



Souder, Miller & Associates ♦ 201 S. Halagueno St. ♦ Carlsbad, NM 88220  
(575) 689-8801

August 10, 2021

#5E28980-BG15

NMOCD District 2  
811 S. First St.  
Artesia, New Mexico 88210

SUBJECT: Response to OCD rejection for the Gravel Grinder Fee 23 28 18 WXY #003H Release  
(NAPP2035543036), Eddy County, New Mexico

Ms. Cristina Eads:

On behalf of Marathon Oil Permian LLC (Marathon, Souder, Miller & Associates (SMA) has prepared this response to the rejected OCD Application for administrative approval of a release notification and corrective action C-141 for the release of liquids related to oil and gas production activities at the Gravel Grinder Fee 23 28 18 WXY #003H site. The site is in Unit M, Section 18, Township 23S, Range 28E, Eddy County, New Mexico, on Federal land.

Per the email dated July 20, 2021, OCD rejected the C-141 for the following reason:

- **This release appears to be less than 300 feet from an irrigation canal, and may cause an imminent risk to human health and/or the environment. Attempts to minimize the contamination left in place by hand excavation or in-situ remediation, or any other applicable remediation method.**

SMA is proposing the following plan to minimize contamination via in-situ remediation:

- The hydrocarbon impacted area will be disced or tilled to approximately 4-6 inches below grade surface.
- Apply Bio-Regen Soil Rx (SDS attached) to the impacted area.

Marathon is requesting 90 days, upon OCD approval of this plan, to complete the proposed plan. Upon completion of work, OCD will be provided with a letter summarizing in-situ remediation activities and photo documentation of work completed.

If there are any questions, please contact me at 505-320-8975.

Submitted by:  
SOUDER, MILLER & ASSOCIATES

A handwritten signature in black ink, appearing to read 'AM', is written over a light blue horizontal line.

Ashley Maxwell  
Project Scientist



## Bio-Regen Soil Rx

### Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 06/01/2015

Supersedes: 03/24/15

Version: 1.0

Format: GHS

Language: English (US)

## SECTION 1: Identification

### Product Identifier

**Product Name** Bio-Regen Soil Rx**Product Name** Mixture

### Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

### Details of the Supplier of the Safety Data Sheet

**Manufacturer** 3 Tier Technologies, LLC  
250 National Place, Suite 142  
Longwood, FL 32750**Telephone (General)** 877-226-7498

### Emergency Telephone Number

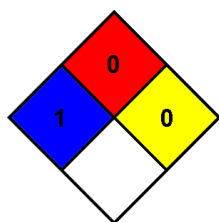
**Manufacturer** 407-808-4653

## SECTION 2: Hazard Identification

### Classification of the Substance or Mixture

**Classification (GHS-US)** Not classified**Label elements** No labeling applicable**Hazard Statements** None**Precautionary Statements** None

### Other Information



### NFPA Health Hazard

1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

### NFPA Fire Hazard

0 - Materials that will not burn.

### NFPA Reactivity

0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

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### SECTION 3: Composition/Information on Ingredients

**Substances** Material does not meet the criteria of a substance.

#### Mixtures

Bio-Regen Soil Rx is a blended composition "not considered hazardous" under the OSHA Hazard Communication Standard CFR Title 29 1910.1200. All ingredients appear on the EPA TSCA Inventory. All Bacillus Bacteria contained in this product are DSL Listed and Compliant.

Components	CAS Number	%	Hazardous
Organic Biopolymer	1415-93-6	50	No
Bacillus Bacteria	ATCC 18250-7	30	No
RO Water	7732-18-5	10	No
Amino Acids	Various	10	No

*Ingredients of <1% have been added to a non-hazardous liquid organic substrate. Active components >5% are identified above.*

See Section 11 for Toxicology Information

### SECTION 4: First aid measures

#### Description of First Aid Measures

<b>Inhalation</b>	Remove to fresh air and keep at rest in a comfortable position for breathing.
<b>Skin (or clothing)</b>	Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation develops or persists, get medical attention.
<b>Eye</b>	Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. If pain, blinking, or irritation develops or persists, get medical attention. Continue rinsing.
<b>Ingestion</b>	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

#### Most Important Symptoms and Effects, both Acute and Delayed

Refer to Section 11: Toxicological Information.

#### Indication of Any Medical Attention and Special Treatment Needed

#### Notes to Physician

All treatments should be based on observed signs and symptoms of distress in patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### SECTION 5: Fire-Fighting Measures

#### Extinguishing Media

**Suitable Extinguishing Media** Carbon dioxide. Dry powder. Foam

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**Unsuitable Extinguishing Media** Not applicable.

### Special Hazards Arising From the Substance or Mixture

**Unusual Fire and Explosion Hazards** Not applicable.

**Hazardous Combustion Products** Not applicable.

**Advice for Firefighters** No special firefighting equipment is needed; however, self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.

## SECTION 6: Accidental Release Measures

### Personal Precautions, Protective Equipment and Emergency Procedures

**Personal Precautions** Store in a safe place. Wear approved goggles when handling this product. Wash material off skin with plenty of soap and water. Wash clothing and footwear before reuse. Always wash hands thoroughly after use.

**Emergency Procedures** Not applicable.

### Environmental Precautions

### Methods and Material for Containment and Cleaning Up

**Containment/Clean-Up Measures** Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in a safe manner in accordance with local/national regulations.

## SECTION 7: Handling and Storage

### Precautions for Safe Handling

**Handling** Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### Conditions for Safe Storage, Including Any Incompatibilities

**Storage** Keep out of reach of children. Store in a dry, well-ventilated area. Keep container closed when not in use.

**Incompatible Materials or Ignition Sources** Caustics, oxidizers, reducers.

## SECTION 8: Exposure Controls/Personal Protection

### Control Parameters

### Exposure Controls

**Engineering Measures/Controls** None specified.



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### Personal Protective Equipment



### Pictograms

#### Respiratory

MSHA-NIOSH approved. No special precautions required.

#### Eye/Face

Protective eye goggles are recommended.

#### Hands

Wear rubber gloves for prolonged exposure; rinse completely from skin after contact.

#### Skin/Body

No special precautions required; rinse completely from skin after contact.

**General Industrial Hygiene Considerations** None specified.

**Environmental Exposure Controls** None specified.

## SECTION 9: Physical and Chemical Properties

Material Description			
<b>Physical Form</b>	Liquid	<b>Appearance - Description</b>	Brown / Black Liquid
<b>Color</b>	Brown / Black	<b>Odor</b>	Mild Citrus Odor
<b>Taste</b>	Data Lacking	<b>Particulate Type</b>	Not relevant
<b>Particulate Size</b>	Not relevant	<b>Aerosol Type</b>	Not relevant
<b>Odor Threshold</b>	Data Lacking	<b>Physical and Chemical Properties</b>	Data Lacking
<b>General Properties</b>			
<b>Boiling Point</b>	>212°F (100°C)	<b>Melting Point</b>	Data Lacking
<b>Decomposition Temperature</b>	Data Lacking	<b>Heat of Decomposition</b>	Data Lacking
<b>pH</b>	6.9 – 9.5	<b>Specific Gravity/Relative Density</b>	1.01 – 1.05
<b>Density</b>	Data Lacking	<b>Bulk Density</b>	Data Lacking
<b>Water Solubility</b>	99%	<b>Solvent Solubility</b>	Not relevant
<b>Viscosity</b>	Equivalent to Water	<b>Explosive Properties</b>	Classification criteria not met.
<b>Oxidizing Properties</b>	Classification criteria not met.		
<b>Volatility</b>			
<b>Vapor Pressure</b>	Equivalent to Water	<b>Vapor Density</b>	Equivalent to Water
<b>Evaporation Rate</b>	Not Determined	<b>VOC (Wt.)</b>	Negligible
<b>VOC (Vol.)</b>	Data Lacking	<b>Volatiles (Wt.)</b>	Data Lacking
<b>Volatiles (Vol.)</b>	Data Lacking		
<b>Flammability</b>			
<b>Flash Point</b>	Not relevant	<b>UEL</b>	Not relevant
<b>LEL</b>	Not relevant	<b>Autoignition</b>	Not relevant
<b>Self-Accelerating Decomposition Temperature (SADT)</b>	Not relevant	<b>Heat of Combustion</b>	Not relevant
<b>Burning Time</b>	Not relevant	<b>Flame Duration</b>	Not relevant
<b>Flame Height</b>	Not relevant	<b>Flame Extension</b>	Not relevant
<b>Ignition Distance</b>	Not relevant	<b>Flammability (solid, gas)</b>	Non-flammable

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<b>Environmental</b>			
<b>Half-Life</b>	Data Lacking	<b>Octanol/Water Partition Coefficient</b>	Data Lacking
<b>Coefficient of Water/Oil Distribution</b>	Data Lacking	<b>Bioaccumulation Factor</b>	Data Lacking
<b>Bioconcentration Factor</b>	Data Lacking	<b>Biochemical Oxygen Demand BOD/BOD5</b>	Data Lacking
<b>Chemical Oxygen Demand</b>	Data Lacking	<b>Persistence</b>	Data Lacking
<b>Degradation</b>	Data Lacking		

### SECTION 10: Stability and Reactivity

<b>Reactivity</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability</b>	Stable under normal temperatures and pressures.
<b>Possibility of Hazardous Reactions</b>	None known.
<b>Conditions to Avoid</b>	None known.
<b>Incompatible Materials</b>	Strong oxidizing agents, alkalis.
<b>Hazardous Decomposition Products</b>	Carbon oxides (CO, CO2). Sulfur oxides.

### SECTION 11: Toxicological Information

#### Information of Toxicological Effects

GHS Properties	Classification
<b>Acute Toxicity</b>	<b>OSHA HCS 2012</b> Classification criteria not met
<b>Aspiration Hazard</b>	<b>OSHA HCS 2012</b> Classification criteria not met
<b>Carcinogenicity</b>	<b>OSHA HCS 2012</b> Classification criteria not met
<b>Germ Cell Mutagenicity</b>	<b>OSHA HCS 2012</b> Classification criteria not met
<b>Respiratory Sensitization</b>	<b>OSHA HCS 2012</b> Mild Irritant
<b>Serious Eye Damage/Irritation</b>	<b>OSHA HCS 2012</b> Mild Irritant
<b>Skin Corrosion/Irritation</b>	<b>OSHA HCS 2012</b> Classification criteria not met
<b>Skin Sensitization</b>	<b>OSHA HCS 2012</b> Mild Irritant
<b>STOT-RE</b>	<b>OSHA HCS 2012</b> Classification criteria not met
<b>STOT-SE</b>	<b>OSHA HCS 2012</b> Classification criteria not met
<b>Toxicity for Reproduction</b>	<b>OSHA HCS 2012</b> Classification criteria not met

**Target Organs** None.

**Route(s) of Entry/Exposure**

**Potential Health Effects**

#### Inhalation

Acute (Immediate) May cause respiratory irritation.  
Chronic (Delayed) No data available.

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### Skin

Acute (Immediate) May cause skin irritation.  
Chronic (Delayed) No data available.

### Eye

Acute (Immediate) Direct contact with the eyes is likely to be irritating.  
Chronic (Delayed) No data available.

### Ingestion

Acute (Immediate) May cause gastrointestinal irritation.  
Chronic (Delayed) No data available.

## SECTION 12: Ecological information

**Toxicity** Material data lacking.

**Persistence and Degradability** Material data lacking.

**Bioaccumulative Potential** Material data lacking.

**Mobility in Soil** Material data lacking.

**Other Adverse Effects** No studies have been found.

**Other Information** No data is available on the adverse effects of this material on the environment.

## SECTION 13: Disposal Considerations

### Waste Treatment Methods

**Product Waste** Dispose of content in accordance with local, regional, national, and/or international regulations.

**Packaging Waste** Dispose of container in accordance with local, regional, national, and/or international regulations.

## SECTION 14: Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(es)	14.4 Packing Group	14.5 Environmental Hazards
DOT	Not applicable	(N.O.I.) Non Hazardous	Not applicable	Not applicable	Not applicable
TDG	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IMO/IMDG	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
IATA/ICAO	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

**Special Precautions for User** None specified.

**Transport in Bulk According to**

**Annex II of MARPOL 73/78**

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### The IBC Code

None specified.

## SECTION 15: Regulatory information

### US Federal Regulations

All chemical substances in this product are listed in the EPA (Environmental Protection Agency) TSCA (Toxic Substances Control Act) Inventory.

### International Regulations

No additional information available.

### California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

## SECTION 16: Other Information

### Disclaimer/Statement of Liability

*The information for this safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual products use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the mandatory requirements of Federal, State, Provincial, or local laws. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries, or consequential damages which may result from the use of or reliance on any information contained in this form.*

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	NAPP2035543036
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party Marathon Oil Permian LLC	OGRID 372098
Contact Name Melodie Sanjari	Contact Telephone 575-988-8753
Contact email <a href="mailto:msanjari@marathonoil.com">msanjari@marathonoil.com</a>	Incident # (assigned by OCD)
Contact mailing address 4111 S. Tidwell Rd., Carlsbad, NM 8220	

### Location of Release Source

Latitude 32.2989697

Longitude -104.13114049  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: GRAVEL GRINDER FEE 23 28 18 WXY #003H	Site Type: Oil & Gas Facility
Date Release Discovered: 12/20/2020	API# (if applicable) 30-015-44627

Unit Letter	Section	Township	Range	County
M	18	23S	28E	Eddy

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 checked="" type="checkbox"/> Other (describe)	Volume/Weight Released (provide units) Oil, Sand & Produced Water Mixture from Wellhead (emulsion) 250 bbl.	Volume/Weight Recovered (provide units) 250 bbl.

#### Cause of Release

Upon arrival at the Gravel Grinder location, it was discovered that an extra heavy 90 on the casing failed as a result of sand erosion which led to the release of approx. 250 bbl. of emulsion (water, oil & sand -appears to be mostly water) on the engineered pad. Recovery efforts began immediately as there were already two trucks in the vicinity – an emergency on call was placed and a surface scrape was conducted after standing fluids were removed to ensure the release did not migrate laterally into the pasture.

Incident ID	NAPP2035543036
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?  Volume
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Melodie Sanjari via a C141a on 12/20	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" 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>Melodie Sanjari</u>	Title: <u>Environmental Professional</u>
Signature: <u>Melodie Sanjari</u>	Date: 12/22/2020
email: <u>msanjari@marathonoil.com</u>	Telephone: <u>575-988-8753</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____

Incident ID	NAPP2035543036
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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?	<u>70</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

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District RP	
Facility ID	
Application ID	

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

Printed Name: Melodie Sanjari Title: Environmental Professional

Signature: Melodie Sanjari Date: 2/25/2021

email: msanjari@marathonoil.com Telephone: 575-988-8753

**OCD Only**

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



Incident ID	NAPP2035543036
District RP	
Facility ID	
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: Melodie Sanjari Title: Environmental Professional

Signature: Melodie Sanjari Date: 2/25/2021

email: msanjari@marathonoil.com Telephone: 575-988-8753

**OCD Only**

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

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

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



Souder, Miller & Associates ♦ 201 S. Halagueno St. ♦ Carlsbad, NM 88220  
(575) 689-8801

February 12, 2021

#5E28980-BG15

NMOCD District 2  
811 S. First St.  
Artesia, New Mexico 88210

SUBJECT: Deferral Request Report for the Gravel Grinder Fee 23 28 18 WXY #003H Release  
(NAPP2035543036), Eddy County, New Mexico

To Whom it May Concern:

On behalf of Marathon Oil Permian LLC (Marathon, Souder, Miller & Associates (SMA) has prepared this Deferral Request Report that describes the release of liquids related to oil and gas production activities at the Gravel Grinder Fee 23 28 18 WXY #003H site. The site is in Unit M, Section 18, Township 23S, Range 28E, Eddy County, New Mexico, on Federal land. Figure 1 illustrates the vicinity and site location on an USGS 7.5 minute quadrangle map.

Table 1 summarizes release information and Closure Criteria.

Table 1: Release Information and Closure Criteria			
Name	Gravel Grinder Fee 23 28 18 WXY #003H	Company	Marathon oil Permian LLC
API Number	30-015-44627	Location	32.2989697 -104.13114049
Tracking Number	NAPP2035543036		
Estimated Date of Release	12/20/2020	Date Reported to NMOCD	12/20/2020
Land Owner	Federal	Reported To	NMOCD District 2
Source of Release	Casing failure		
Released Volume	250 bbls	Released Material	Oil, Sand, and Produced Water
Recovered Volume	250 bbls	Net Release	0 bbls
NMOCD Closure Criteria	51-100 feet to groundwater		
SMA Response Dates	December 30, 2020 and January 21, 2021		

## **1.0 Background**

On December 20, 2020, a release was discovered at the Gravel Grinder Fee 23 28 18 WXY #003H site that was a result of corrosion on the casing at the wellhead. Initial response activities were conducted by Marathon, and included source elimination and containment activities, which recovered approximately 250 barrels of fluid and sand and a surficial scrape of the heavily impacted material across the release area. Figure 1 illustrates the vicinity and site location; Figure 2 illustrates the release location. The C-141 form is included in Appendix A.

## **2.0 Site Information and Closure Criteria**

The Gravel Grinder Fee 23 28 18 WXY #003H is an active production facility located approximately 2.1 miles northwest of Loving, New Mexico on Federal (BLM) land at an elevation of approximately 3,079 feet above mean sea level (amsl).

### **Depth to Groundwater**

Based upon New Mexico Office of State Engineer (NMOSE) well record data (Appendix B), depth to groundwater in the area is estimated to be 70 feet below grade surface (bgs).

### **Wellhead Protection Area**

There are seven (7) known water sources within ½-mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) online water well database.

### **Distance to Nearest Significant Watercourse**

The nearest significant watercourse is an unnamed canal, located approximately 633 feet to the south.

Table 2 demonstrates the Closure Criteria applicable to this location. Figure 2 illustrates the site with 200 and 300-foot radii to indicate that it does not lie within a sensitive area as described in 19.15.29.12.C(4) NMAC.

Based on the information presented herein, the applicable NMOCD Closure Criteria for this site is for a groundwater depth of between 51-100 feet bgs.

## **3.0 Release Characterization and Remediation Activities**

On December 30, 2020 and January 21, 2021, SMA personnel performed site delineation activities at the active Gravel Grinder Fee 23 28 18 WXY #003H site. SMA collected soil samples around the release site and throughout the visibly stained area. The area of visual impact was located entirely within the boundary of the developed production facility.

Soil samples were field-screened for chloride using an electrical conductivity (EC) meter and for hydrocarbon impacts using a calibrated MiniRAE 2000 photoionization detector (PID) equipped with a 10.6 eV lamp.

A total of thirteen (13) sample locations were investigated using a hand-auger, to depths up to four (4) feet bgs. A total of 47 samples were collected for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D.

Figure 3 shows the extent of the release area and sample locations. Laboratory results are summarized in Table 3. Laboratory reports are included in Appendix D.

## **4.0 Site Recommendations**

As demonstrated in Table 3, delineation samples at location meet the Closure Criteria of Table I of 19.15.29.12 NMAC with the exception of the surficial samples collected for sample locations S3, S4, S5, S6, S7, SW1, and SW2. A deferral is requested for sample locations these locations, due to proximity to production equipment and active pipelines, where remediation activities would cause a major facility destruction and a high safety risk. As required, and demonstrated on Table 3 and Figure 3, the deferred area has been fully delineated and does not pose an imminent risk to human health, the environment, or groundwater.

SMA requests a deferral for remediation in the area of locations (S3-S7, SW1, and SW2) for Incident Number NAPP2035543036.

## **5.0 Scope and Limitations**

The scope of our services included: assessment sampling; verifying release stabilization; regulatory liaison; remediation; and preparing this report. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either SMA Project Manager at 505-320-8975 or Shawna Chubbuck at 505-325-7535.

Submitted by:  
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Ashley Maxwell  
Project Scientist



Shawna Chubbuck  
Senior Scientist

## **REFERENCES:**

New Mexico Office of the State Engineer (NMOSE) online water well database  
[https://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](https://gis.ose.state.nm.us/gisapps/ose_pod_locations/); accessed 12/29/2020

Gravel Grinder Fee 23 28 18 WXY #003H Deferral Request Report  
February 12, 2021

Page 4 of 4

## **ATTACHMENTS:**

### **Figures:**

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Surface Water Radius Map

Figure 3: Site and Sample Location Map

### **Tables:**

Table 2: NMOCD Closure Criteria Justification

Table 3: Summary of Sample Results

### **Appendices:**

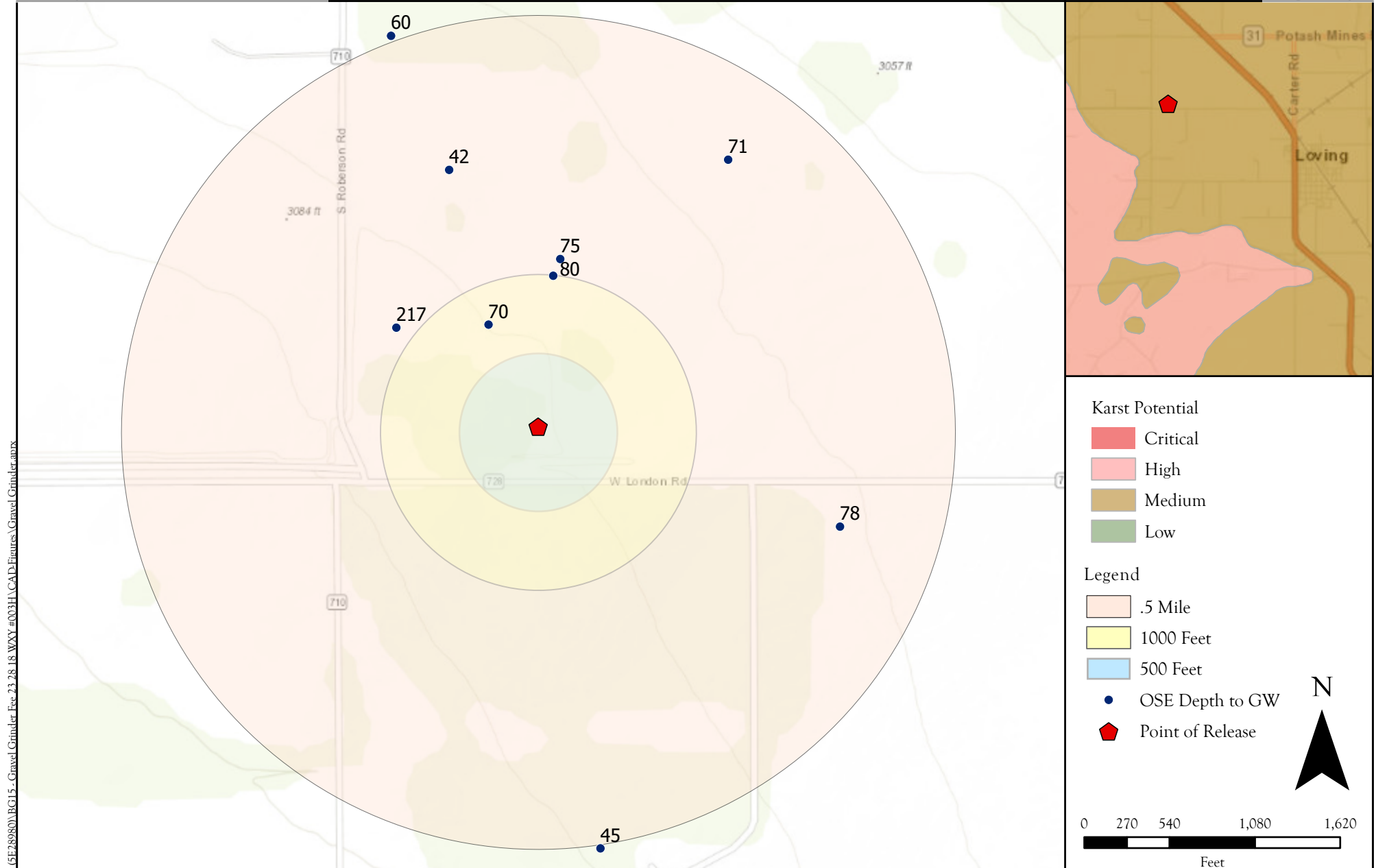
Appendix A: Form C141

Appendix B: NMOSE Wells Report

Appendix C: Field Notes

Appendix D: Laboratory Analytical Reports

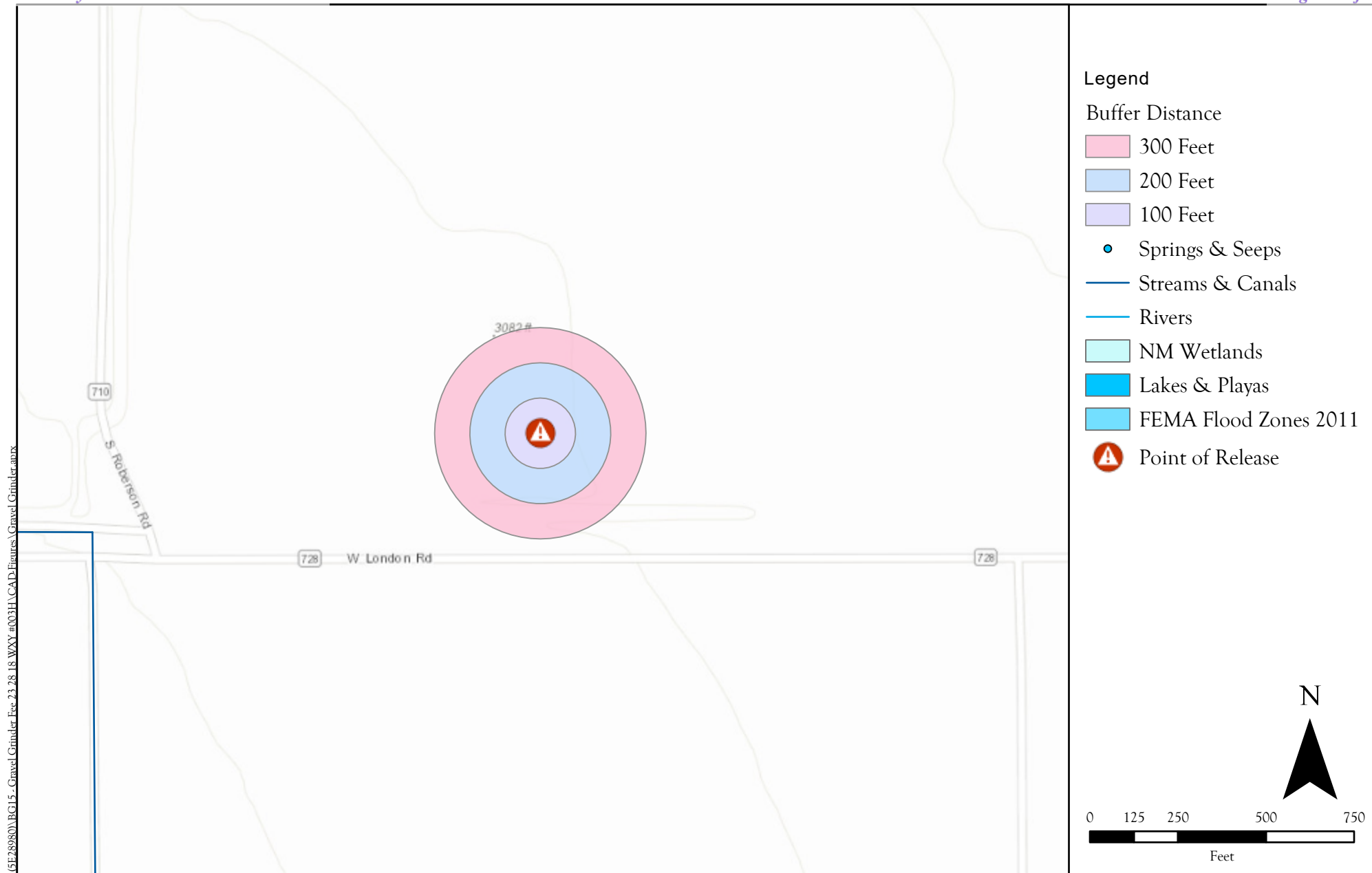
# FIGURES



Site Map  
Gravel Grinder Fee 23 28 18 WXY #3H - Marathon Oil,  
UL: M : 18 T:23S R: 28E Eddy County, New Mexico

Figure 1

<p>Revisions</p> <p>By: _____ Date: _____ Descr: _____</p> <p>By: _____ Date: _____ Descr: _____</p> <p>© Souder, Miller &amp; Associates, 2020, All Rights Reserved</p>	<p>Drawn Jake Madison</p> <p>Date 2/22/2021</p> <p>Checked _____</p> <p>Approved _____</p>	
--	--	--



Surface Water Protection Map  
Gravel Grinder Fee 23 28 18 WXY #3H - Marathon Oil,  
UL: M : 18 T:23S R: 28E Eddy County, New Mexico

Figure 2

## Revisions

By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_

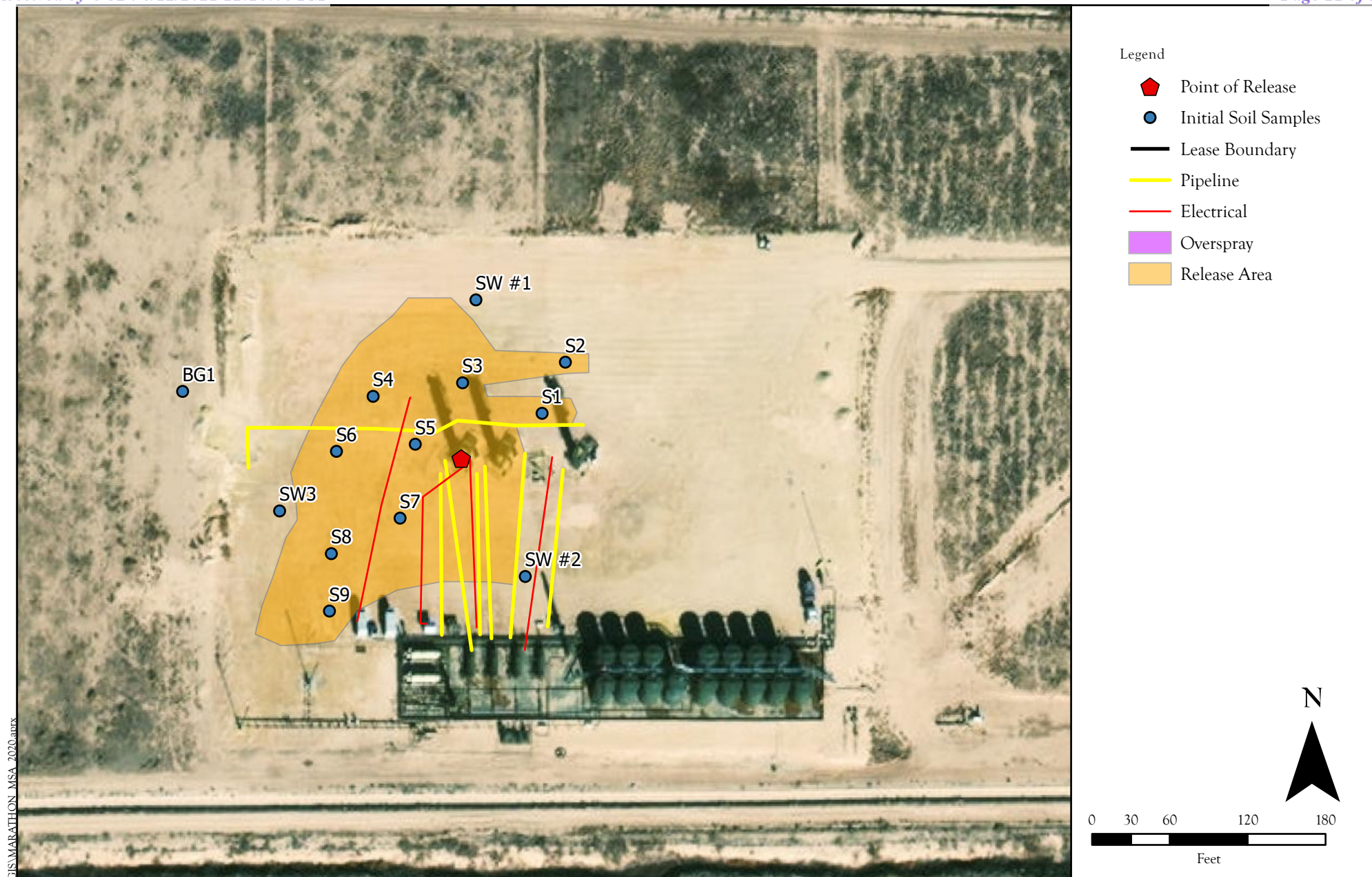
Drawn Jake Madison  
Date 2/22/2021  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_



201 South Halaguena Street  
Carlsbad, New Mexico 88221  
(575) 689-7040  
Serving the Southwest & Rocky Mountains

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Site and Sample Location Map  
Gravel Grinder 23 28 18 #003H- Marathon Oil  
UL: A S: 26 T: 24S R: 34E Lea County, New Mexico

Figure 3

## Revisions

By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_

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Drawn  
Date  
Checked  
Approved

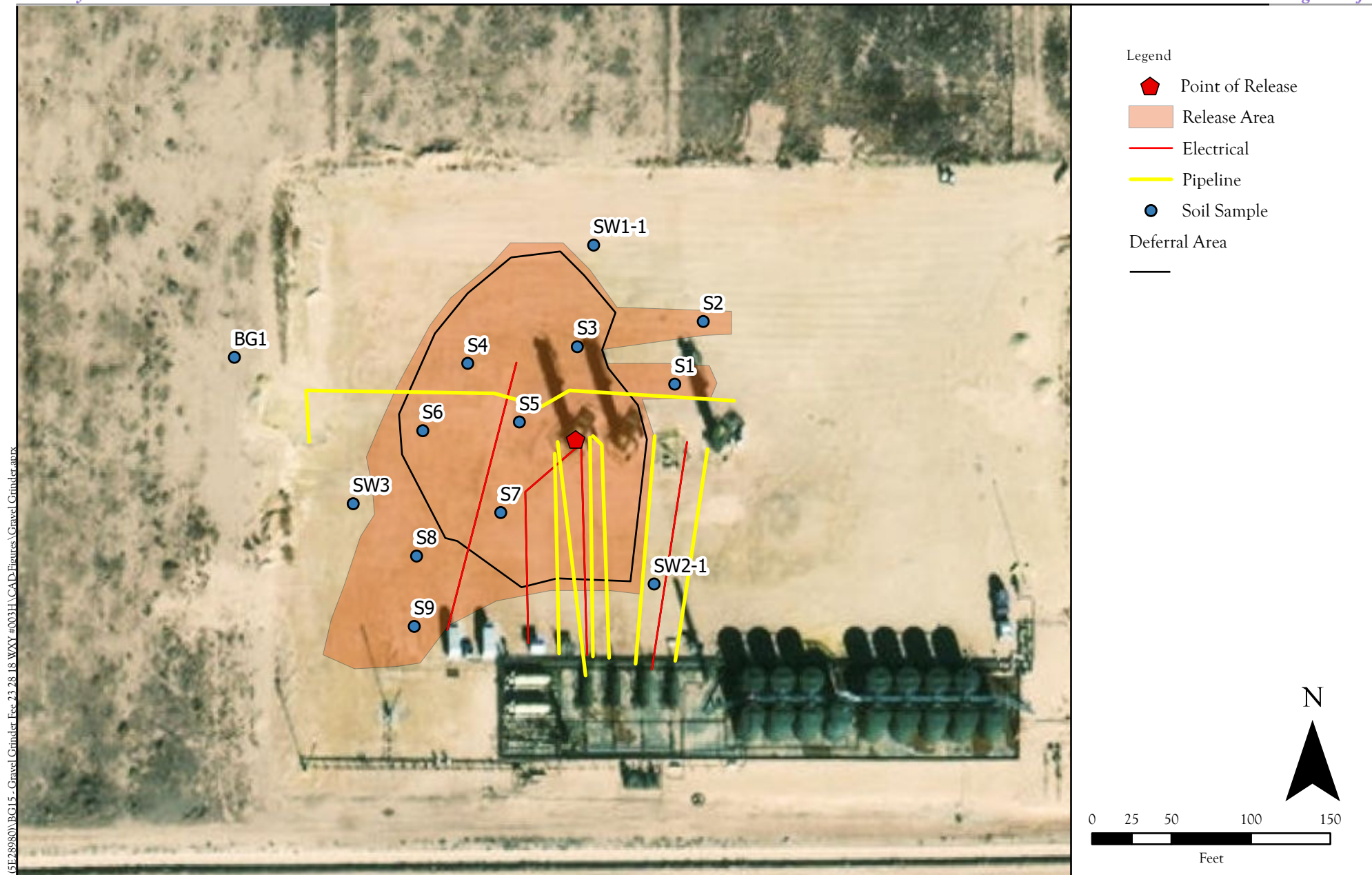
Nate Grove

1/26/2021



201 South Halaguena Street  
Carlsbad, New Mexico 88221  
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Serving the Southwest & Rocky Mountains





Deferral Map  
Gravel Grinder Fee 23 28 18 WXY #3H - Marathon Oil,  
UL: M : 18 T:23S R: 28E Eddy County, New Mexico

Figure 4

## Revisions

By: _____	Date: _____	Descr: _____
By: _____	Date: _____	Descr: _____

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Drawn	Jake Madison
Date	2/24/2021
Checked	_____
Approved	_____



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Carlsbad, New Mexico 88221  
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# TABLES

Table 2:  
NMOCD Closure Criteria

Marathon Oil, Permian LLC  
Gravel Grinder 23 28 18 WXY #003H

Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	70	New Mexico Office of the State Engineer
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)	715	New Mexico Office of the State Engineer
Horizontal Distance to Nearest Significant Watercourse (ft)	633	Un-named Canal/Unites States Geological Survey

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS		600	100		50	10
51' to 100'	X	10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	No	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	No					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	No					
<1000' from fresh water well or spring?	No					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	No					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	No					
<100' from wetland?	No					
within area overlying a subsurface mine	No					
within an unstable area?	No					
within a 100-year floodplain?	No					



Table 3:  
Sample ResultsMarathon Oil, Permian LLC  
Gravel Grinder 23 28 18 WXY #003H

Sample ID	Sample Date	Depth of Sample (feet bgs)	Action Taken	Method 8021B		Method 8015D				Method 300.0
				BTEX	Benzene	GRO	DRO	MRO	Total TPH	Cl-
				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMOCD Reclamation Requirement				50	10	1,000		--	2,500	10,000
BG1	12/30/2020	Surface		<0.210	<0.023	<4.7	28	<48	28	310
	12/30/2020	1		<0.225	<0.025	<5.0	<9.7	<49	<63.7	390
	12/30/2020	2		<0.221	<0.025	<4.9	<9.9	<49	<63.8	1,000
	1/21/2021	3		<0.213	<0.024	<4.7	<9.5	<48	<62.2	660
	1/21/2021	4		<0.210	<0.023	<4.7	<9.2	<46	<59.9	590
S1	12/30/2020	Surface	In Situ	<0.225	<0.025	<5.0	260	49	309	4,300
	12/30/2020	1	In Situ	<0.222	<0.025	<4.9	20	<49	20	1,300
	12/30/2020	2	In Situ	<0.216	<0.024	<4.8	<9.9	<50	<64.7	1,600
	1/21/2021	3	In Situ	<0.216	<0.024	<4.8	<9.8	<49	<63.6	390
	1/21/2021	4	In Situ	<0.215	<0.024	<4.8	<9.5	<47	<61.3	370
S2	12/30/2020	Surface	In Situ	<0.225	<0.005	<5.0	<8.7	<43	<56.7	5,800
	12/30/2020	1	In Situ	<0.210	<0.023	<4.7	<9.5	<47	<61.2	580
	12/30/2020	2	In Situ	<0.216	<0.024	<4.8	<9.5	<47	<61.3	2,200
S3	12/30/2020	Surface	Deferral	<0.216	<0.024	<4.8	780	4,300	5,080	7,300
	12/30/2020	1	In Situ	<0.215	<0.024	<4.8	<9.3	<47	<61.1	2,400
	12/30/2020	2	In Situ	<0.216	<0.024	<4.8	<9.3	<46	<60.1	2,300
	1/21/2021	3	In Situ	<0.221	<0.025	<4.9	<9.7	<49	<63.6	1,600
	1/21/2021	4	In Situ	<0.216	<0.024	<4.8	<9.2	<46	<60.0	980
S4	12/30/2020	Surface	Deferral	0.76	<0.12	41	1,300	660	2,001	9,900
	12/30/2020	1	In Situ	<0.222	<0.025	<4.9	<9.7	<49	<63.6	1,300
	12/30/2020	2	In Situ	<0.225	<0.025	<5.0	<10	<50	<65.0	1,100
S5	12/30/2020	Surface	Deferral	<1.08	<0.12	<24	3,400	10,000	13,400	2,300
	12/30/2020	1	In Situ	<0.213	<0.024	<4.7	62	200	262	1,100
	12/30/2020	2	In Situ	<0.217	<0.024	<4.8	<9.7	<49	<63.5	2,400
	1/21/2021	3	In Situ	<0.222	<0.025	<4.9	<9.2	<46	<60.1	950
	1/21/2021	4	In Situ	<0.220	<0.024	<4.9	<9.4	<47	<61.3	540
S6	12/30/2020	Surface	Deferral	<1.08	<0.12	25	1,800	1,400	3,225	9,600
	12/30/2020	1	In Situ	<0.221	<0.025	<4.9	<10	<50	<64.9	1,500
	12/30/2020	2	In Situ	<0.225	<0.025	<5.0	120	110	230	1,400
	1/21/2021	3	In Situ	<0.224	<0.025	<5.0	<9.6	<48	<62.6	310
	1/21/2021	4	In Situ	<0.219	<0.024	<4.9	<9.4	<47	<61.3	420
S7	12/30/2020	Surface	Deferral	0.30	<0.025	31	1,100	600	1,731	11,000
	12/30/2020	1	In Situ	<0.225	<0.025	<5.0	<10	<50	<65.0	2,100
	12/30/2020	2	In Situ	<0.213	<0.024	<4.7	<9.6	<48	<62.3	2,000
	1/21/2021	3	In Situ	<0.211	<0.023	<4.7	<9.3	<46	<60.0	670
	1/21/2021	4	In Situ	<0.216	<0.024	<4.8	<9.5	<48	<62.3	360
S8	12/30/2020	Surface	In Situ	<0.219	<0.024	<4.9	100	92	192	8,900
	12/30/2020	1	In Situ	<0.215	<0.024	<4.8	<9.8	<49	<63.6	1,700
	12/30/2020	2	In Situ	<0.213	<0.024	<4.7	<9.7	<49	<63.4	320
S9	12/30/2020	Surface	In Situ	<0.220	<0.024	5.0	74	54	133.0	9,700
	12/30/2020	1	In Situ	<0.211	<0.023	<4.7	<10	<50	<64.7	1,800
	12/30/2020	2	In Situ	<0.219	<0.024	<4.9	<9.9	<49	<63.8	1,100
SW1 SW1-1	12/30/2020	Surface	Deferral	<0.224	<0.025	<5.0	67	67	134	11,000
	1/21/2021	Surface	In Situ	<0.215	<0.024	<4.8	<9.0	<45	<58.8	1,100
SW2 SW2-1	12/30/2020	Surface	Deferral	<0.222	<0.024	<4.9	690	560	1,250	15,000
	1/21/2021	Surface	In Situ	<0.221	<0.025	<4.9	28	<47	28	2,600
SW3	12/30/2020	Surface	In Situ	<0.221	<0.025	<4.9	33	<50	33	530

"--" = Not Analyzed

BG: Background sample

# APPENDIX A

## FORM C141

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	NAPP2035543036
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party Marathon Oil Permian LLC	OGRID 372098
Contact Name Melodie Sanjari	Contact Telephone 575-988-8753
Contact email <a href="mailto:msanjari@marathonoil.com">msanjari@marathonoil.com</a>	Incident # (assigned by OCD)
Contact mailing address 4111 S. Tidwell Rd., Carlsbad, NM 8220	

### Location of Release Source

Latitude 32.2989697

Longitude -104.13114049  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: GRAVEL GRINDER FEE 23 28 18 WXY #003H	Site Type: Oil & Gas Facility
Date Release Discovered: 12/20/2020	API# (if applicable) 30-015-44627

Unit Letter	Section	Township	Range	County
M	18	23S	28E	Eddy

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 checked="" type="checkbox"/> Other (describe)	Volume/Weight Released (provide units) Oil, Sand & Produced Water Mixture from Wellhead (emulsion) 250 bbl.	Volume/Weight Recovered (provide units) 250 bbl.

#### Cause of Release

Upon arrival at the Gravel Grinder location, it was discovered that an extra heavy 90 on the casing failed as a result of sand erosion which led to the release of approx. 250 bbl. of emulsion (water, oil & sand -appears to be mostly water) on the engineered pad. Recovery efforts began immediately as there were already two trucks in the vicinity – an emergency on call was placed and a surface scrape was conducted after standing fluids were removed to ensure the release did not migrate laterally into the pasture.



Incident ID	NAPP2035543036
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?  Volume
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? By Melodie Sanjari via a C141a on 12/20	

## Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" 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>Melodie Sanjari</u>	Title: <u>Environmental Professional</u>
Signature: <u>Melodie Sanjari</u>	Date: 12/22/2020
email: <u>msanjari@marathonoil.com</u>	Telephone: <u>575-988-8753</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____



# APPENDIX B

## NMOSE WELLS REPORT



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">C_03779 POD1</a>	C	ED		2	3	3	18	23S	28E	581707	3574103	218	110	70	40
<a href="#">C_02180</a>	C	ED					3	18	23S	28E	581831	3574198*	292	140	80
<a href="#">C_03922 POD1</a>	C	ED		3	2	3	18	23S	28E	581844	3574230	326	138	75	63
<a href="#">C_03082</a>	C	ED		1	3	3	18	23S	28E	581529	3574096*	332	220	217	3
<a href="#">C_04400 POD1</a>	C	ED		3	1	3	18	23S	28E	581496	3574309	506	200	120	80
<a href="#">C_02697</a>	C	ED			1	3	18	23S	28E	581629	3574401*	524	220	42	178
<a href="#">C_04289 POD1</a>	C	ED		1	1	2	19	23S	28E	582387	3573717	614	91	78	13
<a href="#">C_04225 POD1</a>	C	ED		2	2	3	18	23S	28E	582167	3574424	633	120	71	49
<a href="#">C_03753 POD1</a>	C	ED		3	3	1	18	23S	28E	581515	3574658	805	210	60	150

Average Depth to Water: **90 feet**

Minimum Depth: **42 feet**

Maximum Depth: **217 feet**

Record Count: 9

UTM NAD83 Radius Search (in meters):

Easting (X): 581802.41

Northing (Y): 3573906.48

Radius: 806

\*UTM location was derived from PLSS - see Help

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

12/29/20 9:25 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

# APPENDIX C

## FIELD NOTES

SUBJECT Grand Gravel 3H

PROJECT

PAGE

CLIENT MarathonDATE 12/30/20

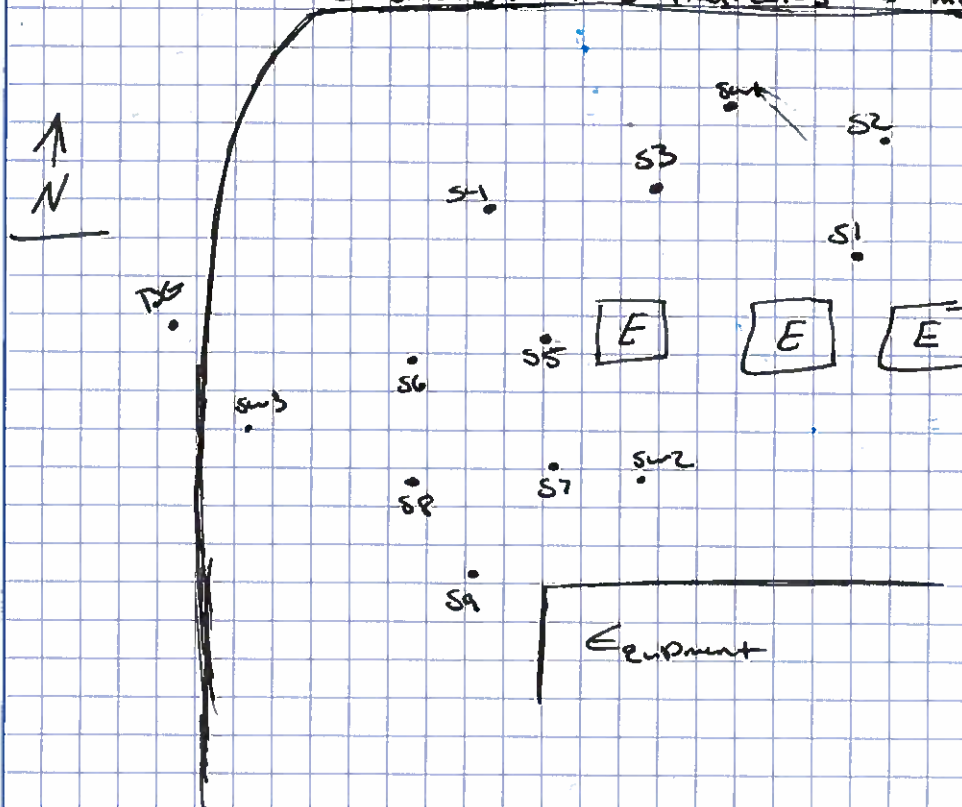
BY

CHECKED

BY

- Arrived at Scheduled time of 8am. met with marathon line-locators and Safety man to discuss Scheduled drilling activity and go over JHA.
- After talking with line locator Supervisor and Melodic Sanderie, work began @ 9am.
- Line locator crew stayed on site while we dug sample locations.
- A total of 9 Sample locations were dug to depths of 2 feet logs.

In addition, 3 Sidewall locations were collected at Surface level and 1 background Sample from Surface to 2'. It is important to note that the background Samples turn tested high for chlorides. This indicates a high amount of natural Salts.



## Field Screening

**Location Name:**

Date:

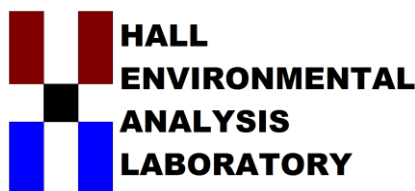
Gravel Grinders 23 28 18 #003 H

1-21-21

[illegible]

# APPENDIX D

## LABORATORY ANALYTICAL REPORTS



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

January 12, 2021

Ashley Maxwell  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL:  
FAX:

RE: Gravel Grinder 23 28 18 3H

OrderNo.: 2101058

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 33 sample(s) on 1/5/2021 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-1 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 9:45:00 AM

Lab ID: 2101058-001

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	4300	150		mg/Kg	50	1/9/2021 12:21:51 PM	57402
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/6/2021 11:46:03 PM	57357
Surr: BFB	93.3	70-130		%Rec	1	1/6/2021 11:46:03 PM	57357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	260	9.5		mg/Kg	1	1/7/2021 10:43:44 AM	57358
Motor Oil Range Organics (MRO)	49	48		mg/Kg	1	1/7/2021 10:43:44 AM	57358
Surr: DNOP	129	30.4-154		%Rec	1	1/7/2021 10:43:44 AM	57358
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/6/2021 11:46:03 PM	57357
Toluene	ND	0.050		mg/Kg	1	1/6/2021 11:46:03 PM	57357
Ethylbenzene	ND	0.050		mg/Kg	1	1/6/2021 11:46:03 PM	57357
Xylenes, Total	ND	0.10		mg/Kg	1	1/6/2021 11:46:03 PM	57357
Surr: 1,2-Dichloroethane-d4	91.4	70-130		%Rec	1	1/6/2021 11:46:03 PM	57357
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/6/2021 11:46:03 PM	57357
Surr: Dibromofluoromethane	99.1	70-130		%Rec	1	1/6/2021 11:46:03 PM	57357
Surr: Toluene-d8	98.3	70-130		%Rec	1	1/6/2021 11:46:03 PM	57357

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-1 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 9:50:00 AM

Lab ID: 2101058-002

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1300	60		mg/Kg	20	1/7/2021 1:07:26 PM	57402
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/7/2021 12:40:08 AM	57357
Surr: BFB	77.1	70-130		%Rec	1	1/7/2021 12:40:08 AM	57357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	20	9.7		mg/Kg	1	1/6/2021 6:50:38 PM	57358
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/6/2021 6:50:38 PM	57358
Surr: DNOP	102	30.4-154		%Rec	1	1/6/2021 6:50:38 PM	57358
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 12:40:08 AM	57357
Toluene	ND	0.049		mg/Kg	1	1/7/2021 12:40:08 AM	57357
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 12:40:08 AM	57357
Xylenes, Total	ND	0.099		mg/Kg	1	1/7/2021 12:40:08 AM	57357
Surr: 1,2-Dichloroethane-d4	97.5	70-130		%Rec	1	1/7/2021 12:40:08 AM	57357
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	1/7/2021 12:40:08 AM	57357
Surr: Dibromofluoromethane	104	70-130		%Rec	1	1/7/2021 12:40:08 AM	57357
Surr: Toluene-d8	98.1	70-130		%Rec	1	1/7/2021 12:40:08 AM	57357

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-1 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 9:55:00 AM

Lab ID: 2101058-003

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1600	60		mg/Kg	20	1/7/2021 1:19:51 PM	57402
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/7/2021 1:07:09 AM	57357
Surr: BFB	79.1	70-130		%Rec	1	1/7/2021 1:07:09 AM	57357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/6/2021 7:00:07 PM	57358
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/6/2021 7:00:07 PM	57358
Surr: DNOP	72.8	30.4-154		%Rec	1	1/6/2021 7:00:07 PM	57358
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 1:07:09 AM	57357
Toluene	ND	0.048		mg/Kg	1	1/7/2021 1:07:09 AM	57357
Ethylbenzene	ND	0.048		mg/Kg	1	1/7/2021 1:07:09 AM	57357
Xylenes, Total	ND	0.096		mg/Kg	1	1/7/2021 1:07:09 AM	57357
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	1/7/2021 1:07:09 AM	57357
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	1/7/2021 1:07:09 AM	57357
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/7/2021 1:07:09 AM	57357
Surr: Toluene-d8	97.6	70-130		%Rec	1	1/7/2021 1:07:09 AM	57357

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-2 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:00:00 AM

Lab ID: 2101058-004

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	5800	300		mg/Kg	100	1/9/2021 12:34:16 PM	57402
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/7/2021 3:21:58 AM	57357
Surr: BFB	74.5	70-130		%Rec	1	1/7/2021 3:21:58 AM	57357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	8.7		mg/Kg	1	1/6/2021 7:09:34 PM	57358
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	1/6/2021 7:09:34 PM	57358
Surr: DNOP	120	30.4-154		%Rec	1	1/6/2021 7:09:34 PM	57358
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 3:21:58 AM	57357
Toluene	ND	0.050		mg/Kg	1	1/7/2021 3:21:58 AM	57357
Ethylbenzene	ND	0.050		mg/Kg	1	1/7/2021 3:21:58 AM	57357
Xylenes, Total	ND	0.10		mg/Kg	1	1/7/2021 3:21:58 AM	57357
Surr: 1,2-Dichloroethane-d4	92.8	70-130		%Rec	1	1/7/2021 3:21:58 AM	57357
Surr: 4-Bromofluorobenzene	88.2	70-130		%Rec	1	1/7/2021 3:21:58 AM	57357
Surr: Dibromofluoromethane	102	70-130		%Rec	1	1/7/2021 3:21:58 AM	57357
Surr: Toluene-d8	94.6	70-130		%Rec	1	1/7/2021 3:21:58 AM	57357

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-2 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:05:00 AM

Lab ID: 2101058-005

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	580	60		mg/Kg	20	1/7/2021 2:09:30 PM	57402
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/7/2021 3:48:56 AM	57357
Surr: BFB	74.2	70-130		%Rec	1	1/7/2021 3:48:56 AM	57357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/6/2021 7:19:00 PM	57358
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/6/2021 7:19:00 PM	57358
Surr: DNOP	112	30.4-154		%Rec	1	1/6/2021 7:19:00 PM	57358
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	1/7/2021 3:48:56 AM	57357
Toluene	ND	0.047		mg/Kg	1	1/7/2021 3:48:56 AM	57357
Ethylbenzene	ND	0.047		mg/Kg	1	1/7/2021 3:48:56 AM	57357
Xylenes, Total	ND	0.093		mg/Kg	1	1/7/2021 3:48:56 AM	57357
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	1/7/2021 3:48:56 AM	57357
Surr: 4-Bromofluorobenzene	88.3	70-130		%Rec	1	1/7/2021 3:48:56 AM	57357
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/7/2021 3:48:56 AM	57357
Surr: Toluene-d8	92.7	70-130		%Rec	1	1/7/2021 3:48:56 AM	57357

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-2 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:10:00 AM

Lab ID: 2101058-006

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2200	60		mg/Kg	20	1/7/2021 2:21:54 PM	57402
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/7/2021 4:15:52 AM	57357
Surr: BFB	77.3	70-130		%Rec	1	1/7/2021 4:15:52 AM	57357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/6/2021 7:28:25 PM	57358
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/6/2021 7:28:25 PM	57358
Surr: DNOP	122	30.4-154		%Rec	1	1/6/2021 7:28:25 PM	57358
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 4:15:52 AM	57357
Toluene	ND	0.048		mg/Kg	1	1/7/2021 4:15:52 AM	57357
Ethylbenzene	ND	0.048		mg/Kg	1	1/7/2021 4:15:52 AM	57357
Xylenes, Total	ND	0.096		mg/Kg	1	1/7/2021 4:15:52 AM	57357
Surr: 1,2-Dichloroethane-d4	93.1	70-130		%Rec	1	1/7/2021 4:15:52 AM	57357
Surr: 4-Bromofluorobenzene	88.0	70-130		%Rec	1	1/7/2021 4:15:52 AM	57357
Surr: Dibromofluoromethane	97.3	70-130		%Rec	1	1/7/2021 4:15:52 AM	57357
Surr: Toluene-d8	99.3	70-130		%Rec	1	1/7/2021 4:15:52 AM	57357

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-3 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:15:00 AM

Lab ID: 2101058-007

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	7300	300		mg/Kg	100	1/9/2021 12:46:40 PM	57402
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/7/2021 4:42:48 AM	57357
Surr: BFB	80.7	70-130		%Rec	1	1/7/2021 4:42:48 AM	57357
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	780	93		mg/Kg	10	1/7/2021 11:07:38 AM	57358
Motor Oil Range Organics (MRO)	4300	460		mg/Kg	10	1/7/2021 11:07:38 AM	57358
Surr: DNOP	0	30.4-154	S	%Rec	10	1/7/2021 11:07:38 AM	57358
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 4:42:48 AM	57357
Toluene	ND	0.048		mg/Kg	1	1/7/2021 4:42:48 AM	57357
Ethylbenzene	ND	0.048		mg/Kg	1	1/7/2021 4:42:48 AM	57357
Xylenes, Total	ND	0.096		mg/Kg	1	1/7/2021 4:42:48 AM	57357
Surr: 1,2-Dichloroethane-d4	93.1	70-130		%Rec	1	1/7/2021 4:42:48 AM	57357
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	1	1/7/2021 4:42:48 AM	57357
Surr: Dibromofluoromethane	103	70-130		%Rec	1	1/7/2021 4:42:48 AM	57357
Surr: Toluene-d8	95.7	70-130		%Rec	1	1/7/2021 4:42:48 AM	57357

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-3 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:20:00 AM

Lab ID: 2101058-008

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2400	60		mg/Kg	20	1/7/2021 2:46:44 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/7/2021 1:52:27 PM	57373
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/7/2021 1:52:27 PM	57373
Surr: DNOP	149	30.4-154		%Rec	1	1/7/2021 1:52:27 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/6/2021 11:30:54 PM	57365
Surr: BFB	99.1	75.3-105		%Rec	1	1/6/2021 11:30:54 PM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/6/2021 11:30:54 PM	57365
Toluene	ND	0.048		mg/Kg	1	1/6/2021 11:30:54 PM	57365
Ethylbenzene	ND	0.048		mg/Kg	1	1/6/2021 11:30:54 PM	57365
Xylenes, Total	ND	0.095		mg/Kg	1	1/6/2021 11:30:54 PM	57365
Surr: 4-Bromofluorobenzene	98.9	80-120		%Rec	1	1/6/2021 11:30:54 PM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-3 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:25:00 AM

Lab ID: 2101058-009

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2300	60		mg/Kg	20	1/7/2021 2:59:10 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/7/2021 2:22:06 PM	57373
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/7/2021 2:22:06 PM	57373
Surr: DNOP	129	30.4-154		%Rec	1	1/7/2021 2:22:06 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/7/2021 12:40:29 AM	57365
Surr: BFB	98.7	75.3-105		%Rec	1	1/7/2021 12:40:29 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 12:40:29 AM	57365
Toluene	ND	0.048		mg/Kg	1	1/7/2021 12:40:29 AM	57365
Ethylbenzene	ND	0.048		mg/Kg	1	1/7/2021 12:40:29 AM	57365
Xylenes, Total	ND	0.096		mg/Kg	1	1/7/2021 12:40:29 AM	57365
Surr: 4-Bromofluorobenzene	98.5	80-120		%Rec	1	1/7/2021 12:40:29 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-4 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:30:00 AM

Lab ID: 2101058-010

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	9900	300		mg/Kg	100	1/9/2021 12:59:04 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	1300	50		mg/Kg	5	1/8/2021 1:22:22 PM	57373
Motor Oil Range Organics (MRO)	660	250		mg/Kg	5	1/8/2021 1:22:22 PM	57373
Surr: DNOP	117	30.4-154		%Rec	5	1/8/2021 1:22:22 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	41	24		mg/Kg	5	1/7/2021 1:49:54 AM	57365
Surr: BFB	145	75.3-105	S	%Rec	5	1/7/2021 1:49:54 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12	D	mg/Kg	5	1/7/2021 1:49:54 AM	57365
Toluene	ND	0.24	D	mg/Kg	5	1/7/2021 1:49:54 AM	57365
Ethylbenzene	ND	0.24	D	mg/Kg	5	1/7/2021 1:49:54 AM	57365
Xylenes, Total	0.76	0.48	D	mg/Kg	5	1/7/2021 1:49:54 AM	57365
Surr: 4-Bromofluorobenzene	100	80-120	D	%Rec	5	1/7/2021 1:49:54 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-4 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:35:00 AM

Lab ID: 2101058-011

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1300	60		mg/Kg	20	1/7/2021 5:32:40 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/7/2021 2:41:49 PM	57373
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/7/2021 2:41:49 PM	57373
Surr: DNOP	135	30.4-154		%Rec	1	1/7/2021 2:41:49 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/7/2021 2:12:59 AM	57365
Surr: BFB	96.7	75.3-105		%Rec	1	1/7/2021 2:12:59 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 2:12:59 AM	57365
Toluene	ND	0.049		mg/Kg	1	1/7/2021 2:12:59 AM	57365
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 2:12:59 AM	57365
Xylenes, Total	ND	0.099		mg/Kg	1	1/7/2021 2:12:59 AM	57365
Surr: 4-Bromofluorobenzene	97.2	80-120		%Rec	1	1/7/2021 2:12:59 AM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-4 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:40:00 AM

Lab ID: 2101058-012

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1100	60		mg/Kg	20	1/7/2021 5:45:05 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/7/2021 2:51:40 PM	57373
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/7/2021 2:51:40 PM	57373
Surr: DNOP	139	30.4-154		%Rec	1	1/7/2021 2:51:40 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/7/2021 2:36:01 AM	57365
Surr: BFB	96.9	75.3-105		%Rec	1	1/7/2021 2:36:01 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 2:36:01 AM	57365
Toluene	ND	0.050		mg/Kg	1	1/7/2021 2:36:01 AM	57365
Ethylbenzene	ND	0.050		mg/Kg	1	1/7/2021 2:36:01 AM	57365
Xylenes, Total	ND	0.10		mg/Kg	1	1/7/2021 2:36:01 AM	57365
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	1/7/2021 2:36:01 AM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-5 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:45:00 AM

Lab ID: 2101058-013

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2300	60		mg/Kg	20	1/7/2021 5:57:29 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	3400	450		mg/Kg	50	1/7/2021 12:43:28 PM	57373
Motor Oil Range Organics (MRO)	10000	2200		mg/Kg	50	1/7/2021 12:43:28 PM	57373
Surr: DNOP	0	30.4-154	S	%Rec	50	1/7/2021 12:43:28 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	24	D	mg/Kg	5	1/7/2021 2:59:04 AM	57365
Surr: BFB	104	75.3-105	D	%Rec	5	1/7/2021 2:59:04 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12	D	mg/Kg	5	1/7/2021 2:59:04 AM	57365
Toluene	ND	0.24	D	mg/Kg	5	1/7/2021 2:59:04 AM	57365
Ethylbenzene	ND	0.24	D	mg/Kg	5	1/7/2021 2:59:04 AM	57365
Xylenes, Total	ND	0.48	D	mg/Kg	5	1/7/2021 2:59:04 AM	57365
Surr: 4-Bromofluorobenzene	96.7	80-120	D	%Rec	5	1/7/2021 2:59:04 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-5 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:50:00 AM

Lab ID: 2101058-014

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1100	60		mg/Kg	20	1/7/2021 6:34:42 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	62	9.5		mg/Kg	1	1/8/2021 1:46:07 PM	57373
Motor Oil Range Organics (MRO)	200	47		mg/Kg	1	1/8/2021 1:46:07 PM	57373
Surr: DNOP	119	30.4-154		%Rec	1	1/8/2021 1:46:07 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/7/2021 3:22:09 AM	57365
Surr: BFB	95.1	75.3-105		%Rec	1	1/7/2021 3:22:09 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 3:22:09 AM	57365
Toluene	ND	0.047		mg/Kg	1	1/7/2021 3:22:09 AM	57365
Ethylbenzene	ND	0.047		mg/Kg	1	1/7/2021 3:22:09 AM	57365
Xylenes, Total	ND	0.095		mg/Kg	1	1/7/2021 3:22:09 AM	57365
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	1/7/2021 3:22:09 AM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-5 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 10:55:00 AM

Lab ID: 2101058-015

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2400	150		mg/Kg	50	1/9/2021 1:11:29 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/7/2021 3:11:19 PM	57373
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/7/2021 3:11:19 PM	57373
Surr: DNOP	139	30.4-154		%Rec	1	1/7/2021 3:11:19 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/7/2021 3:45:10 AM	57365
Surr: BFB	96.9	75.3-105		%Rec	1	1/7/2021 3:45:10 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 3:45:10 AM	57365
Toluene	ND	0.048		mg/Kg	1	1/7/2021 3:45:10 AM	57365
Ethylbenzene	ND	0.048		mg/Kg	1	1/7/2021 3:45:10 AM	57365
Xylenes, Total	ND	0.097		mg/Kg	1	1/7/2021 3:45:10 AM	57365
Surr: 4-Bromofluorobenzene	96.4	80-120		%Rec	1	1/7/2021 3:45:10 AM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-6 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:00:00 AM

Lab ID: 2101058-016

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	9600	590		mg/Kg	200	1/9/2021 1:23:54 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	1800	100		mg/Kg	10	1/8/2021 2:09:53 PM	57373
Motor Oil Range Organics (MRO)	1400	500		mg/Kg	10	1/8/2021 2:09:53 PM	57373
Surr: DNOP	0	30.4-154	S	%Rec	10	1/8/2021 2:09:53 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	25	24		mg/Kg	5	1/7/2021 4:08:12 AM	57365
Surr: BFB	125	75.3-105	S	%Rec	5	1/7/2021 4:08:12 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12	D	mg/Kg	5	1/7/2021 4:08:12 AM	57365
Toluene	ND	0.24	D	mg/Kg	5	1/7/2021 4:08:12 AM	57365
Ethylbenzene	ND	0.24	D	mg/Kg	5	1/7/2021 4:08:12 AM	57365
Xylenes, Total	0.53	0.48	D	mg/Kg	5	1/7/2021 4:08:12 AM	57365
Surr: 4-Bromofluorobenzene	98.5	80-120	D	%Rec	5	1/7/2021 4:08:12 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-6 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:05:00 AM

Lab ID: 2101058-017

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1500	60		mg/Kg	20	1/7/2021 7:11:56 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/8/2021 10:36:53 AM	57373
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/8/2021 10:36:53 AM	57373
Surr: DNOP	119	30.4-154		%Rec	1	1/8/2021 10:36:53 AM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/7/2021 4:31:13 AM	57365
Surr: BFB	95.3	75.3-105		%Rec	1	1/7/2021 4:31:13 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 4:31:13 AM	57365
Toluene	ND	0.049		mg/Kg	1	1/7/2021 4:31:13 AM	57365
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 4:31:13 AM	57365
Xylenes, Total	ND	0.098		mg/Kg	1	1/7/2021 4:31:13 AM	57365
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	1/7/2021 4:31:13 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-6 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:10:00 AM

Lab ID: 2101058-018

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1400	60		mg/Kg	20	1/7/2021 7:24:20 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	120	9.4		mg/Kg	1	1/8/2021 2:33:39 PM	57373
Motor Oil Range Organics (MRO)	110	47		mg/Kg	1	1/8/2021 2:33:39 PM	57373
Surr: DNOP	116	30.4-154		%Rec	1	1/8/2021 2:33:39 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/7/2021 9:09:14 AM	57365
Surr: BFB	102	75.3-105		%Rec	1	1/7/2021 9:09:14 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 9:09:14 AM	57365
Toluene	ND	0.050		mg/Kg	1	1/7/2021 9:09:14 AM	57365
Ethylbenzene	ND	0.050		mg/Kg	1	1/7/2021 9:09:14 AM	57365
Xylenes, Total	ND	0.10		mg/Kg	1	1/7/2021 9:09:14 AM	57365
Surr: 4-Bromofluorobenzene	97.6	80-120		%Rec	1	1/7/2021 9:09:14 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-7 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:15:00 AM

Lab ID: 2101058-019

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	11000	600		mg/Kg	200	1/9/2021 1:36:19 PM	57402
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	1100	45		mg/Kg	5	1/8/2021 2:57:26 PM	57373
Motor Oil Range Organics (MRO)	600	220		mg/Kg	5	1/8/2021 2:57:26 PM	57373
Surr: DNOP	123	30.4-154		%Rec	5	1/8/2021 2:57:26 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	31	4.9		mg/Kg	1	1/7/2021 9:32:43 AM	57365
Surr: BFB	282	75.3-105	S	%Rec	1	1/7/2021 9:32:43 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 9:32:43 AM	57365
Toluene	ND	0.049		mg/Kg	1	1/7/2021 9:32:43 AM	57365
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 9:32:43 AM	57365
Xylenes, Total	0.30	0.098		mg/Kg	1	1/7/2021 9:32:43 AM	57365
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	1/7/2021 9:32:43 AM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-7 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:20:00 AM

Lab ID: 2101058-020

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2100	150		mg/Kg	50	1/9/2021 1:48:43 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/7/2021 4:00:19 PM	57373
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/7/2021 4:00:19 PM	57373
Surr: DNOP	146	30.4-154		%Rec	1	1/7/2021 4:00:19 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/7/2021 9:56:41 AM	57365
Surr: BFB	103	75.3-105		%Rec	1	1/7/2021 9:56:41 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 9:56:41 AM	57365
Toluene	ND	0.050		mg/Kg	1	1/7/2021 9:56:41 AM	57365
Ethylbenzene	ND	0.050		mg/Kg	1	1/7/2021 9:56:41 AM	57365
Xylenes, Total	ND	0.10		mg/Kg	1	1/7/2021 9:56:41 AM	57365
Surr: 4-Bromofluorobenzene	99.0	80-120		%Rec	1	1/7/2021 9:56:41 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-7 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:25:00 AM

Lab ID: 2101058-021

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2000	60		mg/Kg	20	1/7/2021 9:03:36 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/7/2021 4:10:03 PM	57373
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/7/2021 4:10:03 PM	57373
Surr: DNOP	135	30.4-154		%Rec	1	1/7/2021 4:10:03 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/7/2021 10:20:09 AM	57365
Surr: BFB	99.1	75.3-105		%Rec	1	1/7/2021 10:20:09 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 10:20:09 AM	57365
Toluene	ND	0.047		mg/Kg	1	1/7/2021 10:20:09 AM	57365
Ethylbenzene	ND	0.047		mg/Kg	1	1/7/2021 10:20:09 AM	57365
Xylenes, Total	ND	0.095		mg/Kg	1	1/7/2021 10:20:09 AM	57365
Surr: 4-Bromofluorobenzene	97.8	80-120		%Rec	1	1/7/2021 10:20:09 AM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-8 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:30:00 AM

Lab ID: 2101058-022

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	8900	300		mg/Kg	100	1/9/2021 2:01:08 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	100	9.7		mg/Kg	1	1/8/2021 3:21:13 PM	57373
Motor Oil Range Organics (MRO)	92	49		mg/Kg	1	1/8/2021 3:21:13 PM	57373
Surr: DNOP	120	30.4-154		%Rec	1	1/8/2021 3:21:13 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/7/2021 10:43:41 AM	57365
Surr: BFB	107	75.3-105	S	%Rec	1	1/7/2021 10:43:41 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 10:43:41 AM	57365
Toluene	ND	0.049		mg/Kg	1	1/7/2021 10:43:41 AM	57365
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 10:43:41 AM	57365
Xylenes, Total	ND	0.097		mg/Kg	1	1/7/2021 10:43:41 AM	57365
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	1/7/2021 10:43:41 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-8 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:35:00 AM

Lab ID: 2101058-023

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1700	60		mg/Kg	20	1/7/2021 9:28:24 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/7/2021 4:29:31 PM	57373
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/7/2021 4:29:31 PM	57373
Surr: DNOP	136	30.4-154		%Rec	1	1/7/2021 4:29:31 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/7/2021 11:07:09 AM	57365
Surr: BFB	105	75.3-105	S	%Rec	1	1/7/2021 11:07:09 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 11:07:09 AM	57365
Toluene	ND	0.048		mg/Kg	1	1/7/2021 11:07:09 AM	57365
Ethylbenzene	ND	0.048		mg/Kg	1	1/7/2021 11:07:09 AM	57365
Xylenes, Total	ND	0.095		mg/Kg	1	1/7/2021 11:07:09 AM	57365
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	1/7/2021 11:07:09 AM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-8 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:40:00 AM

Lab ID: 2101058-024

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	320	60		mg/Kg	20	1/7/2021 9:40:49 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/8/2021 11:00:23 AM	57373
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/8/2021 11:00:23 AM	57373
Surr: DNOP	100	30.4-154		%Rec	1	1/8/2021 11:00:23 AM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/7/2021 11:30:47 AM	57365
Surr: BFB	105	75.3-105	S	%Rec	1	1/7/2021 11:30:47 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 11:30:47 AM	57365
Toluene	ND	0.047		mg/Kg	1	1/7/2021 11:30:47 AM	57365
Ethylbenzene	ND	0.047		mg/Kg	1	1/7/2021 11:30:47 AM	57365
Xylenes, Total	ND	0.095		mg/Kg	1	1/7/2021 11:30:47 AM	57365
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/7/2021 11:30:47 AM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-9 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:45:00 AM

Lab ID: 2101058-025

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	9700	600		mg/Kg	200	1/9/2021 2:13:33 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	74	9.4		mg/Kg	1	1/8/2021 3:44:58 PM	57373
Motor Oil Range Organics (MRO)	54	47		mg/Kg	1	1/8/2021 3:44:58 PM	57373
Surr: DNOP	110	30.4-154		%Rec	1	1/8/2021 3:44:58 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	5.0	4.9		mg/Kg	1	1/7/2021 11:54:26 AM	57365
Surr: BFB	142	75.3-105	S	%Rec	1	1/7/2021 11:54:26 AM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 11:54:26 AM	57365
Toluene	ND	0.049		mg/Kg	1	1/7/2021 11:54:26 AM	57365
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 11:54:26 AM	57365
Xylenes, Total	ND	0.098		mg/Kg	1	1/7/2021 11:54:26 AM	57365
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/7/2021 11:54:26 AM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-9 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:50:00 AM

Lab ID: 2101058-026

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1800	60		mg/Kg	20	1/7/2021 10:05:38 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/7/2021 4:58:34 PM	57373
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/7/2021 4:58:34 PM	57373
Surr: DNOP	133	30.4-154		%Rec	1	1/7/2021 4:58:34 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/7/2021 12:18:06 PM	57365
Surr: BFB	103	75.3-105		%Rec	1	1/7/2021 12:18:06 PM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	1/7/2021 12:18:06 PM	57365
Toluene	ND	0.047		mg/Kg	1	1/7/2021 12:18:06 PM	57365
Ethylbenzene	ND	0.047		mg/Kg	1	1/7/2021 12:18:06 PM	57365
Xylenes, Total	ND	0.094		mg/Kg	1	1/7/2021 12:18:06 PM	57365
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	1/7/2021 12:18:06 PM	57365

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-9 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 11:55:00 AM

Lab ID: 2101058-027

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1100	60		mg/Kg	20	1/7/2021 10:18:02 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/7/2021 5:08:12 PM	57373
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/7/2021 5:08:12 PM	57373
Surr: DNOP	141	30.4-154		%Rec	1	1/7/2021 5:08:12 PM	57373
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/7/2021 12:41:51 PM	57365
Surr: BFB	103	75.3-105		%Rec	1	1/7/2021 12:41:51 PM	57365
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 12:41:51 PM	57365
Toluene	ND	0.049		mg/Kg	1	1/7/2021 12:41:51 PM	57365
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 12:41:51 PM	57365
Xylenes, Total	ND	0.097		mg/Kg	1	1/7/2021 12:41:51 PM	57365
Surr: 4-Bromofluorobenzene	99.9	80-120		%Rec	1	1/7/2021 12:41:51 PM	57365

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW-1 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 12:00:00 PM

Lab ID: 2101058-028

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	11000	600		mg/Kg	200	1/9/2021 2:50:46 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	67	9.9		mg/Kg	1	1/8/2021 11:23:58 AM	57374
Motor Oil Range Organics (MRO)	67	50		mg/Kg	1	1/8/2021 11:23:58 AM	57374
Surr: DNOP	112	30.4-154		%Rec	1	1/8/2021 11:23:58 AM	57374
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/7/2021 2:16:59 PM	57372
Surr: BFB	103	75.3-105		%Rec	1	1/7/2021 2:16:59 PM	57372
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 2:16:59 PM	57372
Toluene	ND	0.050		mg/Kg	1	1/7/2021 2:16:59 PM	57372
Ethylbenzene	ND	0.050		mg/Kg	1	1/7/2021 2:16:59 PM	57372
Xylenes, Total	ND	0.099		mg/Kg	1	1/7/2021 2:16:59 PM	57372
Surr: 4-Bromofluorobenzene	97.8	80-120		%Rec	1	1/7/2021 2:16:59 PM	57372

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW-2 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 12:05:00 PM

Lab ID: 2101058-029

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	15000	600		mg/Kg	200	1/9/2021 3:03:11 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	690	45		mg/Kg	5	1/8/2021 12:34:55 PM	57374
Motor Oil Range Organics (MRO)	560	230		mg/Kg	5	1/8/2021 12:34:55 PM	57374
Surr: DNOP	120	30.4-154		%Rec	5	1/8/2021 12:34:55 PM	57374
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/7/2021 3:28:47 PM	57372
Surr: BFB	102	75.3-105		%Rec	1	1/7/2021 3:28:47 PM	57372
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.024		mg/Kg	1	1/7/2021 3:28:47 PM	57372
Toluene	ND	0.049		mg/Kg	1	1/7/2021 3:28:47 PM	57372
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 3:28:47 PM	57372
Xylenes, Total	ND	0.098		mg/Kg	1	1/7/2021 3:28:47 PM	57372
Surr: 4-Bromofluorobenzene	99.8	80-120		%Rec	1	1/7/2021 3:28:47 PM	57372

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

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

## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW-3 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 12:10:00 PM

Lab ID: 2101058-030

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	530	59		mg/Kg	20	1/7/2021 10:55:15 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	33	10		mg/Kg	1	1/7/2021 12:44:37 PM	57374
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	1/7/2021 12:44:37 PM	57374
Surr: DNOP	127	30.4-154		%Rec	1	1/7/2021 12:44:37 PM	57374
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/7/2021 4:40:50 PM	57372
Surr: BFB	112	75.3-105	S	%Rec	1	1/7/2021 4:40:50 PM	57372
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 4:40:50 PM	57372
Toluene	ND	0.049		mg/Kg	1	1/7/2021 4:40:50 PM	57372
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 4:40:50 PM	57372
Xylenes, Total	ND	0.098		mg/Kg	1	1/7/2021 4:40:50 PM	57372
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	1/7/2021 4:40:50 PM	57372

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BG-1 (Surface)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 12:15:00 PM

Lab ID: 2101058-031

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	310	60		mg/Kg	20	1/7/2021 11:32:28 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	28	9.7		mg/Kg	1	1/8/2021 12:58:38 PM	57374
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/8/2021 12:58:38 PM	57374
Surr: DNOP	61.2	30.4-154		%Rec	1	1/8/2021 12:58:38 PM	57374
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/7/2021 5:04:50 PM	57372
Surr: BFB	106	75.3-105	S	%Rec	1	1/7/2021 5:04:50 PM	57372
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.023		mg/Kg	1	1/7/2021 5:04:50 PM	57372
Toluene	ND	0.047		mg/Kg	1	1/7/2021 5:04:50 PM	57372
Ethylbenzene	ND	0.047		mg/Kg	1	1/7/2021 5:04:50 PM	57372
Xylenes, Total	ND	0.093		mg/Kg	1	1/7/2021 5:04:50 PM	57372
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	1/7/2021 5:04:50 PM	57372

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BG-1 (-1')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 12:20:00 PM

Lab ID: 2101058-032

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	390	60		mg/Kg	20	1/7/2021 11:44:52 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/7/2021 1:04:01 PM	57374
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/7/2021 1:04:01 PM	57374
Surr: DNOP	95.8	30.4-154		%Rec	1	1/7/2021 1:04:01 PM	57374
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/7/2021 5:28:43 PM	57372
Surr: BFB	106	75.3-105	S	%Rec	1	1/7/2021 5:28:43 PM	57372
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 5:28:43 PM	57372
Toluene	ND	0.050		mg/Kg	1	1/7/2021 5:28:43 PM	57372
Ethylbenzene	ND	0.050		mg/Kg	1	1/7/2021 5:28:43 PM	57372
Xylenes, Total	ND	0.10		mg/Kg	1	1/7/2021 5:28:43 PM	57372
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	1/7/2021 5:28:43 PM	57372

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

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

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## Analytical Report

Lab Order 2101058

Date Reported: 1/12/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BG-2 (-2')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 12/30/2020 12:25:00 PM

Lab ID: 2101058-033

Matrix: SOIL

Received Date: 1/5/2021 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1000	60		mg/Kg	20	1/7/2021 11:57:17 PM	57405
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BRM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/7/2021 1:13:44 PM	57374
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/7/2021 1:13:44 PM	57374
Surr: DNOP	109	30.4-154		%Rec	1	1/7/2021 1:13:44 PM	57374
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/7/2021 5:52:38 PM	57372
Surr: BFB	105	75.3-105		%Rec	1	1/7/2021 5:52:38 PM	57372
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>RAA</b>
Benzene	ND	0.025		mg/Kg	1	1/7/2021 5:52:38 PM	57372
Toluene	ND	0.049		mg/Kg	1	1/7/2021 5:52:38 PM	57372
Ethylbenzene	ND	0.049		mg/Kg	1	1/7/2021 5:52:38 PM	57372
Xylenes, Total	ND	0.098		mg/Kg	1	1/7/2021 5:52:38 PM	57372
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	1/7/2021 5:52:38 PM	57372

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

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

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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>MB-57402</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57402</b>	RunNo: <b>74472</b>								
Prep Date: <b>1/7/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629069</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-57402</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57402</b>	RunNo: <b>74472</b>								
Prep Date: <b>1/7/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629070</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	90	110			

Sample ID: <b>MB-57405</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57405</b>	RunNo: <b>74472</b>								
Prep Date: <b>1/7/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629101</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-57405</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57405</b>	RunNo: <b>74472</b>								
Prep Date: <b>1/7/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629102</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.5	90	110			

**Qualifiers:**

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

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

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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>LCS-57358</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57358</b>	RunNo: <b>74441</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>	SeqNo: <b>2628108</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61	10	50.00	0	121	68.9	141			
Surr: DNOP	5.9		5.000		118	30.4	154			

Sample ID: <b>MB-57358</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57358</b>	RunNo: <b>74441</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>	SeqNo: <b>2628110</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	14		10.00		135	30.4	154			

Sample ID: <b>2101058-008AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-3 (-1')</b>	Batch ID: <b>57373</b>	RunNo: <b>74467</b>								
Prep Date: <b>1/6/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2628830</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	9.5	47.26	6.032	106	15	184			
Surr: DNOP	6.4		4.726		135	30.4	154			

Sample ID: <b>2101058-008AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-3 (-1')</b>	Batch ID: <b>57373</b>	RunNo: <b>74467</b>								
Prep Date: <b>1/6/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2628831</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	60	9.7	48.54	6.032	112	15	184	7.32	23.9	
Surr: DNOP	6.9		4.854		141	30.4	154	0	0	

Sample ID: <b>LCS-57373</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57373</b>	RunNo: <b>74467</b>								
Prep Date: <b>1/6/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2628858</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	65	10	50.00	0	130	68.9	141			
Surr: DNOP	6.7		5.000		133	30.4	154			

**Qualifiers:**

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

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

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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>LCS-57374</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57374</b>	RunNo: <b>74467</b>								
Prep Date: <b>1/6/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2628859</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	66	10	50.00	0	132	68.9	141			
Surr: DNOP	7.4		5.000		149	30.4	154			

Sample ID: <b>MB-57373</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57373</b>	RunNo: <b>74467</b>								
Prep Date: <b>1/6/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2628860</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		114	30.4	154			

Sample ID: <b>MB-57374</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57374</b>	RunNo: <b>74467</b>								
Prep Date: <b>1/6/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2628861</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	15		10.00		147	30.4	154			

Sample ID: <b>2101058-028AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>SW-1 (Surface)</b>	Batch ID: <b>57374</b>	RunNo: <b>74512</b>								
Prep Date: <b>1/6/2021</b>	Analysis Date: <b>1/8/2021</b>	SeqNo: <b>2630398</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	140	9.7	48.40	66.92	160	15	184			
Surr: DNOP	5.3		4.840		109	30.4	154			

Sample ID: <b>2101058-028AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>SW-1 (Surface)</b>	Batch ID: <b>57374</b>	RunNo: <b>74512</b>								
Prep Date: <b>1/6/2021</b>	Analysis Date: <b>1/8/2021</b>	SeqNo: <b>2630399</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	9.5	47.62	66.92	104	15	184	21.4	23.9	
Surr: DNOP	5.3		4.762		112	30.4	154	0	0	

**Qualifiers:**

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

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

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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>mb-57365</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57365</b>	RunNo: <b>74434</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2627851</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.5	75.3	105			

Sample ID: <b>lcs-57365</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57365</b>	RunNo: <b>74434</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>	SeqNo: <b>2627852</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.7	72.5	106			
Surr: BFB	1100		1000		109	75.3	105			S

Sample ID: <b>2101058-008ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>S-3 (-1')</b>	Batch ID: <b>57365</b>	RunNo: <b>74434</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>	SeqNo: <b>2627854</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.9	24.49	0	117	61.3	114			S
Surr: BFB	1100		979.4		113	75.3	105			S

Sample ID: <b>2101058-008amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>S-3 (-1')</b>	Batch ID: <b>57365</b>	RunNo: <b>74434</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2627855</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.8	24.15	0	118	61.3	114	1.09	20	S
Surr: BFB	1100		966.2		112	75.3	105	0	0	S

Sample ID: <b>2101058-028ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>SW-1 (Surface)</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629311</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	24.75	0	115	61.3	114			S
Surr: BFB	1200		990.1		119	75.3	105			S

Sample ID: <b>2101058-028amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>SW-1 (Surface)</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629312</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

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D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

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

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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>2101058-028amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>SW-1 (Surface)</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629312</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.8	23.99	0	112	61.3	114	5.20	20	
Surr: BFB	1200		959.7		120	75.3	105	0	0	S

Sample ID: <b>lcs-57372</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629332</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	72.5	106			
Surr: BFB	1100		1000		111	75.3	105			S

Sample ID: <b>mb-57372</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629333</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	75.3	105			

**Qualifiers:**

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

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

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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>mb-57365</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57365</b>	RunNo: <b>74434</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2627893</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	80	120			

Sample ID: <b>LCS-57365</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57365</b>	RunNo: <b>74434</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>	SeqNo: <b>2627894</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	98.5	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	99.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: <b>2101058-009ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>S-3 (-2')</b>	Batch ID: <b>57365</b>	RunNo: <b>74434</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2627897</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.023	0.9311	0	118	76.3	120			
Toluene	1.1	0.047	0.9311	0	123	78.5	120			S
Ethylbenzene	1.2	0.047	0.9311	0	124	78.1	124			S
Xylenes, Total	3.4	0.093	2.793	0	123	79.3	125			
Surr: 4-Bromofluorobenzene	0.93		0.9311		99.8	80	120			

Sample ID: <b>2101058-009amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>S-3 (-2')</b>	Batch ID: <b>57365</b>	RunNo: <b>74434</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2627898</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.023	0.9259	0	124	76.3	120	4.68	20	S
Toluene	1.2	0.046	0.9259	0	129	78.5	120	4.18	20	S
Ethylbenzene	1.2	0.046	0.9259	0	128	78.1	124	2.20	20	S
Xylenes, Total	3.5	0.093	2.778	0	128	79.3	125	2.69	20	S
Surr: 4-Bromofluorobenzene	0.91		0.9259		98.6	80	120	0	0	

**Qualifiers:**

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

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



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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>2101058-029ams</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>SW-2 (Surface)</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629350</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	0.9901	0	99.4	76.3	120			
Toluene	1.0	0.050	0.9901	0.01057	101	78.5	120			
Ethylbenzene	1.0	0.050	0.9901	0	103	78.1	124			
Xylenes, Total	3.0	0.099	2.970	0	102	79.3	125			
Surr: 4-Bromofluorobenzene	1.0		0.9901		103	80	120			

Sample ID: <b>2101058-029amsd</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>SW-2 (Surface)</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629351</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9662	0	97.3	76.3	120	4.53	20	
Toluene	0.97	0.048	0.9662	0.01057	99.6	78.5	120	3.53	20	
Ethylbenzene	0.97	0.048	0.9662	0	100	78.1	124	4.91	20	
Xylenes, Total	2.9	0.097	2.899	0	101	79.3	125	3.89	20	
Surr: 4-Bromofluorobenzene	1.0		0.9662		103	80	120	0	0	

Sample ID: <b>LCS-57372</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629370</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.1	80	120			
Toluene	0.92	0.050	1.000	0	92.2	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.1	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID: <b>mb-57372</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57372</b>	RunNo: <b>74481</b>								
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/7/2021</b>	SeqNo: <b>2629371</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

**Qualifiers:**

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

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

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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>lcs-57357</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>57357</b>		RunNo: <b>74448</b>							
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>		SeqNo: <b>2628292</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	70	130			
Toluene	1.1	0.050	1.000	0	114	70	130			
Ethylbenzene	1.1	0.050	1.000	0	115	70	130			
Xylenes, Total	3.2	0.10	3.000	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.3	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		93.1	70	130			
Surr: Toluene-d8	0.53		0.5000		106	70	130			

Sample ID: <b>mb-57357</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>							
Client ID: <b>PBS</b>	Batch ID: <b>57357</b>		RunNo: <b>74448</b>							
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>		SeqNo: <b>2628293</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		89.6	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		93.1	70	130			
Surr: Toluene-d8	0.55		0.5000		109	70	130			

**Qualifiers:**

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D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

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E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

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

WO#: 2101058

12-Jan-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>lcs-57357</b>	SampType: <b>LCS</b>				TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>					
Client ID: <b>LCSS</b>	Batch ID: <b>57357</b>				RunNo: <b>74448</b>					
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>				SeqNo: <b>2628319</b>	Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.4	70	130			
Surr: BFB	440		500.0		88.2	70	130			

Sample ID: <b>mb-57357</b>	SampType: <b>MBLK</b>				TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>					
Client ID: <b>PBS</b>	Batch ID: <b>57357</b>				RunNo: <b>74448</b>					
Prep Date: <b>1/5/2021</b>	Analysis Date: <b>1/6/2021</b>				SeqNo: <b>2628320</b>	Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	400		500.0		80.7	70	130			

**Qualifiers:**

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

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

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

## Sample Log-In Check List

Client Name: **Souder, Miller & Associat**Work Order Number: **2101058**RcptNo: **1**Received By: **Isaiah Ortiz**

1/5/2021 7:50:00 AM

I-OX

Completed By: **Isaiah Ortiz**

1/5/2021 8:34:58 AM

I-OX

Reviewed By: **Em 1/5/21**

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: **SGL 1/5/21**

### 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Not Present			
2	2.6	Good	Not Present			
3	2.4	Good	Not Present			



## Chain-of-Custody Record

Client: SMA - Carlstead

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Project Manager:

Ashley Maxwell

Sampler: ALG, PS

On Ice: ☒ Yes ☐ No

# of Coolers: 3

Cooler Temp (including CFI): Remarks

HEAL No. 2101058

Container Type and #

Preservative Type

Cool

402

001

002

003

004

005

006

007

008

009

010

011

012

Received by: Via: Date: Time

Relinquished by: Relinquished by: Date: Time

1-4-21 1310

1-4-21 1400

1-4-21 1310

1-4-21 1400

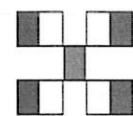
1-4-21 1310

1-4-21 1400

1-4-21 1310

1-4-21 1400

1-4-21 1310



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

(C), F, Br, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

BTEX / MTBE / TMB's (8021)

Remarks:

B'll to Marathon

2.4°C ± 0

2.6°C ± 0

2.4°C ± 0





## Chain-of-Custody Record

Client: SMA - Carlsbad

Turn-Around Time: 5 Day

☒ Standard ☐ Rush

Project Name: Gravel Grader 23 28 18 3H

Project #: 3H

Project Manager: Ashley Maxwell

Sampler: NH, PS

On Ice: ☒ Yes ☐ No

# of Coolers: 3

Cooler Temp (including CF): Remarks (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No
12/30	11:45	Soil	S-9 (Surface)	4 oz	Cool	2101058
	11:50		S-9 (-1')			26
	11:55		S-9 (-2')			27
	12:00		SW-1 (Surface)			28
	12:05		SW-2 (Surface)			29
	12:10		SW-3 (Surface)			30
	12:15		BG-1 (Surface)			31
	12:20		BG-1 (-1')			32
	12:25		BG-1 (-2')			33

Relinquished by: AWM

Date: 1/4/21 Time: 1310

Relinquished by: AWM

Date: 1/4/21 Time: 1900

## Analysis Request

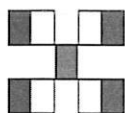
TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub>	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
----------------------------	----------------------------	--------------------	--------------------------	---------------	--	------------	-----------------	---------------------------------

Remarks: Bill to Marathon

2.4<sup>±</sup> ±0

2.6<sup>±</sup> ±0

2.4<sup>±</sup> ±0



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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



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

February 01, 2021

Ashley Maxwell  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL:  
FAX:

RE: Gravel Grinder 23 28 18 3H

OrderNo.: 2101884

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 14 sample(s) on 1/23/2021 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-1 (-3')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 10:45:00 AM

Lab ID: 2101884-001

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	390	60		mg/Kg	20	1/26/2021 9:56:12 PM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/26/2021 4:51:00 PM	57717
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/26/2021 4:51:00 PM	57717
Surr: DNOP	121	30.4-154		%Rec	1	1/26/2021 4:51:00 PM	57717
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/27/2021 1:01:21 AM	57716
Surr: BFB	94.2	75.3-105		%Rec	1	1/27/2021 1:01:21 AM	57716
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/27/2021 1:01:21 AM	57716
Toluene	ND	0.048		mg/Kg	1	1/27/2021 1:01:21 AM	57716
Ethylbenzene	ND	0.048		mg/Kg	1	1/27/2021 1:01:21 AM	57716
Xylenes, Total	ND	0.096		mg/Kg	1	1/27/2021 1:01:21 AM	57716
Surr: 4-Bromofluorobenzene	97.1	80-120		%Rec	1	1/27/2021 1:01:21 AM	57716

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-1 (-4')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 10:50:00 AM

Lab ID: 2101884-002

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	370	60		mg/Kg	20	1/26/2021 10:08:36 PM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/26/2021 5:15:06 PM	57717
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/26/2021 5:15:06 PM	57717
Surr: DNOP	122	30.4-154		%Rec	1	1/26/2021 5:15:06 PM	57717
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/27/2021 1:24:47 AM	57716
Surr: BFB	95.9	75.3-105		%Rec	1	1/27/2021 1:24:47 AM	57716
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/27/2021 1:24:47 AM	57716
Toluene	ND	0.048		mg/Kg	1	1/27/2021 1:24:47 AM	57716
Ethylbenzene	ND	0.048		mg/Kg	1	1/27/2021 1:24:47 AM	57716
Xylenes, Total	ND	0.095		mg/Kg	1	1/27/2021 1:24:47 AM	57716
Surr: 4-Bromofluorobenzene	98.2	80-120		%Rec	1	1/27/2021 1:24:47 AM	57716

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-3 (-3')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 10:55:00 AM

Lab ID: 2101884-003

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1600	60		mg/Kg	20	1/26/2021 10:21:01 PM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/26/2021 5:39:20 PM	57717
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/26/2021 5:39:20 PM	57717
Surr: DNOP	122	30.4-154		%Rec	1	1/26/2021 5:39:20 PM	57717
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2021 1:48:10 AM	57716
Surr: BFB	96.1	75.3-105		%Rec	1	1/27/2021 1:48:10 AM	57716
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	1/27/2021 1:48:10 AM	57716
Toluene	ND	0.049		mg/Kg	1	1/27/2021 1:48:10 AM	57716
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2021 1:48:10 AM	57716
Xylenes, Total	ND	0.098		mg/Kg	1	1/27/2021 1:48:10 AM	57716
Surr: 4-Bromofluorobenzene	98.6	80-120		%Rec	1	1/27/2021 1:48:10 AM	57716

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-3 (-4')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:00:00 AM

Lab ID: 2101884-004

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	980	60		mg/Kg	20	1/26/2021 10:33:26 PM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/26/2021 6:03:37 PM	57717
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/26/2021 6:03:37 PM	57717
Surr: DNOP	122	30.4-154		%Rec	1	1/26/2021 6:03:37 PM	57717
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/27/2021 2:11:30 AM	57716
Surr: BFB	95.9	75.3-105		%Rec	1	1/27/2021 2:11:30 AM	57716
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	1/27/2021 2:11:30 AM	57716
Toluene	ND	0.048		mg/Kg	1	1/27/2021 2:11:30 AM	57716
Ethylbenzene	ND	0.048		mg/Kg	1	1/27/2021 2:11:30 AM	57716
Xylenes, Total	ND	0.096		mg/Kg	1	1/27/2021 2:11:30 AM	57716
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	1/27/2021 2:11:30 AM	57716

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-5 (-3')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:05:00 AM

Lab ID: 2101884-005

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	950	60		mg/Kg	20	1/26/2021 10:45:51 PM	57741
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2021 4:23:40 AM	57723
Surr: BFB	103	70-130		%Rec	1	1/27/2021 4:23:40 AM	57723
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/26/2021 9:29:19 AM	57724
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/26/2021 9:29:19 AM	57724
Surr: DNOP	129	30.4-154		%Rec	1	1/26/2021 9:29:19 AM	57724
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/27/2021 4:23:40 AM	57723
Toluene	ND	0.049		mg/Kg	1	1/27/2021 4:23:40 AM	57723
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2021 4:23:40 AM	57723
Xylenes, Total	ND	0.099		mg/Kg	1	1/27/2021 4:23:40 AM	57723
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%Rec	1	1/27/2021 4:23:40 AM	57723
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	1/27/2021 4:23:40 AM	57723
Surr: Dibromofluoromethane	110	70-130		%Rec	1	1/27/2021 4:23:40 AM	57723
Surr: Toluene-d8	96.1	70-130		%Rec	1	1/27/2021 4:23:40 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-5 (-4')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:10:00 AM

Lab ID: 2101884-006

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	540	61		mg/Kg	20	1/26/2021 10:58:15 PM	57741
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2021 5:49:15 AM	57723
Surr: BFB	103	70-130		%Rec	1	1/27/2021 5:49:15 AM	57723
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/26/2021 10:40:01 AM	57724
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/26/2021 10:40:01 AM	57724
Surr: DNOP	99.9	30.4-154		%Rec	1	1/26/2021 10:40:01 AM	57724
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/27/2021 5:49:15 AM	57723
Toluene	ND	0.049		mg/Kg	1	1/27/2021 5:49:15 AM	57723
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2021 5:49:15 AM	57723
Xylenes, Total	ND	0.098		mg/Kg	1	1/27/2021 5:49:15 AM	57723
Surr: 1,2-Dichloroethane-d4	91.3	70-130		%Rec	1	1/27/2021 5:49:15 AM	57723
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	1/27/2021 5:49:15 AM	57723
Surr: Dibromofluoromethane	107	70-130		%Rec	1	1/27/2021 5:49:15 AM	57723
Surr: Toluene-d8	98.4	70-130		%Rec	1	1/27/2021 5:49:15 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-6 (-3')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:15:00 AM

Lab ID: 2101884-007

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	310	61		mg/Kg	20	1/26/2021 11:10:39 PM	57741
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/27/2021 7:14:47 AM	57723
Surr: BFB	102	70-130		%Rec	1	1/27/2021 7:14:47 AM	57723
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/26/2021 11:03:40 AM	57724
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/26/2021 11:03:40 AM	57724
Surr: DNOP	122	30.4-154		%Rec	1	1/26/2021 11:03:40 AM	57724
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/27/2021 7:14:47 AM	57723
Toluene	ND	0.050		mg/Kg	1	1/27/2021 7:14:47 AM	57723
Ethylbenzene	ND	0.050		mg/Kg	1	1/27/2021 7:14:47 AM	57723
Xylenes, Total	ND	0.099		mg/Kg	1	1/27/2021 7:14:47 AM	57723
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%Rec	1	1/27/2021 7:14:47 AM	57723
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	1/27/2021 7:14:47 AM	57723
Surr: Dibromofluoromethane	108	70-130		%Rec	1	1/27/2021 7:14:47 AM	57723
Surr: Toluene-d8	101	70-130		%Rec	1	1/27/2021 7:14:47 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-6 (-4')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:20:00 AM

Lab ID: 2101884-008

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	420	60		mg/Kg	20	1/26/2021 11:47:53 PM	57741
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: <b>JMR</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/27/2021 7:43:13 AM	57723
Surr: BFB	102	70-130		%Rec	1	1/27/2021 7:43:13 AM	57723
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/26/2021 11:27:21 AM	57724
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/26/2021 11:27:21 AM	57724
Surr: DNOP	136	30.4-154		%Rec	1	1/26/2021 11:27:21 AM	57724
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/27/2021 7:43:13 AM	57723
Toluene	ND	0.049		mg/Kg	1	1/27/2021 7:43:13 AM	57723
Ethylbenzene	ND	0.049		mg/Kg	1	1/27/2021 7:43:13 AM	57723
Xylenes, Total	ND	0.097		mg/Kg	1	1/27/2021 7:43:13 AM	57723
Surr: 1,2-Dichloroethane-d4	86.6	70-130		%Rec	1	1/27/2021 7:43:13 AM	57723
Surr: 4-Bromofluorobenzene	94.9	70-130		%Rec	1	1/27/2021 7:43:13 AM	57723
Surr: Dibromofluoromethane	105	70-130		%Rec	1	1/27/2021 7:43:13 AM	57723
Surr: Toluene-d8	94.5	70-130		%Rec	1	1/27/2021 7:43:13 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-7 (-3')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:25:00 AM

Lab ID: 2101884-009

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	670	60		mg/Kg	20	1/27/2021 12:00:18 AM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/26/2021 11:51:05 AM	57724
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/26/2021 11:51:05 AM	57724
Surr: DNOP	125	30.4-154		%Rec	1	1/26/2021 11:51:05 AM	57724
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/30/2021 1:18:16 PM	57723
Surr: BFB	96.0	75.3-105		%Rec	1	1/30/2021 1:18:16 PM	57723
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	1/28/2021 2:31:47 AM	57723
Toluene	ND	0.047		mg/Kg	1	1/28/2021 2:31:47 AM	57723
Ethylbenzene	ND	0.047		mg/Kg	1	1/28/2021 2:31:47 AM	57723
Xylenes, Total	ND	0.094		mg/Kg	1	1/28/2021 2:31:47 AM	57723
Surr: 1,2-Dichloroethane-d4	84.4	70-130		%Rec	1	1/28/2021 2:31:47 AM	57723
Surr: 4-Bromofluorobenzene	91.3	70-130		%Rec	1	1/28/2021 2:31:47 AM	57723
Surr: Dibromofluoromethane	108	70-130		%Rec	1	1/28/2021 2:31:47 AM	57723
Surr: Toluene-d8	95.9	70-130		%Rec	1	1/28/2021 2:31:47 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: S-7 (-4')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:30:00 AM

Lab ID: 2101884-010

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	360	60		mg/Kg	20	1/27/2021 12:12:42 AM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/26/2021 12:14:43 PM	57724
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/26/2021 12:14:43 PM	57724
Surr: DNOP	105	30.4-154		%Rec	1	1/26/2021 12:14:43 PM	57724
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/30/2021 1:41:54 PM	57723
Surr: BFB	94.5	75.3-105		%Rec	1	1/30/2021 1:41:54 PM	57723
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/28/2021 3:00:12 AM	57723
Toluene	ND	0.048		mg/Kg	1	1/28/2021 3:00:12 AM	57723
Ethylbenzene	ND	0.048		mg/Kg	1	1/28/2021 3:00:12 AM	57723
Xylenes, Total	ND	0.096		mg/Kg	1	1/28/2021 3:00:12 AM	57723
Surr: 1,2-Dichloroethane-d4	86.2	70-130		%Rec	1	1/28/2021 3:00:12 AM	57723
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	1/28/2021 3:00:12 AM	57723
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/28/2021 3:00:12 AM	57723
Surr: Toluene-d8	96.4	70-130		%Rec	1	1/28/2021 3:00:12 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BG-1 (-3')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:35:00 AM

Lab ID: 2101884-011

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	660	60		mg/Kg	20	1/27/2021 12:25:07 AM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/26/2021 12:38:27 PM	57724
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/26/2021 12:38:27 PM	57724
Surr: DNOP	153	30.4-154		%Rec	1	1/26/2021 12:38:27 PM	57724
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/31/2021 3:59:33 AM	57723
Surr: BFB	95.3	75.3-105		%Rec	1	1/31/2021 3:59:33 AM	57723
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/28/2021 3:28:40 AM	57723
Toluene	ND	0.047		mg/Kg	1	1/28/2021 3:28:40 AM	57723
Ethylbenzene	ND	0.047		mg/Kg	1	1/28/2021 3:28:40 AM	57723
Xylenes, Total	ND	0.095		mg/Kg	1	1/28/2021 3:28:40 AM	57723
Surr: 1,2-Dichloroethane-d4	84.5	70-130		%Rec	1	1/28/2021 3:28:40 AM	57723
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	1/28/2021 3:28:40 AM	57723
Surr: Dibromofluoromethane	110	70-130		%Rec	1	1/28/2021 3:28:40 AM	57723
Surr: Toluene-d8	95.8	70-130		%Rec	1	1/28/2021 3:28:40 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: BG-1 (-4')

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:40:00 AM

Lab ID: 2101884-012

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	590	60		mg/Kg	20	1/27/2021 12:37:31 AM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	1/26/2021 1:02:01 PM	57724
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	1/26/2021 1:02:01 PM	57724
Surr: DNOP	129	30.4-154		%Rec	1	1/26/2021 1:02:01 PM	57724
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/31/2021 4:22:56 AM	57723
Surr: BFB	95.7	75.3-105		%Rec	1	1/31/2021 4:22:56 AM	57723
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.023		mg/Kg	1	1/28/2021 3:57:25 AM	57723
Toluene	ND	0.047		mg/Kg	1	1/28/2021 3:57:25 AM	57723
Ethylbenzene	ND	0.047		mg/Kg	1	1/28/2021 3:57:25 AM	57723
Xylenes, Total	ND	0.093		mg/Kg	1	1/28/2021 3:57:25 AM	57723
Surr: 1,2-Dichloroethane-d4	87.4	70-130		%Rec	1	1/28/2021 3:57:25 AM	57723
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	1/28/2021 3:57:25 AM	57723
Surr: Dibromofluoromethane	107	70-130		%Rec	1	1/28/2021 3:57:25 AM	57723
Surr: Toluene-d8	95.2	70-130		%Rec	1	1/28/2021 3:57:25 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW-1 (Surf)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:45:00 AM

Lab ID: 2101884-013

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	1100	60		mg/Kg	20	1/27/2021 12:49:56 AM	57741
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.0		mg/Kg	1	1/26/2021 1:25:42 PM	57724
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	1/26/2021 1:25:42 PM	57724
Surr: DNOP	121	30.4-154		%Rec	1	1/26/2021 1:25:42 PM	57724
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/31/2021 5:33:07 AM	57723
Surr: BFB	95.9	75.3-105		%Rec	1	1/31/2021 5:33:07 AM	57723
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.024		mg/Kg	1	1/28/2021 4:26:00 AM	57723
Toluene	ND	0.048		mg/Kg	1	1/28/2021 4:26:00 AM	57723
Ethylbenzene	ND	0.048		mg/Kg	1	1/28/2021 4:26:00 AM	57723
Xylenes, Total	ND	0.095		mg/Kg	1	1/28/2021 4:26:00 AM	57723
Surr: 1,2-Dichloroethane-d4	88.7	70-130		%Rec	1	1/28/2021 4:26:00 AM	57723
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	1/28/2021 4:26:00 AM	57723
Surr: Dibromofluoromethane	106	70-130		%Rec	1	1/28/2021 4:26:00 AM	57723
Surr: Toluene-d8	94.1	70-130		%Rec	1	1/28/2021 4:26:00 AM	57723

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

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

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## Analytical Report

Lab Order 2101884

Date Reported: 2/1/2021

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: SW-2 (Surf)

Project: Gravel Grinder 23 28 18 3H

Collection Date: 1/21/2021 11:50:00 AM

Lab ID: 2101884-014

Matrix: SOIL

Received Date: 1/23/2021 10:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>VP</b>
Chloride	2600	150		mg/Kg	50	1/27/2021 6:28:03 PM	57749
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	28	9.3		mg/Kg	1	1/26/2021 1:49:25 PM	57724
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/26/2021 1:49:25 PM	57724
Surr: DNOP	102	30.4-154		%Rec	1	1/26/2021 1:49:25 PM	57724
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/31/2021 5:56:30 AM	57723
Surr: BFB	96.7	75.3-105		%Rec	1	1/31/2021 5:56:30 AM	57723
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>							Analyst: <b>JMR</b>
Benzene	ND	0.025		mg/Kg	1	1/28/2021 4:54:28 AM	57723
Toluene	ND	0.049		mg/Kg	1	1/28/2021 4:54:28 AM	57723
Ethylbenzene	ND	0.049		mg/Kg	1	1/28/2021 4:54:28 AM	57723
Xylenes, Total	ND	0.098		mg/Kg	1	1/28/2021 4:54:28 AM	57723
Surr: 1,2-Dichloroethane-d4	87.2	70-130		%Rec	1	1/28/2021 4:54:28 AM	57723
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	1/28/2021 4:54:28 AM	57723
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/28/2021 4:54:28 AM	57723
Surr: Toluene-d8	96.8	70-130		%Rec	1	1/28/2021 4:54:28 AM	57723

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

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

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

WO#: 2101884

01-Feb-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>MB-57741</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57741</b>	RunNo: <b>74872</b>								
Prep Date: <b>1/26/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642619</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-57741</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57741</b>	RunNo: <b>74872</b>								
Prep Date: <b>1/26/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642620</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.1	90	110			

Sample ID: <b>MB-57749</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57749</b>	RunNo: <b>74902</b>								
Prep Date: <b>1/26/2021</b>	Analysis Date: <b>1/27/2021</b>	SeqNo: <b>2643652</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: <b>LCS-57749</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 300.0: Anions</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57749</b>	RunNo: <b>74902</b>								
Prep Date: <b>1/26/2021</b>	Analysis Date: <b>1/27/2021</b>	SeqNo: <b>2643653</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	90	110			

**Qualifiers:**

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

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

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

WO#: 2101884

01-Feb-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>LCS-57717</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57717</b>	RunNo: <b>74840</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2641647</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	68.9	141			
Surr: DNOP	5.0		5.000		101	30.4	154			

Sample ID: <b>MB-57717</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57717</b>	RunNo: <b>74840</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2641649</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		110	30.4	154			

Sample ID: <b>MB-57724</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57724</b>	RunNo: <b>74857</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642187</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		121	30.4	154			

Sample ID: <b>LCS-57724</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57724</b>	RunNo: <b>74857</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642188</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61	10	50.00	0	121	68.9	141			
Surr: DNOP	6.1		5.000		122	30.4	154			

Sample ID: <b>2101884-005AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>S-5 (-3')</b>	Batch ID: <b>57724</b>	RunNo: <b>74857</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642190</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	9.4	46.77	0	117	15	184			
Surr: DNOP	5.6		4.677		120	30.4	154			

**Qualifiers:**

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

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2101884

01-Feb-21

Client: Souder, Miller & Associates

Project: Gravel Grinder 23 28 18 3H

Sample ID: 2101884-005AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: S-5 (-3')		Batch ID: 57724		RunNo: 74857						
Prep Date: 1/25/2021		Analysis Date: 1/26/2021		SeqNo: 2642191		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	9.5	47.57	0	117	15	184	1.72	23.9	
Surr: DNOP	5.7		4.757		119	30.4	154	0	0	

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

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

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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

WO#: 2101884

01-Feb-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>mb-57716</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57716</b>	RunNo: <b>74870</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642227</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		97.1	75.3	105			

Sample ID: <b>lcs-57716</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57716</b>	RunNo: <b>74870</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642228</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	80	120			
Surr: BFB	1100		1000		108	75.3	105			S

Sample ID: <b>lcs-57723</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57723</b>	RunNo: <b>74945</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/30/2021</b>	SeqNo: <b>2646074</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.3	80	120			
Surr: BFB	1100		1000		107	75.3	105			S

Sample ID: <b>mb-57723</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57723</b>	RunNo: <b>74945</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/30/2021</b>	SeqNo: <b>2646078</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		94.6	75.3	105			

Sample ID: <b>2.5ug gro lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R74957</b>	RunNo: <b>74957</b>								
Prep Date:	Analysis Date: <b>1/30/2021</b>	SeqNo: <b>2646140</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	75.3	105			S

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R74957</b>	RunNo: <b>74957</b>								
Prep Date:	Analysis Date: <b>1/30/2021</b>	SeqNo: <b>2646173</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		105	75.3	105			

**Qualifiers:**

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

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

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

WO#: 2101884

01-Feb-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>mb-57716</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57716</b>	RunNo: <b>74870</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642267</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		98.1	80	120			

Sample ID: <b>LCS-57716</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>57716</b>	RunNo: <b>74870</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/26/2021</b>	SeqNo: <b>2642268</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.2	80	120			
Toluene	0.99	0.050	1.000	0	98.6	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.9	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	80	120			

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>BS74957</b>	RunNo: <b>74957</b>								
Prep Date:	Analysis Date: <b>1/30/2021</b>	SeqNo: <b>2646178</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>BS74957</b>	RunNo: <b>74957</b>								
Prep Date:	Analysis Date: <b>1/30/2021</b>	SeqNo: <b>2646199</b>	Units: <b>%Rec</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

**Qualifiers:**

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

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

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

WO#: 2101884

01-Feb-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>Ics-57723</b>	SampType: <b>LCS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>57723</b>	RunNo: <b>74864</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/27/2021</b>	SeqNo: <b>2643490</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	121	80	120			S
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.4	0.10	3.000	0	114	80	120			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.3	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.9	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		115	70	130			
Surr: Toluene-d8	0.46		0.5000		91.6	70	130			

Sample ID: <b>mb-57723</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>PBS</b>	Batch ID: <b>57723</b>	RunNo: <b>74864</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/27/2021</b>	SeqNo: <b>2643491</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.2	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		111	70	130			
Surr: Toluene-d8	0.48		0.5000		95.6	70	130			

Sample ID: <b>2101884-006ams</b>	SampType: <b>MS4</b>	TestCode: <b>EPA Method 8260B: Volatiles Short List</b>								
Client ID: <b>S-5 (-4')</b>	Batch ID: <b>57723</b>	RunNo: <b>74864</b>								
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/27/2021</b>	SeqNo: <b>2643494</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.024	0.9579	0	123	71.1	115			S
Toluene	1.1	0.048	0.9579	0	115	79.6	132			
Ethylbenzene	1.1	0.048	0.9579	0	116	83.8	134			
Xylenes, Total	3.5	0.096	2.874	0	120	82.4	132			
Surr: 1,2-Dichloroethane-d4	0.44		0.4789		91.2	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.4789		95.9	70	130			
Surr: Dibromofluoromethane	0.52		0.4789		108	70	130			
Surr: Toluene-d8	0.46		0.4789		95.2	70	130			

**Qualifiers:**

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

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

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

WO#: 2101884

01-Feb-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>2101884-006amsd</b>		SampType: <b>MSD4</b>		TestCode: <b>EPA Method 8260B: Volatiles Short List</b>						
Client ID: <b>S-5 (-4')</b>		Batch ID: <b>57723</b>		RunNo: <b>74864</b>						
Prep Date: <b>1/25/2021</b>		Analysis Date: <b>1/27/2021</b>		SeqNo: <b>2643495</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.024	0.9718	0	124	71.1	115	2.23	20	S
Toluene	1.1	0.049	0.9718	0	118	79.6	132	4.56	20	
Ethylbenzene	1.2	0.049	0.9718	0	124	83.8	134	8.09	20	
Xylenes, Total	3.7	0.097	2.915	0	127	82.4	132	6.56	20	
Surr: 1,2-Dichloroethane-d4	0.46		0.4859		95.3	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.48		0.4859		97.9	70	130	0	0	
Surr: Dibromofluoromethane	0.53		0.4859		108	70	130	0	0	
Surr: Toluene-d8	0.49		0.4859		101	70	130	0	0	

**Qualifiers:**

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

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

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

WO#: 2101884

01-Feb-21

**Client:** Souder, Miller & Associates**Project:** Gravel Grinder 23 28 18 3H

Sample ID: <b>lcs-57723</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>57723</b>			RunNo: <b>74864</b>						
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/27/2021</b>			SeqNo: <b>2644164</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.0	70	130			
Surr: BFB	500		500.0		100	70	130			

Sample ID: <b>mb-57723</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>PBS</b>	Batch ID: <b>57723</b>			RunNo: <b>74864</b>						
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/27/2021</b>			SeqNo: <b>2644165</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	500		500.0		100	70	130			

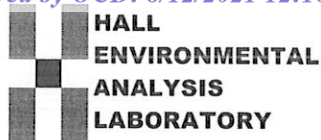
Sample ID: <b>2101884-005ams</b>	SampType: <b>MS</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>S-5 (-3')</b>	Batch ID: <b>57723</b>			RunNo: <b>74864</b>						
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/27/2021</b>			SeqNo: <b>2644167</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.7	23.72	0	93.5	49.2	122			
Surr: BFB	470		474.4		100	70	130			

Sample ID: <b>2101884-005amsd</b>	SampType: <b>MSD</b>			TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID: <b>S-5 (-3')</b>	Batch ID: <b>57723</b>			RunNo: <b>74864</b>						
Prep Date: <b>1/25/2021</b>	Analysis Date: <b>1/27/2021</b>			SeqNo: <b>2644168</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.65	0	96.0	49.2	122	2.42	20	
Surr: BFB	490		473.0		103	70	130	0	0	

**Qualifiers:**

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

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



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

## Sample Log-In Check List

Client Name: **Souder, Miller & Associates**

Work Order Number: **2101884**

RcptNo: 1

Received By: **Desiree Dominguez** 1/23/2021 10:45:00 AM

Completed By: **Desiree Dominguez** 1/22/2021 3:43:06 PM

Reviewed By: **JR 1/25/21**

*JD*

*JD*

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

# of preserved bottles checked for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: **DAD 01/23/21**

### 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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good				







# HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

4901 Hawkins NE - Albuquerque, NM 87109

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

# Analysis Request

[illegible]

Remarks:

Marathon Oil Permian LLC

**District I**

1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 41714

**CONDITIONS**

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 41714
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
rhamlet	The in-situ remediation must be completed within 90 days. Resampling will need to show soil analytical results below closure criteria for depth to water determination. Otherwise, the contaminated soil will need to be removed with shovel/hydrovac. There will be no extension. The only remediation that should remain are the sample points that are being requested for deferral. Specify exactly which sample points you are asking for a deferral on and the reason the contaminants cannot be removed. Only sample locations that are right adjacent to equipment and require a major deconstruction will be available for a deferral. Make sure all possible contaminated soil is removed before a deferral request is submitted to the OCD payment portal.	11/19/2021