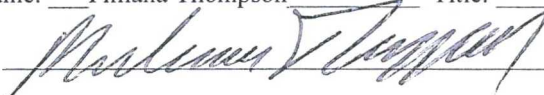
Closure

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: Philana Thompson Title: Regulatory Compliance Specialist


Signature:  Date: 2/14/2019

email: pthompson@merrion.bz Telephone: 505-486-1171

OCD Only

Received by: Vanessa Fields Date: 2/20/2019

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: 2/21/2019

Printed Name: Vanessa Fields Title: Environmental Specialist



February 14th, 2019

Vanessa Fields
Environmental Specialist
1000 Rio Brazos Road
Aztec, NM 87410

**Re: Closure Report: nVF1833048464
Federal 29 #1
B-29-T25N-R9W
30-045-25052**

Cause of Release:

11/14/18 Pumper Frank H. was on location to turn the well on, once he turned it on he noticed that the level in the produced water tank (which was empty at the start) was significantly lower than what was expected. It was calculated that we had lost 22 bbls of produced water from the tank. A truck was ordered to immediately come and remove the remaining produced water in the tank. Upon inspection the tank had rusted through on the bottom side of the tank.

11/15/2018 Notified NMOCD via electronic communication of incident and submitted Release Notification on 11/20/2018.

Site Information:

Site Name: Federal 29 #1
API: #30-045-25052
Legal: NW/NE S29, T25N, R9W 990 FNL & 1780 FEL 36.3769073, -107.8098679
Land Jurisdiction: BLM
Topo Site Location Map Figure 1
Aerial Site Location Map Figure 2

Closure Standards:

Per regulation 19.15.29 this location was determined to be within 300 feet of a watercourse. The following closure standards were used to determine action levels (19.15.29.12 Table I).

< 50 feet

Chloride	EPA 300.0 or SM4500 CIB	600 mg/kg
TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

Field Notes:

Nov. 19, 2018

Work Detail: Took down fence on 11/19/18 and hauled 2 loads clean soil to location. Hauled 3 loads contaminated soil to Envirotech.

Dec. 17, 2018

Work Detail: Met 3D services, BLM, OCD and Rule Engineering on location 12/17/18. Took soil samples using the backhoe for safety.

February 11, 2019

Work Detail: 3 D Services hauled 18 contaminated loads to land farm and 19 clean loads to location on 2/11/2019. Began the back fill process.

February 12, 2019

Work Detail: 3D hauled 19 contaminated loads to land farm and 29 loads of clean soil to location on 2/12/2019. Finished back filling.

Soil Sampling (See Sampling Reports):

	Bottom 5pt	Northwest Wall	Northeast Wall	Southeast Wall	Southwest wall	Bottom Grab	
11/26/2018	ND	ND	ND	ND	ND	ND	<i>TPH</i>
	ND	ND	ND	ND	ND	ND	<i>BTEX</i>
	1310	ND	398	ND	ND	878	<i>Chlorides</i>

	West Wall	South Wall w/2	North Wall	South Wall E/2	Base		
12/17/2018	ND	77	120	1100	700		<i>Chlorides</i>

	South Wall East	Base	
1/29/2019	ND	ND	<i>Chlorides</i>

Conclusions:

Based on final laboratory analytical results of the excavation site the results showed that the contaminated soils had been removed and benzene, total TPH and chloride concentrations were ND or below regulatory limits. The site was backfilled with clean soil from Envirotech. The tank that failed has since been removed from the site.

If you have any questions, please call me at 505-486-1171.

Sincerely,

Philana Thompson
Regulatory Compliance Specialist
Merrion Oil & Gas Corporation

Figure 1

Topographic Site Location Map
Merrion Oil & Gas Corporation
Federal 29 #1
30-045-25052
Incident #nVF1833048464
NWNE S29, T25N, R9W

Legend



-  1/2 Mile Radius
-  Federal 29-1



Figure 2

Topographic Site Location Map
Merrion Oil & Gas Corporation
Federal 29 #1
30-045-25052
Incident #nVF1833048464
NWNE S29, T25N, R9W

Legend

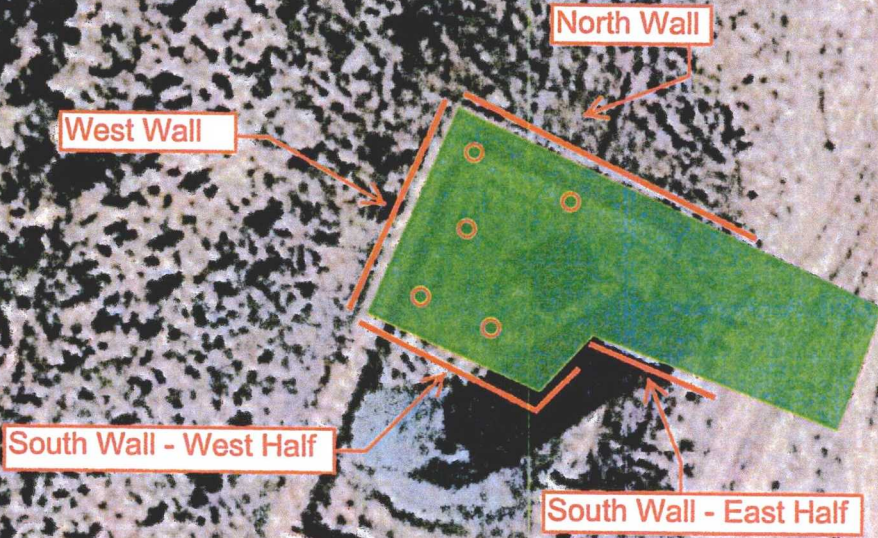
- 1000 ft
- 300 ft
- 500 ft
- Federal 29-1

Federal 29-1



Federal 29 #1

Legend
Excavation Extent



Google Earth

90 ft





10/10/10

8/12/18





Analytical Report

Report Summary

Client: Merrion Oil & Gas
Chain Of Custody Number:
Samples Received: 11/26/2018 1:15:00PM
Job Number: 03048-0009
Work Order: P811073
Project Name/Location: Federal 29-1

Report Reviewed By:

Date: 12/3/18

Walter Hinchman, Laboratory Director

Date: 12/3/18

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.
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Envirotech, Inc, currently holds the appropriate and available Utah TNi certification NM009792018-1 for the data reported.



Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Bottom 5 Point	P811073-01A	Soil	11/26/18	11/26/18	Glass Jar, 4 oz.
NorthWest Wall	P811073-02A	Soil	11/26/18	11/26/18	Glass Jar, 4 oz.
NorthEast Wall	P811073-03A	Soil	11/26/18	11/26/18	Glass Jar, 4 oz.
SouthEast Wall	P811073-04A	Soil	11/26/18	11/26/18	Glass Jar, 4 oz.
SouthWest Wall	P811073-05A	Soil	11/26/18	11/26/18	Glass Jar, 4 oz.
Bottom Grab	P811073-06A	Soil	11/26/18	11/26/18	Glass Jar, 4 oz.

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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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**Bottom 5 Point
P811073-01 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		102 %		50-150	1848010	11/27/18	11/30/18	EPA 8021B	

Nonhalogenated Organics by 8015

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848010	11/27/18	11/30/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		103 %		50-150	1848010	11/27/18	11/30/18	EPA 8015D	
<i>Surrogate: n-Nonane</i>		90.2 %		50-200	1848009	11/27/18	11/27/18	EPA 8015D	

Anions by 300.0/9056A

Chloride	1310	20.0	mg/kg	1	1848012	11/28/18	11/28/18	EPA 300.0/9056A	
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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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**NorthWest Wall
P811073-02 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848010	11/27/18	11/30/18	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		102 %		50-150	1848010	11/27/18	11/30/18	EPA 8021B	

Nonhalogenated Organics by 8015

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848010	11/27/18	11/30/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		103 %		50-150	1848010	11/27/18	11/30/18	EPA 8015D	
<i>Surrogate: n-Nonane</i>		89.5 %		50-200	1848009	11/27/18	11/27/18	EPA 8015D	

Anions by 300.0/9056A

Chloride	ND	20.0	mg/kg	1	1848012	11/28/18	11/28/18	EPA 300.0/9056A	
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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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**NorthEast Wall
P811073-03 (Solid)**

Reporting

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Volatile Organics by EPA 8021

Benzene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		102 %		50-150	1848010	11/27/18	12/01/18	EPA 8021B	

Nonhalogenated Organics by 8015

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848010	11/27/18	12/01/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		104 %		50-150	1848010	11/27/18	12/01/18	EPA 8015D	
<i>Surrogate: n-Nonane</i>		89.1 %		50-200	1848009	11/27/18	11/27/18	EPA 8015D	

Anions by 300.0/9056A

Chloride	398	20.0	mg/kg	1	1848012	11/28/18	11/28/18	EPA 300.0/9056A	
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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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**SouthEast Wall
P811073-04 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		102 %		50-150	1848010	11/27/18	12/01/18	EPA 8021B	

Nonhalogenated Organics by 8015

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848010	11/27/18	12/01/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		103 %		50-150	1848010	11/27/18	12/01/18	EPA 8015D	
<i>Surrogate: n-Nonane</i>		90.6 %		50-200	1848009	11/27/18	11/27/18	EPA 8015D	

Anions by 300.0/9056A

Chloride	ND	20.0	mg/kg	1	1848012	11/28/18	11/28/18	EPA 300.0/9056A	
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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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**SouthWest Wall
P811073-05 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatile Organics by EPA 8021

Benzene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		101 %		50-150	1848010	11/27/18	12/01/18	EPA 8021B	

Nonhalogenated Organics by 8015

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848010	11/27/18	12/01/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		101 %		50-150	1848010	11/27/18	12/01/18	EPA 8015D	
<i>Surrogate: n-Nonane</i>		89.8 %		50-200	1848009	11/27/18	11/27/18	EPA 8015D	

Anions by 300.0/9056A

Chloride	ND	20.0	mg/kg	1	1848012	11/28/18	11/28/18	EPA 300.0/9056A	
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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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**Bottom Grab
P811073-06 (Solid)**

Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Volatiles Organics by EPA 8021

Benzene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Toluene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Ethylbenzene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
p,m-Xylene	ND	200	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
o-Xylene	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Total Xylenes	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
Total BTEX	ND	100	ug/kg	1	1848010	11/27/18	12/01/18	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		102 %		50-150	1848010	11/27/18	12/01/18	EPA 8021B	

Nonhalogenated Organics by 8015

Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1848010	11/27/18	12/01/18	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1848009	11/27/18	11/27/18	EPA 8015D	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		103 %		50-150	1848010	11/27/18	12/01/18	EPA 8015D	
<i>Surrogate: n-Nonane</i>		90.3 %		50-200	1848009	11/27/18	11/27/18	EPA 8015D	

Anions by 300.0/9056A

Chloride	878	20.0	mg/kg	1	1848012	11/28/18	11/29/18	EPA 300.0/9056A	
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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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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 Limits	RPD	RPD Limit	Notes
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Batch 1848010 - Purge and Trap EPA 5030A

Blank (1848010-BLK1)										
Prepared: 11/27/18 1 Analyzed: 11/28/18 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	8030		"	8000		100	50-150			

LCS (1848010-BS1)										
Prepared: 11/27/18 1 Analyzed: 11/28/18 1										
Benzene	5130	100	ug/kg	5000		103	70-130			
Toluene	5150	100	"	5000		103	70-130			
Ethylbenzene	5200	100	"	5000		104	70-130			
p,m-Xylene	10600	200	"	10000		106	70-130			
o-Xylene	5130	100	"	5000		103	70-130			
Total Xylenes	15800	100	"	15000		105	70-130			
Surrogate: 4-Bromochlorobenzene-PID	8080		"	8000		101	50-150			

Matrix Spike (1848010-MS1)										
Source: P811072-01 Prepared: 11/27/18 1 Analyzed: 11/28/18 2										
Benzene	5050	100	ug/kg	5000	ND	101	54.3-133			
Toluene	5080	100	"	5000	ND	102	61.4-130			
Ethylbenzene	5130	100	"	5000	ND	103	61.4-133			
p,m-Xylene	10500	200	"	10000	ND	105	63.3-131			
o-Xylene	5070	100	"	5000	ND	101	63.3-131			
Total Xylenes	15600	100	"	15000	ND	104	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	8140		"	8000		102	50-150			

Matrix Spike Dup (1848010-MSD1)										
Source: P811072-01 Prepared: 11/27/18 1 Analyzed: 11/28/18 2										
Benzene	5260	100	ug/kg	5000	ND	105	54.3-133	4.12	20	
Toluene	5290	100	"	5000	ND	106	61.4-130	4.00	20	
Ethylbenzene	5350	100	"	5000	ND	107	61.4-133	4.15	20	
p,m-Xylene	10900	200	"	10000	ND	109	63.3-131	4.14	20	
o-Xylene	5280	100	"	5000	ND	106	63.3-131	3.99	20	
Total Xylenes	16200	100	"	15000	ND	108	63.3-131	4.09	20	
Surrogate: 4-Bromochlorobenzene-PID	8160		"	8000		102	50-150			

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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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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
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Batch 1848009 - DRO Extraction EPA 3570

Blank (1848009-BLK1)										
										Prepared & Analyzed: 11/27/18 1
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Oil Range Organics (C28-C40+)	ND	50.0	"							
Surrogate: n-Nonane	46.0		"	50.0		92.0	50-200			
LCS (1848009-BS1)										
										Prepared & Analyzed: 11/27/18 1
Diesel Range Organics (C10-C28)	477	25.0	mg/kg	500		95.5	38-132			
Surrogate: n-Nonane	45.0		"	50.0		89.9	50-200			
Matrix Spike (1848009-MS1)										
										Source: P811072-01 Prepared & Analyzed: 11/27/18 1
Diesel Range Organics (C10-C28)	619	25.0	mg/kg	500	104	103	38-132			
Surrogate: n-Nonane	45.8		"	50.0		91.5	50-200			
Matrix Spike Dup (1848009-MSD1)										
										Source: P811072-01 Prepared & Analyzed: 11/27/18 1
Diesel Range Organics (C10-C28)	602	25.0	mg/kg	500	104	99.7	38-132	2.81	20	
Surrogate: n-Nonane	44.8		"	50.0		89.7	50-200			

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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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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
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Batch 1848010 - Purge and Trap EPA 5030A

Blank (1848010-BLK1)		Prepared: 11/27/18 1 Analyzed: 11/28/18 1								
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.22		"	8.00		103	50-150			
LCS (1848010-BS2)		Prepared: 11/27/18 1 Analyzed: 11/28/18 2								
Gasoline Range Organics (C6-C10)	46.7	20.0	mg/kg	50.0		93.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.44		"	8.00		106	50-150			
Matrix Spike (1848010-MS2)		Source: P811072-01		Prepared: 11/27/18 1 Analyzed: 11/28/18 2						
Gasoline Range Organics (C6-C10)	48.4	20.0	mg/kg	50.0	ND	96.8	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.35		"	8.00		104	50-150			
Matrix Spike Dup (1848010-MSD2)		Source: P811072-01		Prepared: 11/27/18 1 Analyzed: 11/28/18 2						
Gasoline Range Organics (C6-C10)	47.0	20.0	mg/kg	50.0	ND	93.9	70-130	2.99	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.31		"	8.00		104	50-150			

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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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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
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Batch 1848012 - Anion Extraction EPA 300.0/9056A

Blank (1848012-BLK1)	Prepared & Analyzed: 11/28/18 1									
Chloride	ND	20.0	mg/kg							
LCS (1848012-BS1)	Prepared & Analyzed: 11/28/18 1									
Chloride	258	20.0	mg/kg	250		103	90-110			
Matrix Spike (1848012-MS1)	Source: P811072-01 Prepared & Analyzed: 11/28/18 1									
Chloride	270	20.0	mg/kg	250	ND	108	80-120			
Matrix Spike Dup (1848012-MSD1)	Source: P811072-01 Prepared: 11/28/18 1 Analyzed: 11/29/18 1									
Chloride	272	20.0	mg/kg	250	ND	109	80-120	0.948	20	

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Merrion Oil & Gas 610 Reilly Ave. Farmington NM, 87401	Project Name: Federal 29-1 Project Number: 03048-0009 Project Manager: Philana Thompson	Reported: 12/03/18 14:46
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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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Client: Merrion Oil & Gas
 Project: Federal 29-1
 Project Manager: Philana Thompson
 Address: 610 Reilly Ave
 City, State, Zip: Farmington, NM 87401
 Phone: 5054861171
 Email: pthompson@merrion-bc

Report Attention
 Report due by:
 Attention: Philana Thompson
 Address: 610 Reilly Ave
 City, State, Zip: Farmington, NM 87401
 Phone: 5054861171
 Email: pthompson@merrion-bc

Lab Use Only
 Lab WO# P311073 Job Number 03048-0009
 TAT
 EPA Program
 1D 3D RCRA CWA SDWA

Analysis and Method
 State
 NM CO UT AZ
 X

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	TPH 418.1	Remarks
9:58 AM	11/26/18	S	1	Bottom 5 point	1	X	X	X			X		1-4oz glass via
10:06 AM	11/26/18		1	North West Wall	2								
10:13 AM	11/26/18		1	North East Wall	3								
10:22 AM	11/26/18		1	South East Wall	4								
10:26 AM	11/26/18		1	South West Wall	5								
10:30 AM	11/26/18		1	Bottom Grab	6								

Additional Instructions: NM OLD Table 1, visible ice in cooler etc

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: [Signature]

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6°C on subsequent days.

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>11-26-18</u>	Time <u>11:15</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>11-26-18</u>	Time <u>X 13:15</u>	Lab Use Only Received on ice: <u>(Y) / N</u>
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 T2 T3 AVG Temp °C <u>4.0°C</u>

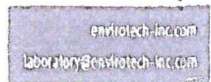
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

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 laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



5796 US Highway 64 Farmington, NM 87401
 Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

PH 505 622 0615 FX 505 627 1816
 TN 970 259 0615 FX 010 862 1829





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

December 26, 2018

Heather Woods

Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Merrion Federal 29 1

OrderNo.: 1812984

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/18/2018 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,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order: 1812984
 Date Reported: 12/26/2018

CLIENT: Rule Engineering LLC
Project: Merrion Federal 29 1

Lab Order: 1812984

Lab ID: 1812984-001 **Collection Date:** 12/17/2018 9:30:00 AM
Client Sample ID: West Wall **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	ND	30		mg/Kg	20	12/20/2018 9:26:59 PM	42243

Lab ID: 1812984-002 **Collection Date:** 12/17/2018 9:35:00 AM
Client Sample ID: South Wall West Half **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	77	30		mg/Kg	20	12/20/2018 10:04:13 PM	42243

Lab ID: 1812984-003 **Collection Date:** 12/17/2018 9:40:00 AM
Client Sample ID: North Wall **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	120	30		mg/Kg	20	12/20/2018 10:16:37 PM	42243

Lab ID: 1812984-004 **Collection Date:** 12/17/2018 9:45:00 AM
Client Sample ID: Base **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: MRA							
Chloride	700	30		mg/Kg	20	12/20/2018 10:29:02 PM	42243

Lab ID: 1812984-005 **Collection Date:** 12/17/2018 9:50:00 AM
Client Sample ID: South Wall East Half **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS Analyst: smb							
Chloride	1100	75		mg/Kg	50	12/23/2018 6:53:20 PM	42243

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 1 of 2
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1812984

26-Dec-18

Client: Rule Engineering LLC
Project: Merrion Federal 29 1

Sample ID	MB-42243	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	42243	RunNo:	56495					
Prep Date:	12/20/2018	Analysis Date:	12/20/2018	SeqNo:	1890382	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-42243	SampType:	ics	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	42243	RunNo:	56495					
Prep Date:	12/20/2018	Analysis Date:	12/20/2018	SeqNo:	1890383	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.9	90	110			

Qualifiers:

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



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

Sample Log-In Check List

Client Name: **RULE ENGINEERING LL**

Work Order Number: **1812984**

RcptNo: **1**

Received By: **Isaiah Ortiz** 12/18/2018 8:05:00 AM

I-Ox

Completed By: **Isaiah Ortiz** 12/18/2018 8:43:47 AM

I-Ox

Reviewed By: **DAD 12/18/18**

LB: [Signature] 12/18/18

Chain of Custody

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

Log In

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

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

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

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

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			
2	2.1	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering

Mailing Address: 501 Airport Dr Ste 205
Farmington, NM 87401
 Phone #: (505) 716-2787
 Email or Fax#: hwoods@ruleengineering.com

VQC Package:
 Standard Level 4 (Full Validation)

Creditation:
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush _____

Project Name: Merrion Federal 29 #1

Project #: _____

Project Manager:
Heather Woods
Merrion Federal 29 #1

Sampler: Heather Woods

On Ice: Yes No

Sample Temperature: 29°C 21°C



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F ⁻ , Cl ⁻ , NO ₂ ⁻ , PO ₄ ⁻³ , SO ₄ ⁻²)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)	
7/18	0930	Soil	East West Wall	(1) 4oz Glass	cool	-001								X					
7/18	0935	Soil	South Wall - West Half			-002								X					
7/18	0940	Soil	North Wall			-003								X					
7/18	0945	Soil	Base			-004								X					
7/18	0950	Soil	South Wall - East Half			-005								X					
 HB HW 																			

Relinquished by: Heather M. Woods Received by: Christine Wachs Date Time: 12/17/18 1839

Relinquished by: Christine Wachs Received by: Tracy Courice Date Time: 12/18/18 0805

Remarks: Direct Bill to Merrion Oil and Gas
c/o Philana Thompson
pthompson@merrion.biz

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



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

January 31, 2019

Heather Woods

Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: Merrion Federal 29 1

OrderNo.: 1901A32

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/26/2019 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,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: Merrion Federal 29 1

Lab Order: 1901A32

Lab ID: 1901A32-001
Client Sample ID: South Wall- East (2)

Collection Date: 1/25/2019 8:30:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	1/29/2019 6:38:42 PM	42859

Lab ID: 1901A32-002
Client Sample ID: Base (2)

Collection Date: 1/25/2019 8:42:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
FIELD PARAMETERS							Analyst:
Reference Elevation							
EPA METHOD 300.0: ANIONS							Analyst: smb
Chloride	ND	60		mg/Kg	20	1/29/2019 6:51:07 PM	42859

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

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	D Sample Diluted Due to Matrix	E Value above quantitation range	
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	Page 1 of 2
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range	
	PQL Practical Quantitative Limit	RL Reporting Detection Limit	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1901A32
 31-Jan-19

Client: Rule Engineering LLC
Project: Merrion Federal 29 1

Sample ID	MB-42859	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	42859	RunNo:	57344					
Prep Date:	1/29/2019	Analysis Date:	1/29/2019	SeqNo:	1918616	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-42859	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	42859	RunNo:	57344					
Prep Date:	1/29/2019	Analysis Date:	1/29/2019	SeqNo:	1918617	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	90	110			

Qualifiers:

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



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Sample Log-In Check List

Client Name: **RULE ENGINEERING LL**

Work Order Number: **1901A32**

RcptNo: **1**

Received By: **Desiree Dominguez** 1/28/2019 9:45:00 AM *DD*

Completed By: **Desiree Dominguez** 1/28/2019 8:24:04 AM *DD*

Reviewed By: *LB* 1/28/19
 LABELED BY: TMM 1-28-19

Chain of Custody

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

Log In

- 3. Was an attempt made to cool the samples? Yes No NA
- 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
Not required
- 5. Sample(s) in proper container(s)? Yes No
- 6. Sufficient sample volume for indicated test(s)? Yes No
- 7. Are samples (except VOA and ONG) properly preserved? Yes No
- 8. Was preservative added to bottles? Yes No NA
- 9. VOA vials have zero headspace? Yes No No VOA Vials
- 10. Were any sample containers received broken? Yes No
- 11. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 12. Are matrices correctly identified on Chain of Custody? Yes No
- 13. Is it clear what analyses were requested? Yes No
- 14. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

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

Adjusted? _____

Checked by: _____

TMM

Special Handling (if applicable)

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

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

16. Additional remarks:
 Samples were not frozen

17. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	-0.2	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering

Mailing Address: 501 Airport Dr, Ste 205
Farmington, NM 87401

Phone #: (505) 711-2787

email or Fax#: hwoods@ruleengineering.com

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

Accreditation: Az Compliance
 NELAC Other

EDD (Type)

Turn-Around Time:
 Standard Rush 3-Day

Project Name: Merrion Federal 79 #1

Project #:

Project Manager: Heather Woods

Sampler: Heather Woods

On Ice: Yes No

Hot Coolers: Yes Not Frozen

Cooler Temp (including CF): 0.4°C - 0.6°C = 0.2°C

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
<u>1/25/19</u>	<u>0830</u>	<u>Soil</u>	<u>South Wall-East (2)</u>	<u>(1) 4oz Glass</u>	<u>None</u>	<u>-001</u>
<u>1/25/19</u>	<u>0842</u>	<u>Soil</u>	<u>Base (2)</u>	<u>(1) 4oz Glass</u>	<u>None</u>	<u>-002</u>



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request									
BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₂ , NO ₃ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
						<input checked="" type="checkbox"/>			
						<input checked="" type="checkbox"/>			

Date: <u>1/25/19</u>	Time: <u>1830</u>	Relinquished by: <u>Heather M. Woods</u>	Received by: <u>[Signature]</u>	Via:	Date: <u>1/25/19</u>	Time: <u>1830</u>
Date: <u>1/25/19</u>	Time: <u>1900</u>	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Via: <u>Courier</u>	Date: <u>1/26/19</u>	Time: <u>9:45</u>

Remarks: Direct Bill to Merrion
C/o Philana Thompson

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