

APPENDIX A

APPROVED COGCC FORM 19 SPILL/RELEASE REPORT (INITIAL AND SUPPLEMENTAL FORMS)

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

403391282

Date Received:

05/02/2023

Spill report taken by:

Araza, Steven

Spill/Release Point ID:

484391

SPILL/RELEASE REPORT (INITIAL)

This form is to be submitted by the party responsible for the oil and gas spill or release. Refer to COGCC Rule 912.b. for reporting requirements of spills or releases of E&P Waste, produced Fluids, or unauthorized Releases of natural gas. Submit a Site Investigation and Remediation Workplan (Form 27) if Rule 913.c. applies.

OPERATOR INFORMATION

| | | |
|---------------------------------------|----------------------|---|
| Name of Operator: CAERUS PICEANCE LLC | Operator No: 10456 | Phone Numbers Phone: (970) 730-7848 Mobile: (970) 730-7848 Email: kvertiz@caerusoilandgas.com |
| Address: 1001 17TH STREET #1600 | | |
| City: DENVER | State: CO Zip: 80202 | |
| Contact Person: Kathy Vertiz | | |

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 403391282

Initial Report Date: 05/02/2023 Date of Discovery: 05/02/2023 Spill Type: Recent Spill

Spill/Release Point Location:

QTRQTR SWNW SEC 9 TWP 2S RNG 97W MERIDIAN 6

Latitude: 39.891270 Longitude: -108.292690

Municipality (if within municipal boundaries): County: RIO BLANCO

Enter Lat./long measurement of the actual Spill/Release Point. Lat./Long. Data shall meet standards of Rule 216.

Reference Location:

Facility Type: WELL SITE ☒ Facility/Location ID No 335717
 Spill/Release Point Name: LOVE RANCH 8 Off-Location Flowline ☐ Well API No. (Only if the reference facility is well) 05- -
☐ No Existing Facility or Location ID No.

Estimated Total Spill Volume: use same ranges as others for values

Estimated Oil Spill Volume(bbl): 0 Estimated Condensate Spill Volume(bbl): Unknown

Estimated Flow Back Fluid Spill Volume(bbl): 0 Estimated Produced Water Spill Volume(bbl): Unknown

Estimated Other E&P Waste Spill Volume(bbl): 0 Estimated Drilling Fluid Spill Volume(bbl): 0

Specify:

Has the subject Spill/Release been controlled at the time of reporting? Yes

Land Use:

Current Land Use: CROP LAND Other(Specify): Pasture Grass and alfalfa

Weather Condition: Partly cloudy and windy

Surface Owner: FEE Other(Specify): Caerus

Describe what is known about the spill/release event (what happened -- including how it was stopped, contained, and recovered):

Caerus identified a sheen emanating on Piceance Creek along a known pipeline corridor. Caerus initiate immediate spill response procedures, deploying booms in the waterway, started fluid recovery, began Regulatory notification, shut in lines and began pressure testing.

List of Agencies and Other Parties Notified Pursuant to Rule 912.b.(7)-(11):

OTHER NOTIFICATIONS

| <u>Date</u> | <u>Agency/Party</u> | <u>Contact</u> | <u>Phone</u> | <u>Response</u> |
|-------------|---------------------|----------------------|--------------|-----------------------------------|
| 5/2/2023 | CDPHE | CDPHE Reporting Line | 877-518-5608 | Left Message and spoke with Ann |
| 5/2/2023 | NRC | NRC Reporting Line | 800-424-8802 | Spoke with response coordinator |
| 5/2/2023 | CPW | Taylor Elm | 970-986-9767 | Spoke on the phone |
| 5/2/2023 | BLM | Tim Barrett | 970-858-9940 | Spoke on the phone |
| 5/2/2023 | Rio Blanco County | Eddie Smercina | 970-878-9586 | Left voice message and sent email |
| 5/2/2023 | COGCC | Alex | 303-894-2100 | ext 5138, Spoke on the phone |
| 5/2/2023 | COGCC | Steven Arauza | 720-498-5298 | Left voice message |

REPORT CRITERIA

Rule 912.b.(1) Report to the Director (select all criteria that apply):

- Yes Rule 912.b.(1).A: A Spill or Release of any size that impacts or threatens to impact any Waters of the State, Public Water System, residence or occupied structure, livestock, wildlife, or publicly-maintained road.
- Waters of the State: Impacted Public Water System: n/a
- Residence or Occupied Structure: n/a Livestock: Threatened to Impact
- Wildlife: Threatened to Impact Publicly-Maintained Road: n/a
- Yes Rule 912.b.(1).B: A Spill or Release in which 1 barrel or more of E&P Waste or produced fluids is spilled or released outside of berms or other secondary containment.
- Yes Rule 912.b.(1).C: A Spill or Release of 5 barrels or more of E&P Waste or produced Fluids regardless of whether the Spill or Release is completely contained within berms or other secondary containment.
- No Rule 912.b.(1).D: Within 6 hours of discovery, a Grade 1 Gas Leak. For a Grade 1 Gas Leak from a Flowline, the Operator also must submit the Form 19 – Initial, document number on a Form 44, Flowline Report, for the Grade 1 Gas Leak
- Enter the approximate time of discovery _____ (HH:MM)
- Enter the Document Number of the Grade 1 Gas Leak Report, Form 44 _____
- Was there a reportable accident associated with either a Grade 1 Gas Leak or an E&P waste spill or release? _____
- Enter the Document Number of the Initial Accident Report, Form 22 _____
- Was there damage during excavation? _____
- Was CO 811 notified prior to excavation? _____
- No Rule 912.b.(1).E: The discovery of 10 cubic yards or more of impacted material resulting from a current or historic Spill or Release. Discovery and reporting will not be contingent upon confirmation samples demonstrating exceedance of Table 915-1 standards.
- Estimated Volume of Impacted Solids (cu. yd.): _____

| | |
|-----|--|
| Yes | <p>Rule 912.b.(1).F: The discovery of impacted Waters of the State, including Groundwater. Discovery and reporting will not be contingent upon confirmation samples demonstrating exceedance of Table 915-1 standards. The presence of free product or hydrocarbon sheen on Groundwater or surface water is reportable. The presence of contaminated soil in contact with Groundwater or surface water is reportable. Check all that apply:</p> <p><input checked="" type="checkbox"/> The presence of free product or hydrocarbon sheen Surface Water</p> <p><input type="checkbox"/> The presence of free product or hydrocarbon sheen on Groundwater</p> <p><input checked="" type="checkbox"/> The presence of contaminated soil in contact with Groundwater</p> <p><input type="checkbox"/> The presence of contaminated soil in contact with Surface water</p> |
| Yes | <p>Rule 912.b.(1).G: A suspected or actual Spill or Release of any volume where the volume cannot be immediately determined, including a spill or release of any volume that daylights from the subsurface.</p> |
| No | <p>Rule 912.b.(1).H: Spill or Release resulting in vaporized hydrocarbon mists that leave the Oil and Gas Location or Off-Location Flowline right of way from an Oil and Gas Location and impacts or threatens to impact off-location property.</p> <p><input type="checkbox"/> Areas offsite of Oil & Gas Location <input type="checkbox"/> Off-Location Flowline right of way</p> |
| No | <p>Rule 912.b.(1).I: A Release of natural gas that results in an accumulation of soil gas or gas seeps.</p> |
| No | <p>Rule 912.b.(1).J: A Release that results in natural gas in Groundwater.</p> |

OPERATOR COMMENTS:

| |
|--|
| |
|--|

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Blair Rollins
 Title: EHS Specialist Date: 05/02/2023 Email: brollins@caerusoilandgas.com

| <u>COA Type</u> | <u>Description</u> |
|-----------------|---|
| | Provide documentation of notification that has been provided to downstream surface water users including administrators of all Public Water Systems within 15 miles downstream of this Spill/Release. |
| | Submit photo documentation, as described in Rule 912.b.(4).B, via a Supplemental Form 19. |
| | Operator shall collect sample(s) from comparable, nearby non-impacted native soil for purposes of establishing background soil conditions including pH, electrical conductivity (EC) and sodium adsorption ratio (SAR), per Rule 915.e.(2).D. |
| | Per Rule 912.a.(2), the Operator will conduct sampling and analysis of soil, surface water, and groundwater--if encountered, to determine the horizontal and vertical extent of any contamination in excess of the cleanup concentrations in Table 915-1 for soil, surface water, and groundwater. The Operator shall analyze samples for the complete Table 915-1 list and shall compare analytical results for site investigation samples to the Table 915-1 Protection of Groundwater Soil Screening Level Concentrations. |
| | In the Supplemental Form 19, identify the root cause of the failure and explain how reoccurrence on this pipeline and the other pipelines associated with this facility will be prevented, per Rule 912.d.(3). Coordinate with COGCC Western Integrity Inspector, Mike Longworth, regarding pipeline excavation, assessment, and repair. Provide a minimum 48-hours of advance notice to Mike Longworth via email (michael.longworth@state.co.us) prior to pressure testing of equipment. |
| | Assess nature and extent of contamination with confirmation soil samples. The operator shall comply with Rule 915.e.(2) for collection of soil samples. The operator shall notify the COGCC and comply with Rule 915.e.(3) if groundwater is encountered during cleanup operations. |
| | Additional information required by Rule 912.b.(4) shall be submitted on a supplemental spill report no later than ten days after discovery (reported Discovery Date: 5/2/2023). Within 90 days of spill discovery date, Operator shall comply with Spill/Release closure requirements outlined in Rule 912.b.(6). |
| 7 COAs | |

Attachment List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|-------------------|
| 403391282 | FORM 19 SUBMITTED |

Total Attach: 1 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|----------------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

403398312

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Araza, Steven

Spill/Release Point ID:

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SPILL/RELEASE REPORT (SUPPLEMENTAL)

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| Address: <u>1001 17TH STREET #1600</u> | | Phone: <u>(970) 285-2925</u> |
| City: <u>DENVER</u> | State: <u>CO</u> | Zip: <u>80202</u> |
| Contact Person: <u>Blair Rollins</u> | | Mobile: <u>(970) 640-6919</u> |
| | | Email: <u>brollins@caerusoilandgas.com</u> |

☐ Transfer of Operatorship: Pursuant to Rule 912.f, this Supplemental Form 19 is being submitted to designate the Buying Operator as the responsible Operator for this Spill and Release.

INITIAL SPILL/RELEASE REPORT

Initial Spill/Release Report Doc# 403391282

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| | <input type="checkbox"/> Areas offsite of Oil & Gas Location <input type="checkbox"/> Off-Location Flowline right of way |
| No | Rule 912.b.(1).I: A Release of natural gas that results in an accumulation of soil gas or gas seeps. |
| No | Rule 912.b.(1).J: A Release that results in natural gas in Groundwater. |

SPILL/RELEASE DETAIL REPORTS

| | | | |
|---|--------------------------------------|--|---|
| #1 | Supplemental Report Date: 05/12/2023 | | |
| FLUIDS | BBL's SPILLED | BBL's RECOVERED | Unknown |
| OIL | 0 | 0 | <input type="checkbox"/> |
| CONDENSATE | | | <input checked="" type="checkbox"/> |
| PRODUCED WATER | | | <input checked="" type="checkbox"/> |
| DRILLING FLUID | 0 | 0 | <input type="checkbox"/> |
| FLOW BACK FLUID | 0 | 0 | <input type="checkbox"/> |
| OTHER E&P WASTE | 0 | 0 | <input type="checkbox"/> |
| specify: _____ | | | |
| Was spill/release completely contained within berms or secondary containment? <u>NO</u> Was an Emergency Pit constructed? <u>NO</u> | | | |
| <i>Secondary containment, including walls & floor regardless of construction material, must be sufficiently impervious to contain any discharge from primary containment until cleanup occurs.</i> | | | |
| A Form 15 Pit Report shall be submitted within 30 calendar days after the construction of an emergency pit | | | |
| Impacted Media (Check all that apply) <input checked="" type="checkbox"/> Soil <input checked="" type="checkbox"/> Groundwater <input checked="" type="checkbox"/> Surface Water <input type="checkbox"/> Dry Drainage Feature | | | |
| Surface Area Impacted: Length of Impact (feet): _____ | | Width of Impact (feet): _____ | |
| Depth of Impact (feet BGS): _____ | | Depth of Impact (inches BGS): _____ | |
| How was extent determined? | | | |
| Caerus is in the process of determining the extent of contamination associated with the project to include surface water, groundwater, and soil impacts. Following identification of the incident, emergency response measures were implemented to contain and capture the spilled material. Booms were installed along Piceance Creek and the irrigation channels which flowed west into the field, please refer to the attached Spill Response and Sampling Figures for details regarding boom deployment and sample locations. Surface water samples were collected to characterize the release and are included as attachments. Additional surface water sampling activities have been and are being conducted on a weekly basis, with results pending. Once analytical results are received, Caerus will provide this information in supplemental documentation. | | | |
| Soil/Geology Description: | | | |
| Soil map unit 41: Havre loam, 0 to 4 percent slopes. | | | |
| Depth to Groundwater (feet BGS) <u>1</u> | | Number Water Wells within 1/2 mile radius: <u>19</u> | |
| If less than 1 mile, distance in feet to nearest | | Water Well <u>3100</u> None <input type="checkbox"/> | Surface Water <u>0</u> None <input type="checkbox"/> |
| | | Wetlands <u>1</u> None <input type="checkbox"/> | Springs _____ None <input checked="" type="checkbox"/> |

Livestock 100 None ☐Occupied Building 3100 None ☐

Additional Spill Details Not Provided Above:

Caerus is monitoring sorbent booms and pads for saturation and routinely replacing as needed. As an initial remediation measure, surface water and groundwater skimming near the point of release is being conducted with a transport truck. The nearest ground water well downgradient of the release is located 3,055 feet north of the point of release. The other wells within the half mile radius are either natural gas wells or located upgradient of the point of release.

REQUEST FOR CLOSURE

Spill/Release Reports should be closed when impacts have been remediated or when further investigation and corrective actions will take place under an approved Form 27.

Basis for Closure: ☐ Corrective Actions Completed (documentation attached, check all that apply)

☐ Horizontal and Vertical extents of impacts have been delineated.

☐ Documentation of compliance with Table 915-1 is attached.

☐ All E&P Waste has been properly treated or disposed.

☐ Work proceeding under an approved Form 27 (Rule 912.c).

Form 27 Remediation Project No: _____

☐ SUSPECTED Spill/Release did not occur or was below Rule 912.a.(5) reporting thresholds.

OPERATOR COMMENTS:

I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: _____ Print Name: Blair Rollins

Title: EHS Specialist Date: 05/12/2023 Email: brollins@caerusoilandgas.com

COA Type

Description

| | |
|-------|--|
| | |
| 0 COA | |

Attachment List

| Att Doc Num | Name |
|-------------|------------------------------------|
| 403398312 | SPILL/RELEASE REPORT(SUPPLEMENTAL) |
| 403401825 | OTHER |
| 403401833 | MAP |
| 403401835 | MAP |
| 403401837 | MAP |
| 403401839 | MAP |
| 403401841 | MAP |
| 403401842 | MAP |
| 403401843 | MAP |
| 403401844 | MAP |
| 403401872 | ANALYTICAL RESULTS |
| 403401876 | ANALYTICAL RESULTS |
| 403401877 | ANALYTICAL RESULTS |
| 403401878 | ANALYTICAL RESULTS |
| 403401879 | ANALYTICAL RESULTS |

| | |
|-----------|-------------------|
| 403420296 | FORM 19 SUBMITTED |
|-----------|-------------------|

Total Attach: 16 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|--------------------------|-------------------------------|----------------------------|
| Environmental | Comply with outstanding COAs. | 06/01/2023 |

Total: 1 comment(s)

APPENDIX B
EAGLE SYNERGISTIC OIP FINDINGS AND REPORT

Eagle Synergistic Optimizing Technologies, LLC



Specializing in High Resolution Site Characterization Technology

Karen Maestas
Kleinfelder
kmaestas@kleinfelder.com
303.550.7184

RE:
White River City, CO
Project # 23.155A

Karen,

Below is a comprehensive report detailing the HRSC investigative services conducted at your White River City, CO site Love Ranch 8. It includes an overview of logistics, individual logs, cross-sections of data, as well as a data synopsis.

Please let us know if you have any questions or requests and feel free to contact us anytime.

We strive to ensure that our client's expectations are met and exceeded in all aspects. We look forward to working with you again in the future.

Thank you,

Janet L Castle, PG, President

jcastle@EagleSynergistic.com

Eagle Synergistic

751 Pine Ridge Rd #100

Golden, CO 80403

Direct: 720-475-0022

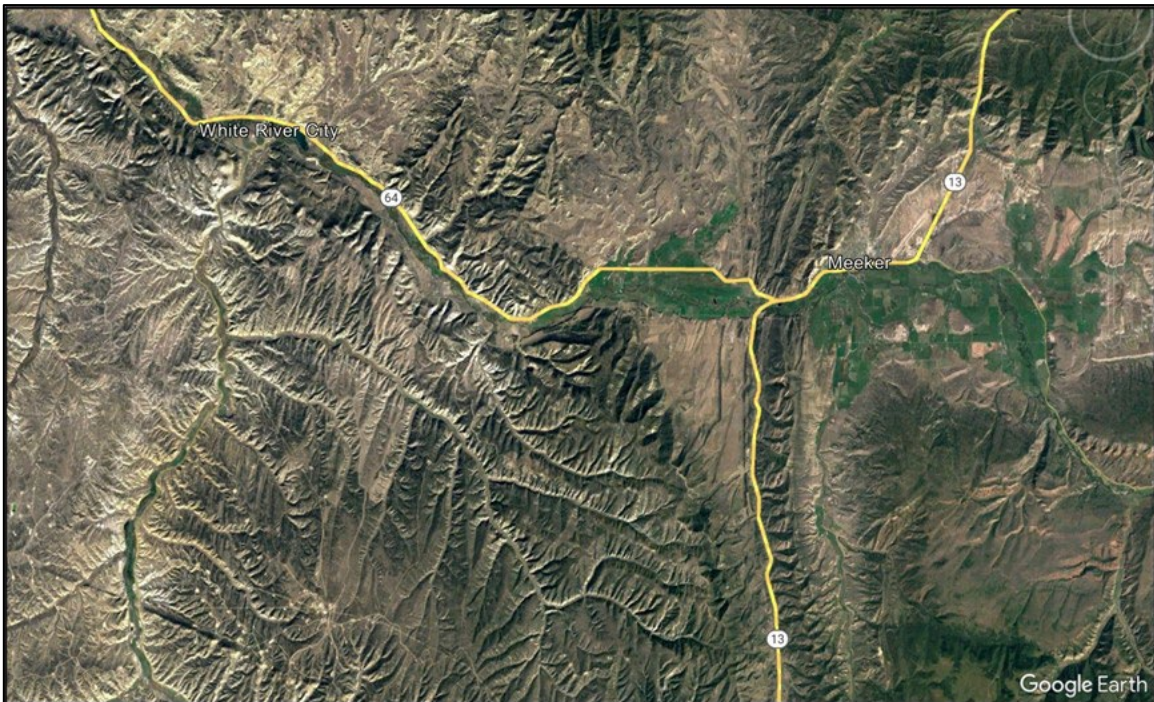
Office: 303-305-7783

www.EagleSynergistic.com

Locations Nationwide: CO, TX, CA, GA, PA, IL

WOSB

Project #23.155A
COMPREHENSIVE REPORT
7/7/2023



Map Data: Google, © 2023

Caerus Love Ranch 8
White River City, CO

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PROJECT OVERVIEW

Project Summary - Logistics

Between 5/31/23 and 6/8/23, Eagle Synergistic worked with Kleinfelder to complete an HRSC investigation of Love Ranch 8. DPT services were provided by Eagle Synergistic. This investigation included advancing 24 Optical Image Profiler-Green (OIPG) and four Optical Image Profiler-Ultraviolet (OIPUV) borings to depths ranging from 19.55 to 37.85 feet below ground surface. Both tools were run in conjunction with the electrical conductivity dipole (EC) and the Hydraulic Profiling Tool (HPT). The objective of the investigation was to use the OIP and OIP-G to investigate the free-phase plume on site.

On 6/27/23, Eagle Synergistic returned to the site with the objective of completing additional OIP-UV borings within the LR8 investigation area. 5 OIP-UV borings were completed to depths ranging from 25 to 25.2' bgs. The OIP-UV data overlays from Phase A have been updated to include these new datasets.

Personnel:

Eagle Synergistic – Evan Graves, Harry Jordan, Logan Cayon

Kleinfelder – Jordan Veith

Caerus – Blair Rollins

HRSC BORING LOCATIONS



DETECTOR INTERPRETATION

The OIP-G probe is designed with both 520nm green laser diode light (G) and infrared LED (IR) sources which are directed out a sapphire window into the boring sidewall. As the probe is advanced into the subsurface, the 520 nm G light source will induce fluorescence of PAHs present in NAPL level creosote, coal tars, or any heavy fuels or oils present in the soil. This fluorescence is captured by an onboard camera which operates at 30 images per second. Images are saved throughout the advancement of the log and still photos are taken using 520nm G and IR light sources each rod addition as well as at operator-chosen depths.

The OIP-UV probe is designed with UV and visible light sources which are directed out a sapphire window. As the probe is advanced into the subsurface, the UV light source will induce fluorescence of the fuel polycyclic aromatic hydrocarbons (PAHs). This fluorescence is captured by an onboard camera which operates at 30 images per second. Images are saved throughout the advancement of the log and still photos are taken using UV and visible light sources each rod addition as well as at operator-chosen depths.

In general, higher HPT pressure values indicate more compact soil. Likewise, higher EC values indicate smaller grain size, increased pore-fluid conductivity, or higher compaction. HPT is simply measuring the pressure required to maintain a set flow of water into the side-wall soil. The EC is measuring how readily an electrical current can pass through the soil. A tighter, more compact soil will display higher values than a looser, less compact soil.

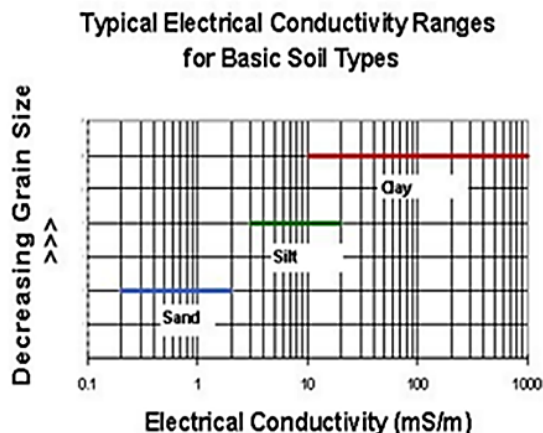
Normally, EC values and HPT pressure should trend together. When the EC reads a lower value (coarser-grained material e.g., sand or gravel) the HPT pressure tends to generally read lower in that interval as the sand/gravel will accept the injected water with ease. When the EC reads a higher value (finer-grained material, i.e., silts and clays) the HPT pressure tends to read higher. In tight, impermeable clays the HPT pressure can often reach 110 pounds per square inch (PSI), the system maximum pressure, while EC values may range from 100-400 milli Siemens per meter (mS/m). Due to regional lithological properties, some sites may display EC and HPT data trends that do not directly correlate.

This report, and the information contained herein, consists solely of qualitative information provided to the recipient for its own independent use. Eagle Synergistic will not provide to the recipient or owner(s) of the subject property any recommendations related to this report or any information contained herein, and Eagle Synergistic hereby disclaims all responsibility related to the same.

UNDERSTANDING EC AND HPT DATA

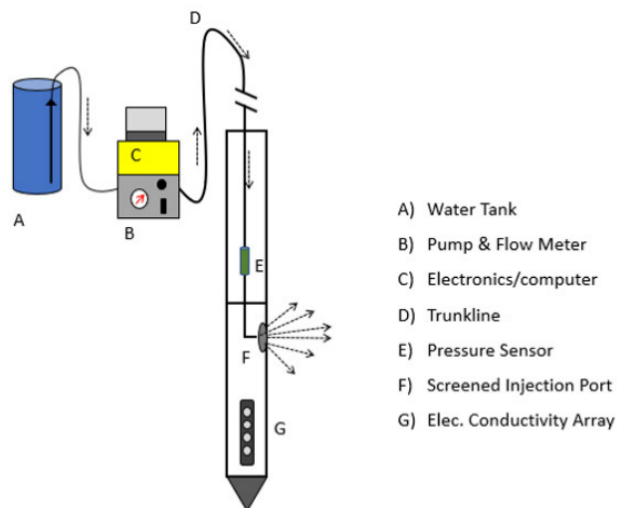
EC (Electrical Conductivity):

- Lowest relative detector on probe, located approximately 1 inch from the probe tip.
- Soil conductivity, in general, varies with grain size.
- Fine-grained soils, such as silts or clays, tend to produce higher EC signals than coarse-grained sands and gravels.
- The EC can also detect salts, metals, etc.



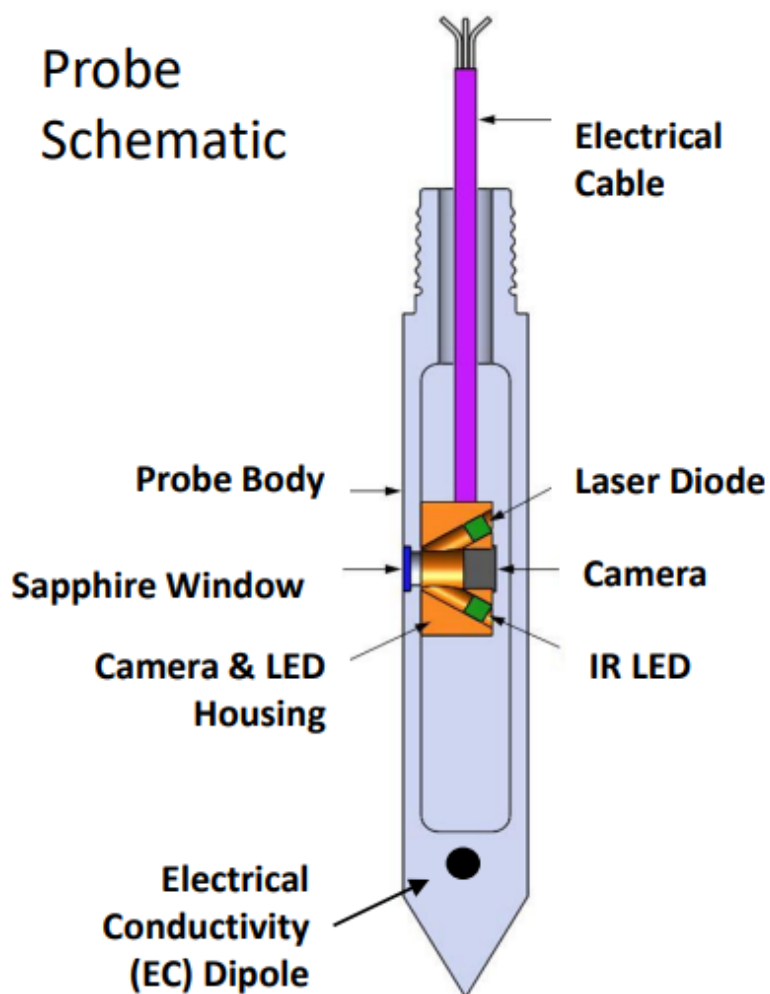
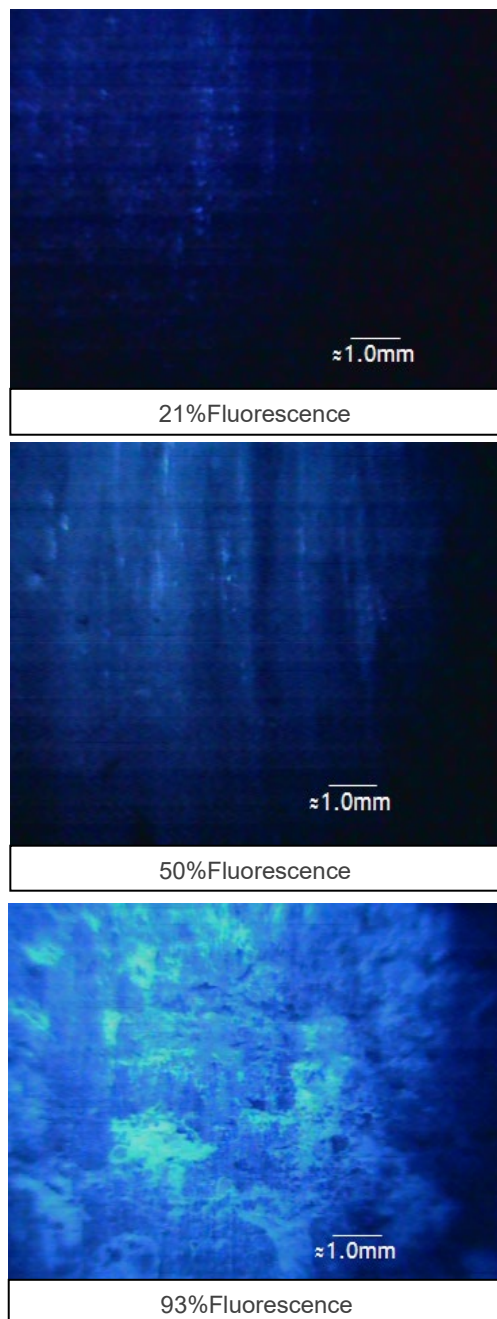
HPT Pressure

As shown in the figure below, water from a supply tank (A) is pumped by a pump (B) housed within the HPT controller at a set flow rate through the trunkline (D) and into the formation after passing through the injection screen (F). HPT system injection pressure measurements are made using a downhole pressure transducer (E). Use of a transducer in the downhole position allows measurement of the injection pressure at the HPT screen only and excludes frictional losses through the flow tube of the HPT trunkline. The downhole transducer position is also necessary for making hydrostatic pressure measurements at the probe.



UNDERSTANDING OIP-G FLUORESCENCE

OIP Fluorescence (%) is expressed as the percentage of the OIP camera view occupied by fluorescence, essentially indicating the degree of light non-aqueous phase liquid (LNAPL) saturation within the soil matrix. Site-specific variables such as the degree of LNAPL weathering, soil texture and LNAPL composition can affect the fluorescence intensity and appearance on the log. The images below are examples only and were not collected during this project.



QUALITY ASSURANCE

All probes contain an electrical conductivity dipole, which is tested for performance prior to the tooling being advanced. The dipole is tested using a low-value resistor and a high-value resistor, and the results for this test are presented with each boring log.

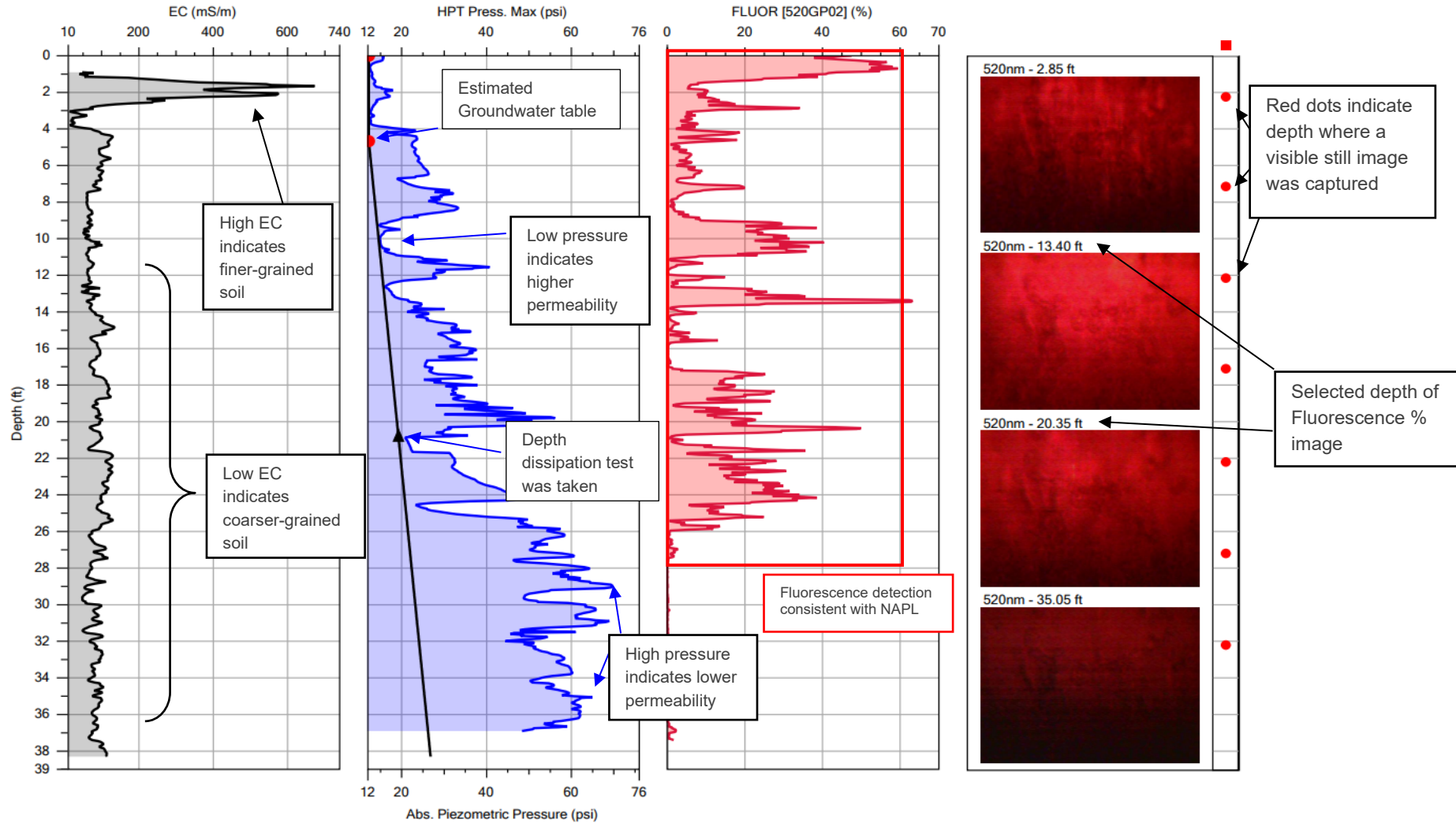
HPT ports and transducers are tested for performance prior to advancement using a reference tube, which allows the static pressure of a 6-in water column to be measured. We ensure that the transducer reads this value within a reasonable margin of error. This test is performed at the beginning and end of each boring, and the results are included.

Optical Image Profiler are tested in several ways. A visual target is held against the sapphire window to test the functionality of the visible light source. 4 mL quartz containers of Diesel fuel and motor are each held against the window to measure the effectiveness of the ultraviolet light within the probe. A blank black box is also held against the window to ensure that there are no false positives being recorded. These three tests are performed at the beginning and end of each boring and the results are recorded with each log.

These QA/Response tests are completed before and after each individual boring to ensure that the system is functioning correctly and responding well to the site-specific contaminant of concern. All QA/response logs are automatically compiled by the software and are available at Kleinfelder's request.

Individual Logs

Example OIP-G Log (for reference)

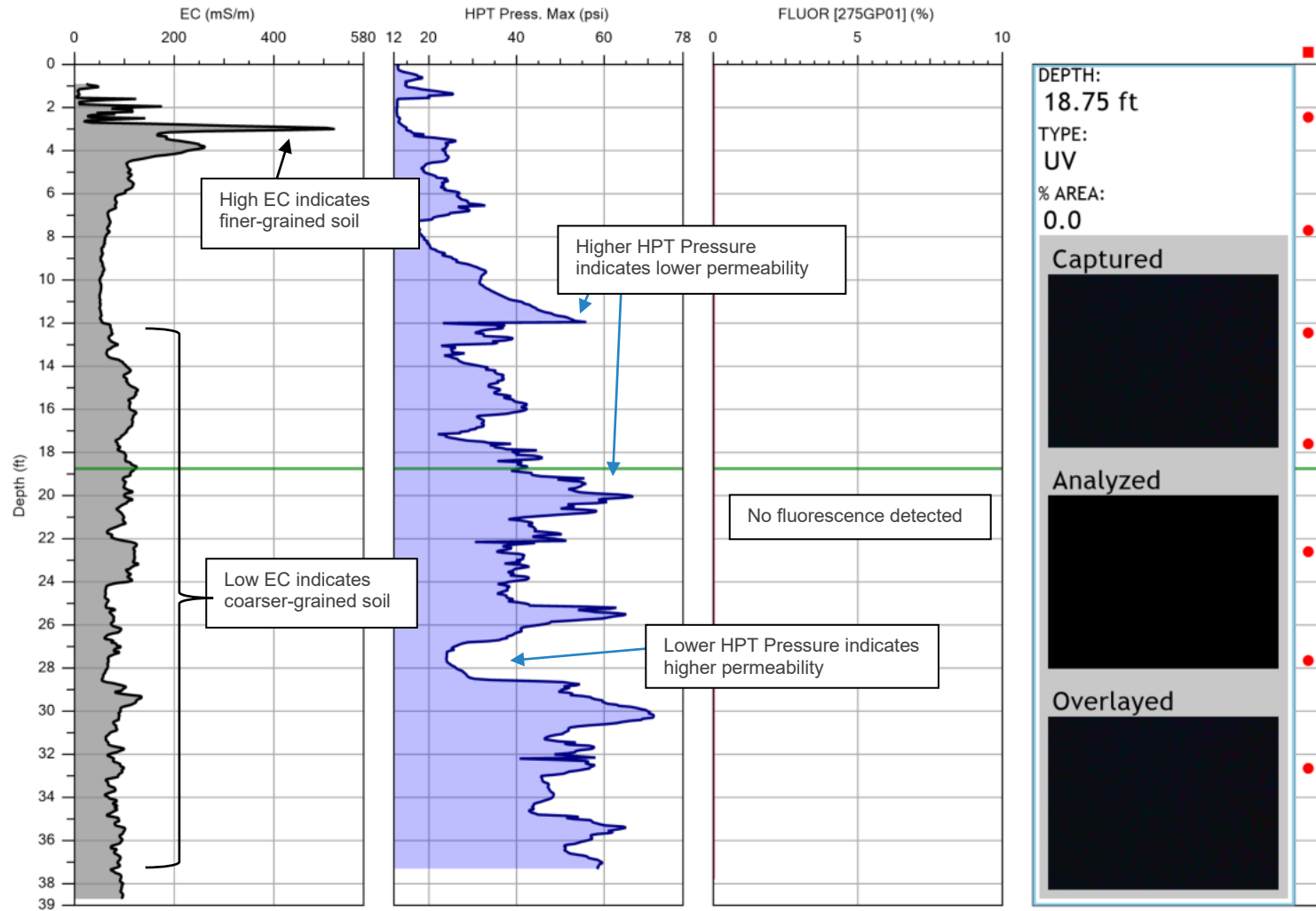


Descriptive text boxes are general interpretations only. Refer to Eagle Synergistic for further analysis of HRSC data.



| | | | | | |
|-------------|-------------------|-----------|-------------|-----------|--------------|
| Company: | Eagle Synergistic | Operator: | LC | File: | OIPG-20.OIHP |
| Project ID: | 23.155 | Client: | Kleinfelder | Date: | 6/5/2023 |
| | | | | Location: | Meeker, CO |

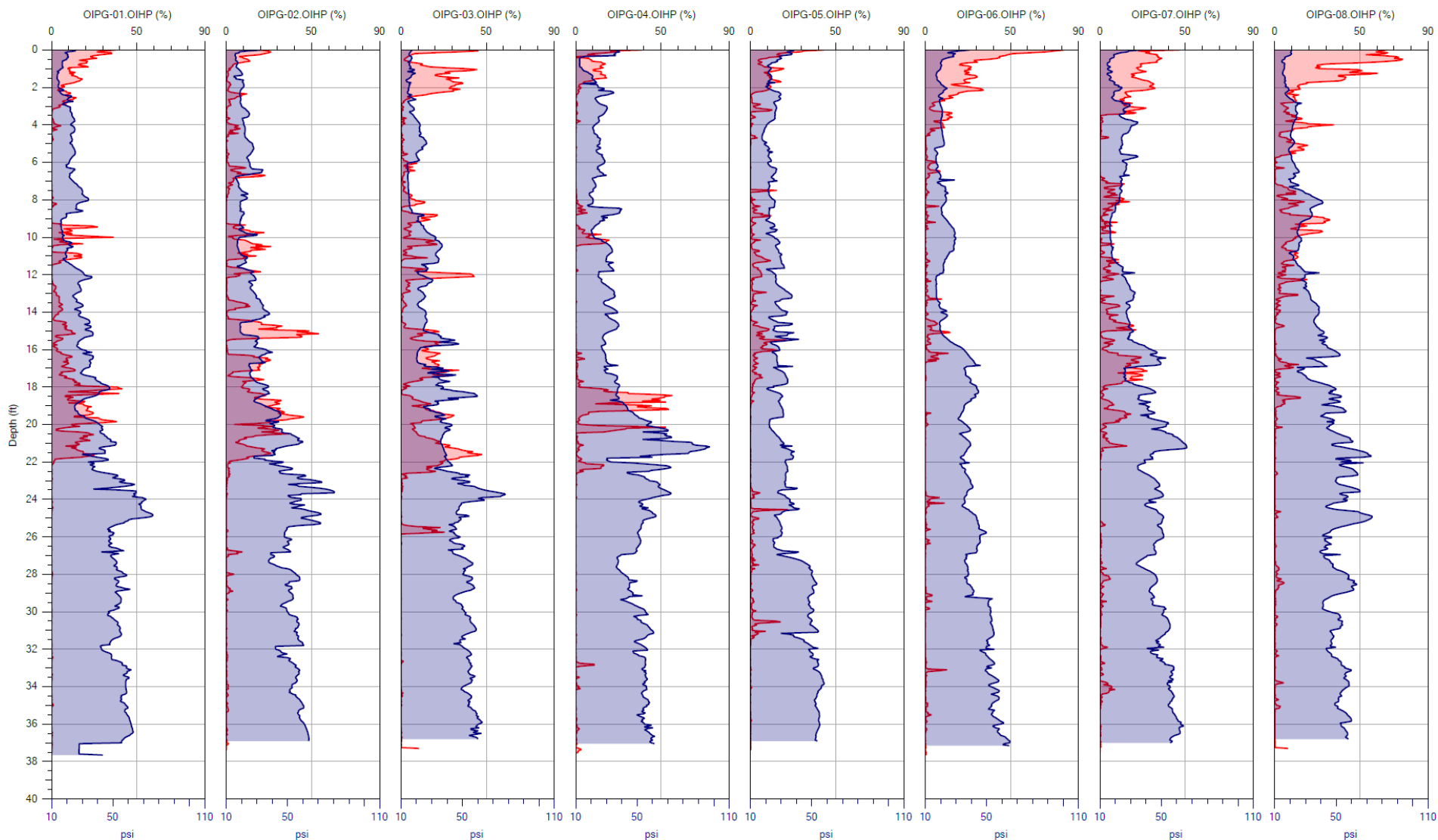
Example OIP-UV Log (for reference)



| | | | | | |
|-------------|-------------------|-----------|-------------|-----------|---------------|
| Company: | Eagle Synergistic | Operator: | EG | File: | OIPUV-18.OIHP |
| Project ID: | 23.155 | Client: | Kleinfelder | Date: | 6/8/2023 |
| | | | | Location: | Meeker, CO |

OIP-G OVERLAYS – FLUORESCENCE (%) AND HPT PRESSURE (psi)

Pg 1 of 3)



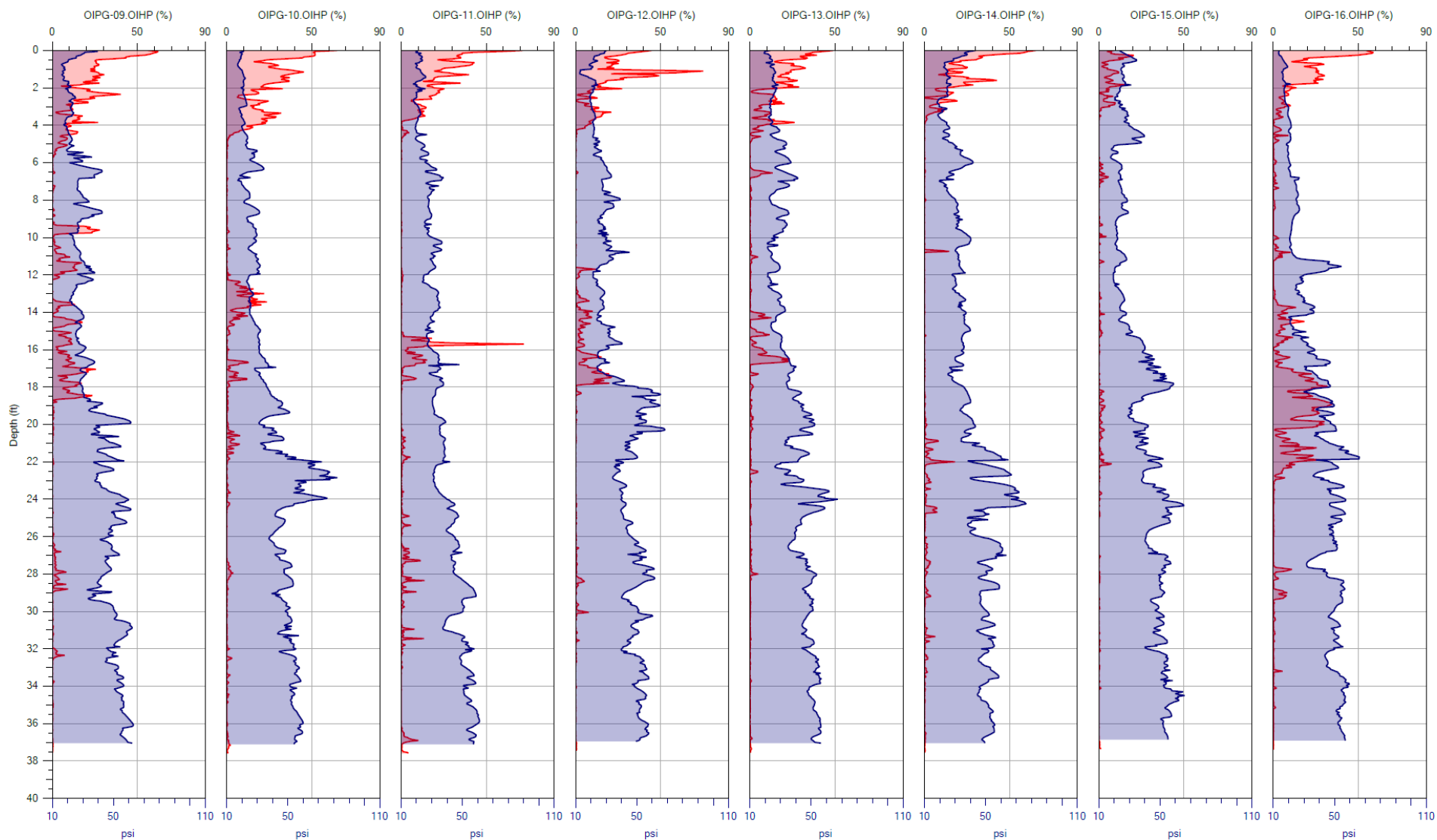
FLUOR [520GP02] / HPT Press. Max

Company: Eagle Synergistic
Project ID: 23.155

Operator: EG
Client: Kleinfelder

| | | | |
|--------------|-----------|--------------|----------|
| OIPG-01.OIHP | 5/31/2023 | OIPG-05.OIHP | 6/1/2023 |
| OIPG-02.OIHP | 5/31/2023 | OIPG-06.OIHP | 6/1/2023 |
| OIPG-03.OIHP | 5/31/2023 | OIPG-07.OIHP | 6/2/2023 |
| OIPG-04.OIHP | 6/1/2023 | OIPG-08.OIHP | 6/2/2023 |

Pg (2 of 3)



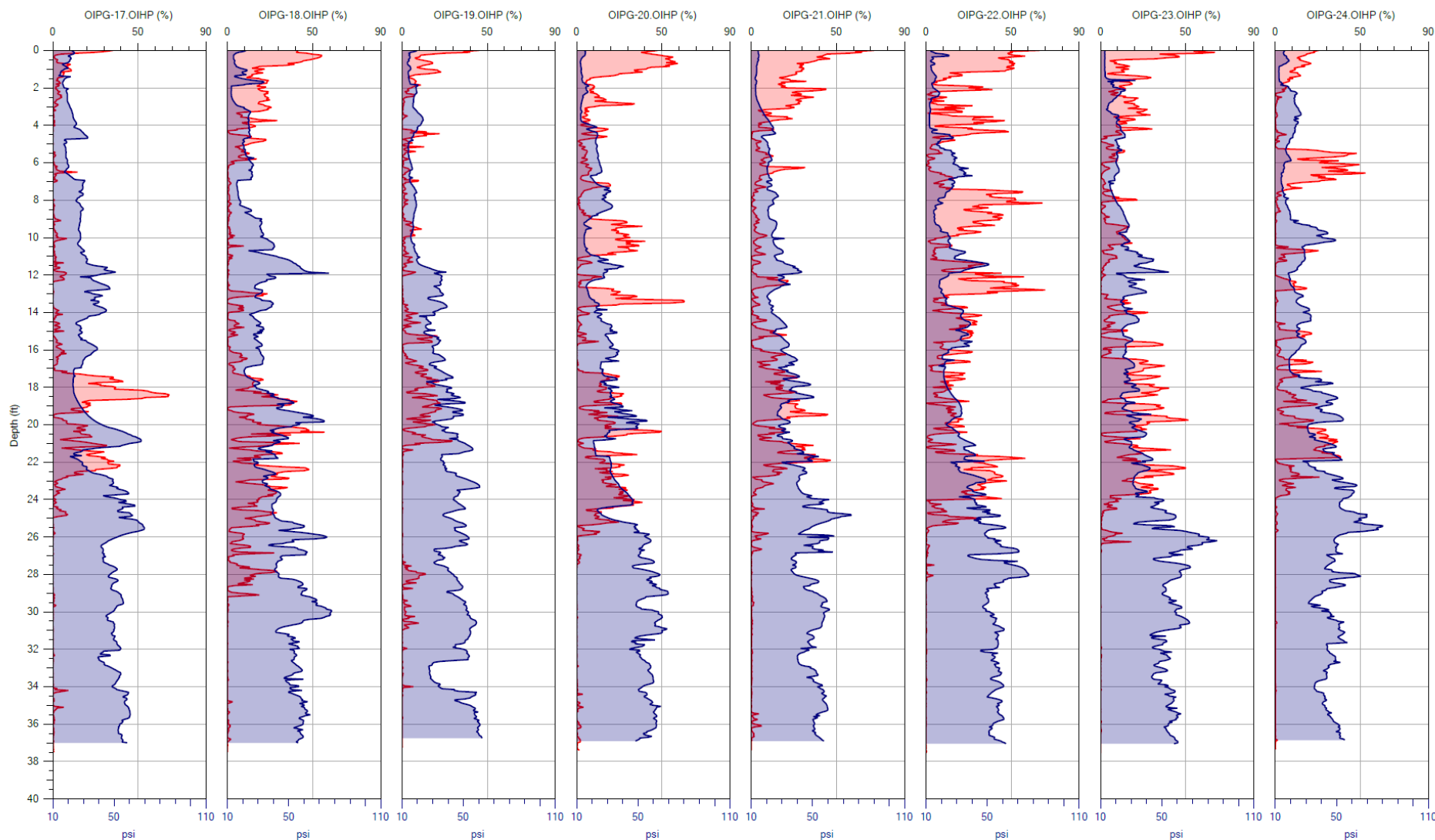
FLUOR [520GP02] / HPT Press. Max

Company: Eagle Synergistic
Project ID: 23.155

Operator: EG
Client: Kleinfelder

| | | | |
|--------------|----------|--------------|----------|
| OIPG-09.OIHP | 6/2/2023 | OIPG-13.OIHP | 6/2/2023 |
| OIPG-10.OIHP | 6/2/2023 | OIPG-14.OIHP | 6/2/2023 |
| OIPG-11.OIHP | 6/2/2023 | OIPG-15.OIHP | 6/5/2023 |
| OIPG-12.OIHP | 6/2/2023 | OIPG-16.OIHP | 6/5/2023 |

Pg (3 of 3)



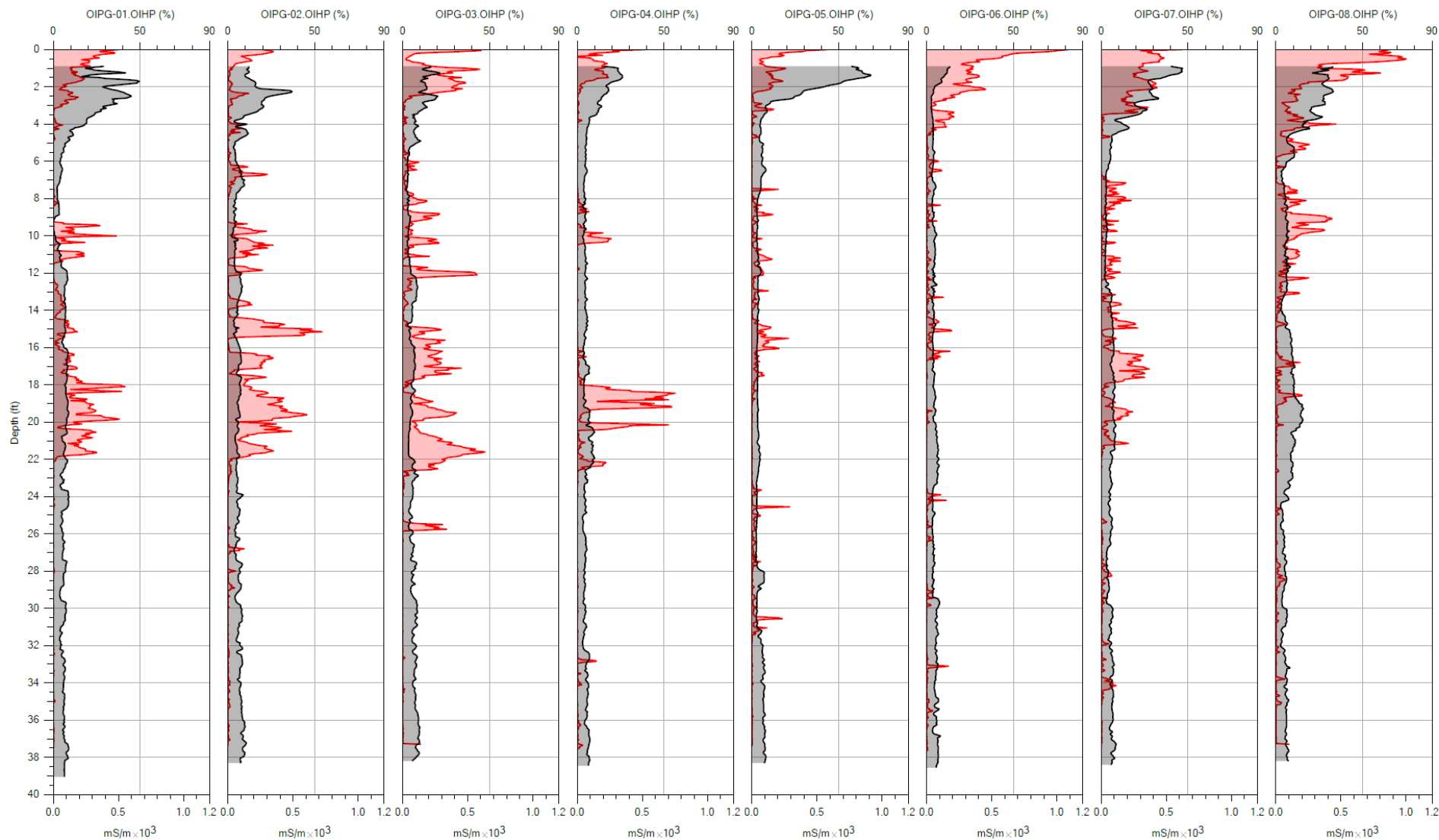
FLUOR [520GP02] / HPT Press. Max

| | | | |
|-------------|-------------------|-----------|-------------|
| Company: | Eagle Synergistic | Operator: | EG |
| Project ID: | 23.155 | Client: | Kleinfelder |

| | | | |
|--------------|----------|--------------|----------|
| OIPG-17.OIHP | 6/5/2023 | OIPG-21.OIHP | 6/5/2023 |
| OIPG-18.OIHP | 6/5/2023 | OIPG-22.OIHP | 6/6/2023 |
| OIPG-19.OIHP | 6/5/2023 | OIPG-23.OIHP | 6/6/2023 |
| OIPG-20.OIHP | 6/5/2023 | OIPG-24.OIHP | 6/8/2023 |

OIP-G OVERLAYS – FLUORESCENCE (%) AND EC (mS/m)

Pg (1 of 3)



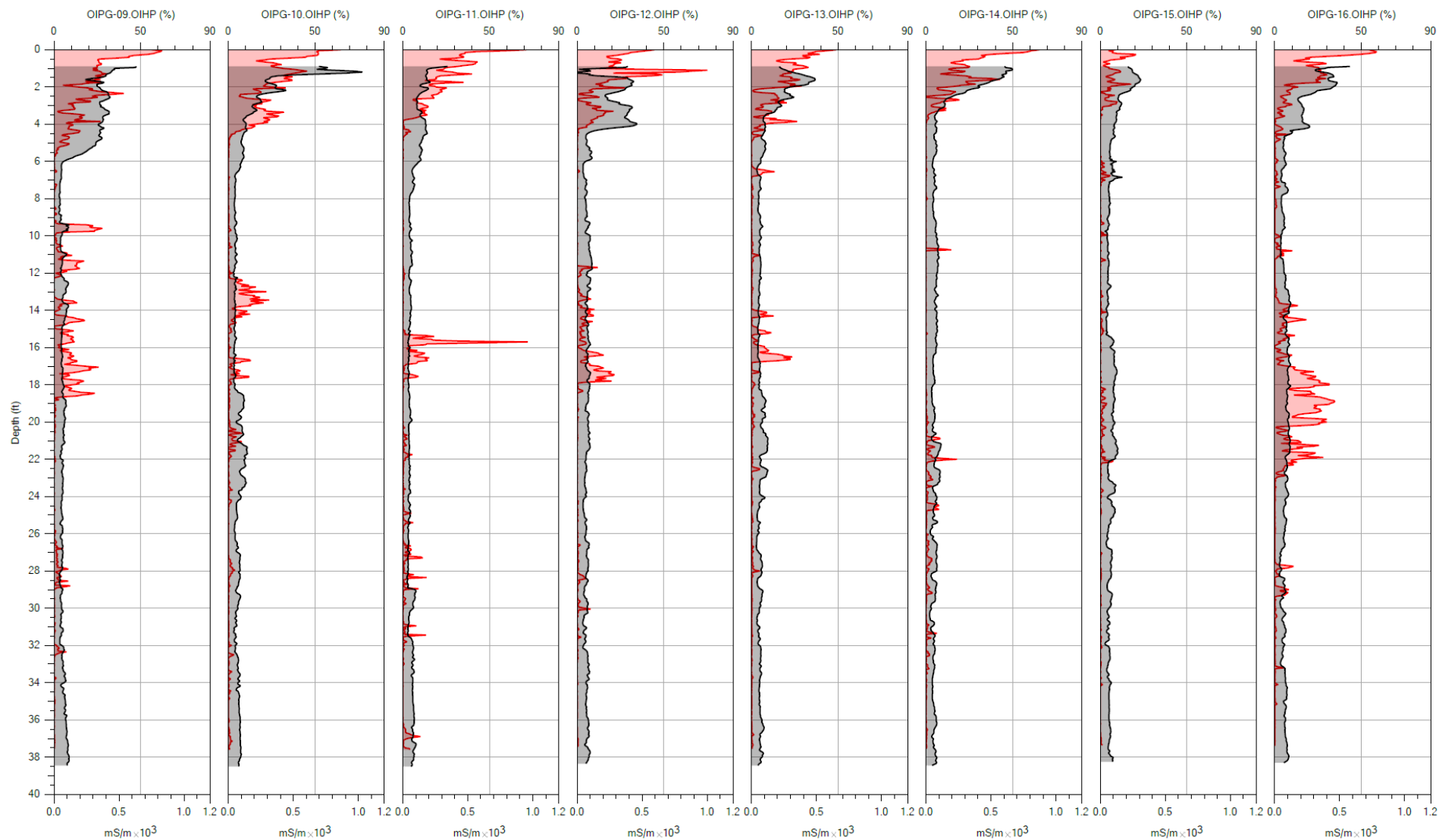
FLUOR [520GP02] / EC

Company:
Eagle Synergistic
Project ID:
23.155

Operator:
EG
Client:
Kleinfelder

| | | | |
|--------------|-----------|--------------|----------|
| OIPG-01.OIHP | 5/31/2023 | OIPG-05.OIHP | 6/1/2023 |
| OIPG-02.OIHP | 5/31/2023 | OIPG-06.OIHP | 6/1/2023 |
| OIPG-03.OIHP | 5/31/2023 | OIPG-07.OIHP | 6/2/2023 |
| OIPG-04.OIHP | 6/1/2023 | OIPG-08.OIHP | 6/2/2023 |

Pg (2 of 3)



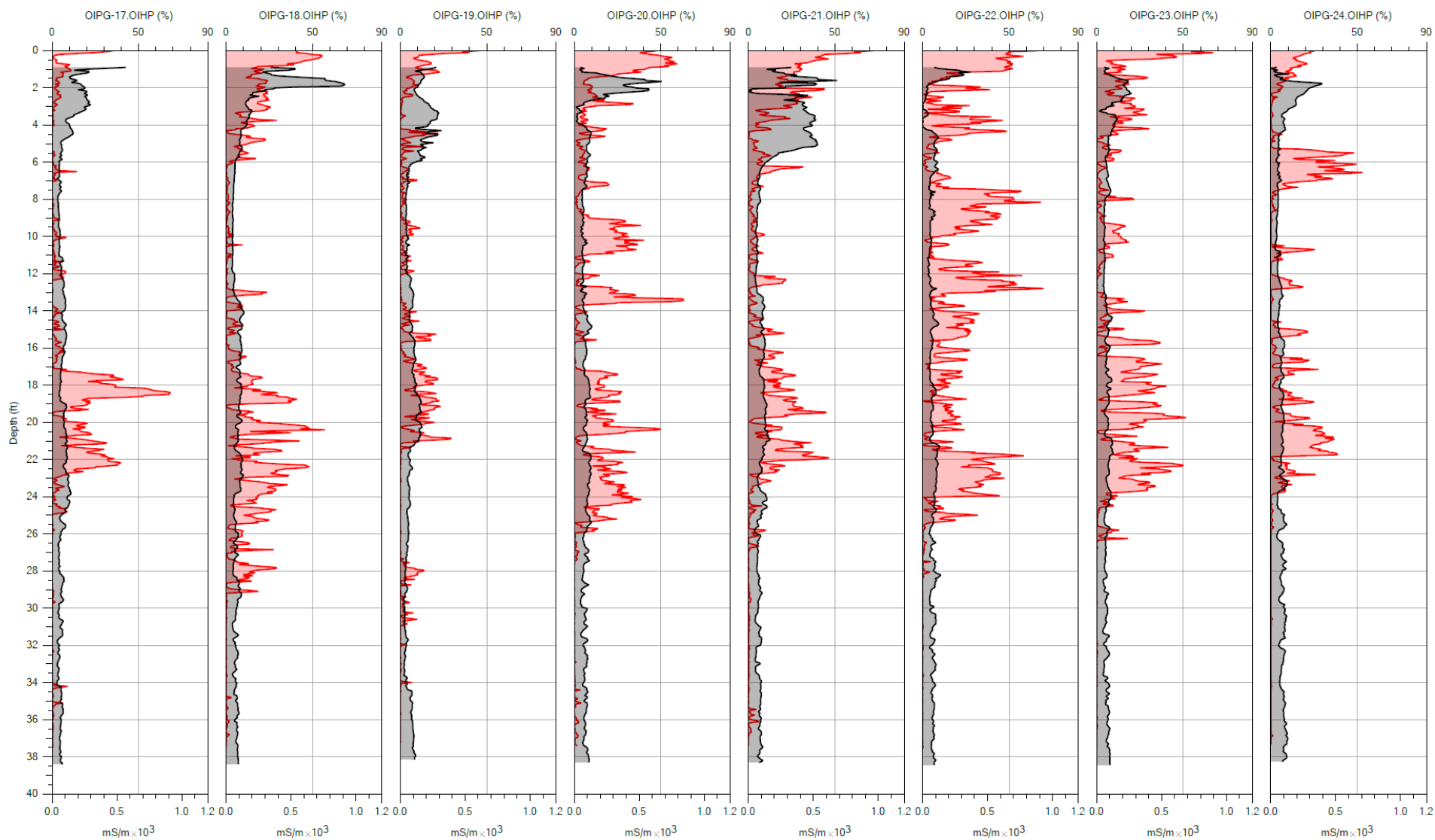
FLUOR [520GP02] / EC

Company: Eagle Synergistic
 Project ID: 23.155

Operator: EG
 Client: Kleinfelder

| | | | |
|--------------|----------|--------------|----------|
| OIPG-09.OIHP | 6/2/2023 | OIPG-13.OIHP | 6/2/2023 |
| OIPG-10.OIHP | 6/2/2023 | OIPG-14.OIHP | 6/2/2023 |
| OIPG-11.OIHP | 6/2/2023 | OIPG-15.OIHP | 6/5/2023 |
| OIPG-12.OIHP | 6/2/2023 | OIPG-16.OIHP | 6/5/2023 |

Pg (3 of 3)



FLUOR [520GP02] / EC

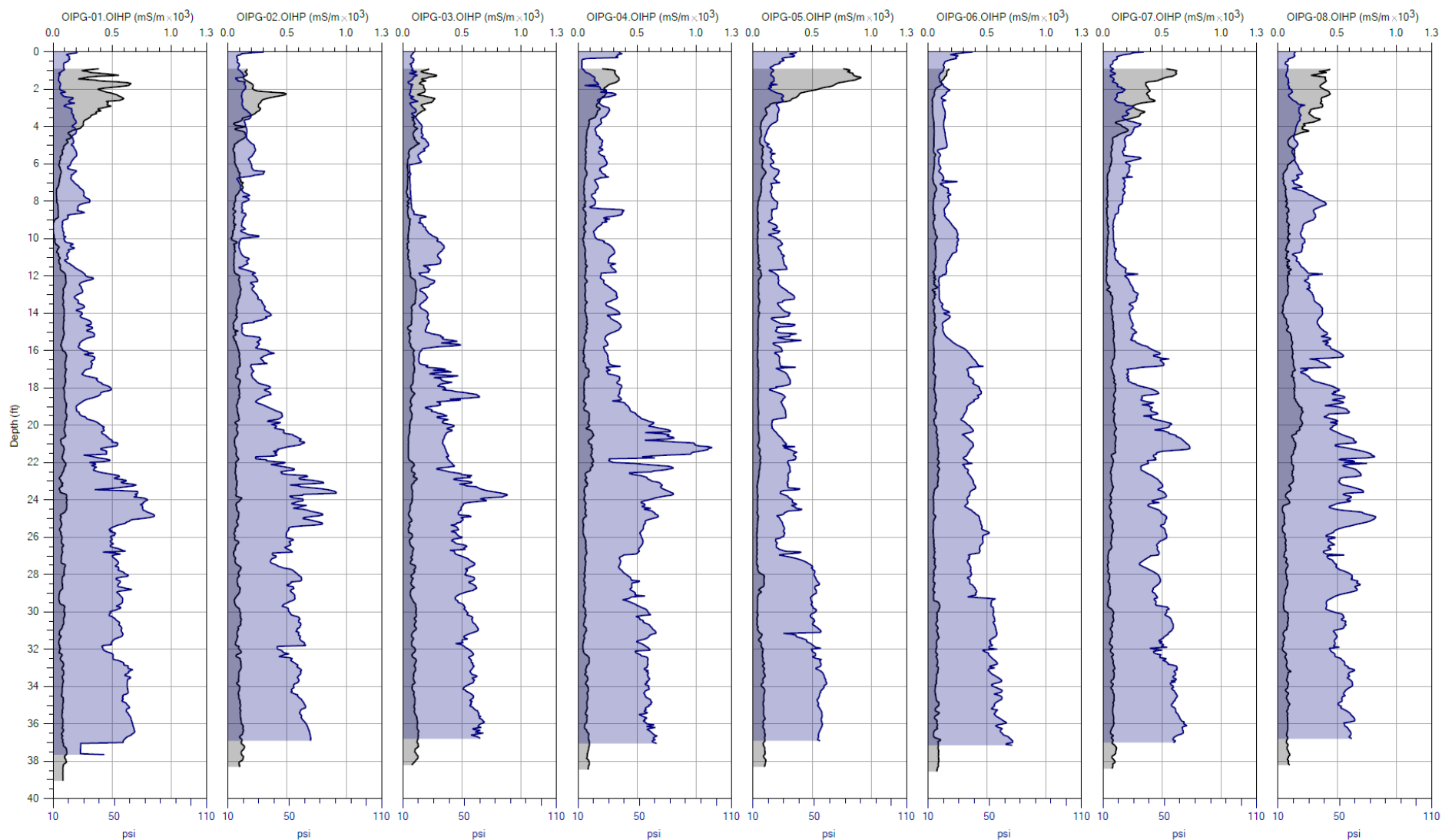
Company: Eagle Synergistic
 Project ID: 23.155

Operator: EG
 Client: Kleinfelder

| | | | |
|--------------|----------|--------------|----------|
| OIPG-17.OIHP | 6/5/2023 | OIPG-21.OIHP | 6/5/2023 |
| OIPG-18.OIHP | 6/5/2023 | OIPG-22.OIHP | 6/6/2023 |
| OIPG-19.OIHP | 6/5/2023 | OIPG-23.OIHP | 6/6/2023 |
| OIPG-20.OIHP | 6/5/2023 | OIPG-24.OIHP | 6/8/2023 |

OIP-G OVERLAYS – EC (mS/m) AND HPT PRESSURE MAX (psi)

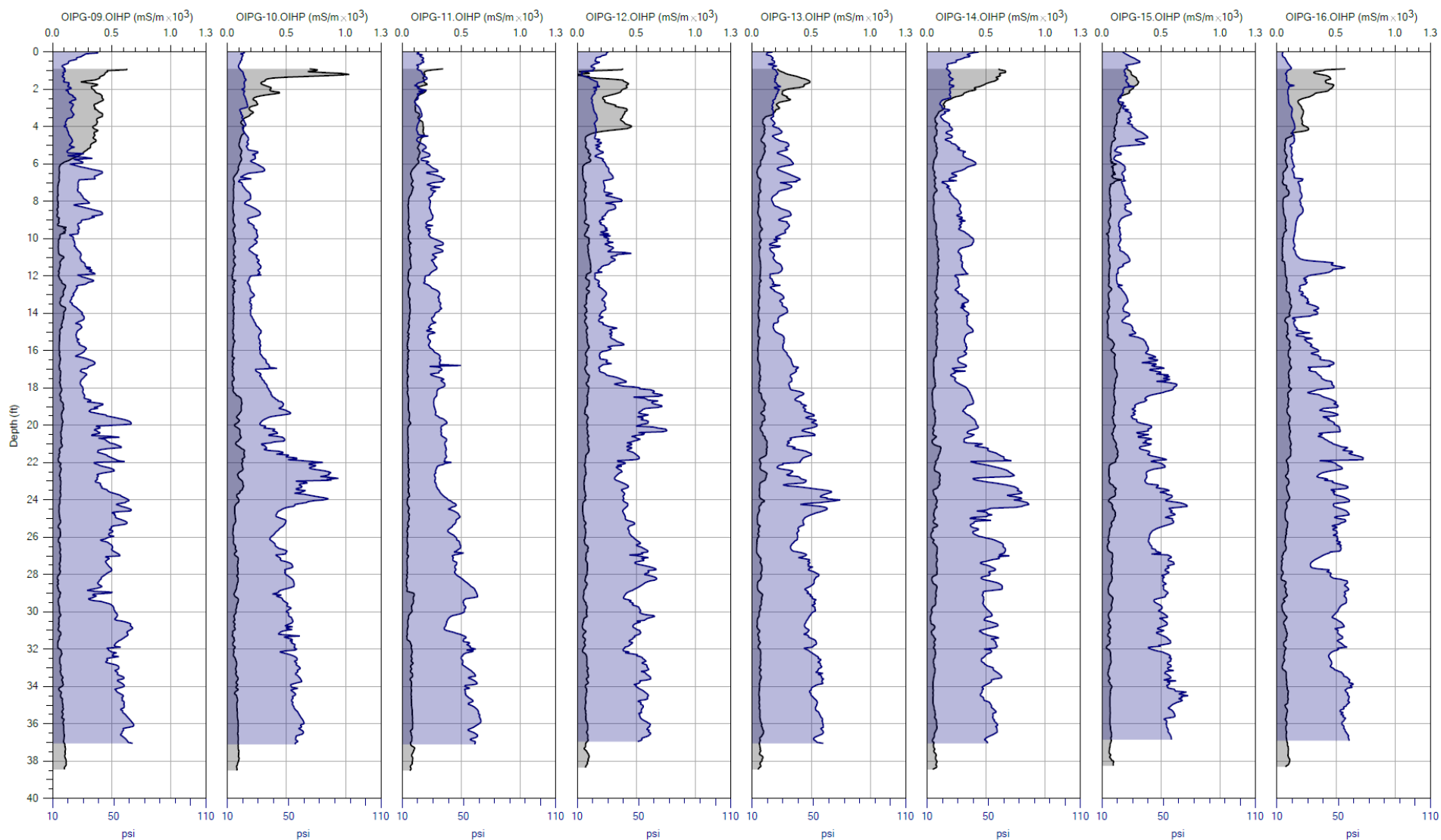
Pg (1 of 3)



EC / HPT Press. Max

| | | | | | | | |
|-------------|-------------------|-----------|-------------|--------------|-----------|--------------|----------|
| Company: | Eagle Synergistic | Operator: | EG | OIPG-01.OIHP | 5/31/2023 | OIPG-05.OIHP | 6/1/2023 |
| Project ID: | 23.155 | Client: | Kleinfelder | OIPG-02.OIHP | 5/31/2023 | OIPG-06.OIHP | 6/1/2023 |
| | | | | OIPG-03.OIHP | 5/31/2023 | OIPG-07.OIHP | 6/2/2023 |
| | | | | OIPG-04.OIHP | 6/1/2023 | OIPG-08.OIHP | 6/2/2023 |

Pg (2 of 3)



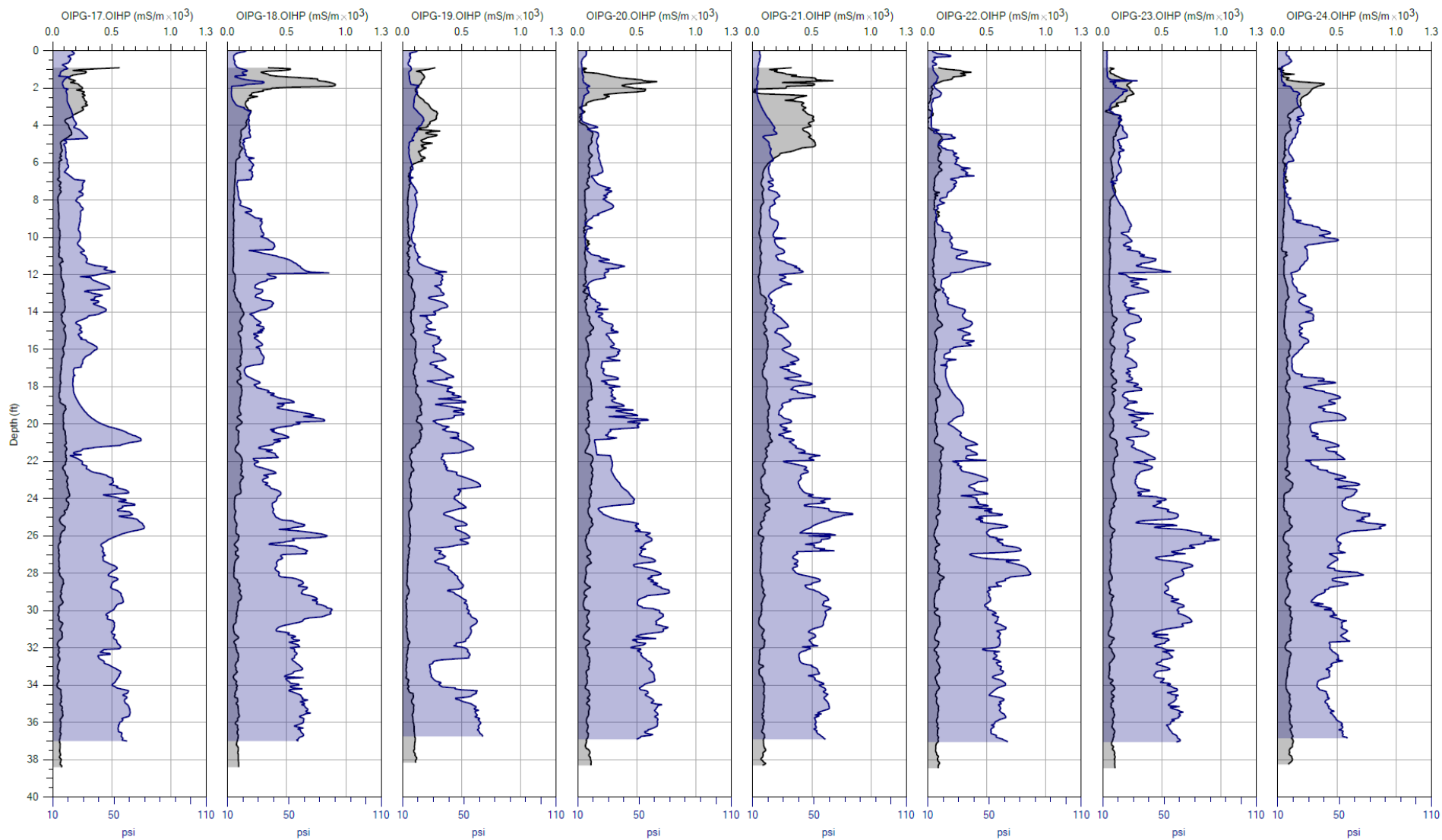
EC / HPT Press. Max

Company: Eagle Synergistic
Project ID: 23.155

Operator: EG
Client: Kleinfelder

| | | | |
|--------------|----------|--------------|----------|
| OIPG-09.OIHP | 6/2/2023 | OIPG-13.OIHP | 6/2/2023 |
| OIPG-10.OIHP | 6/2/2023 | OIPG-14.OIHP | 6/2/2023 |
| OIPG-11.OIHP | 6/2/2023 | OIPG-15.OIHP | 6/5/2023 |
| OIPG-12.OIHP | 6/2/2023 | OIPG-16.OIHP | 6/5/2023 |

Pg (3 of 3)



EC / HPT Press. Max

Company:

Eagle Synergistic

Operator:

EG

Project ID:

23.155

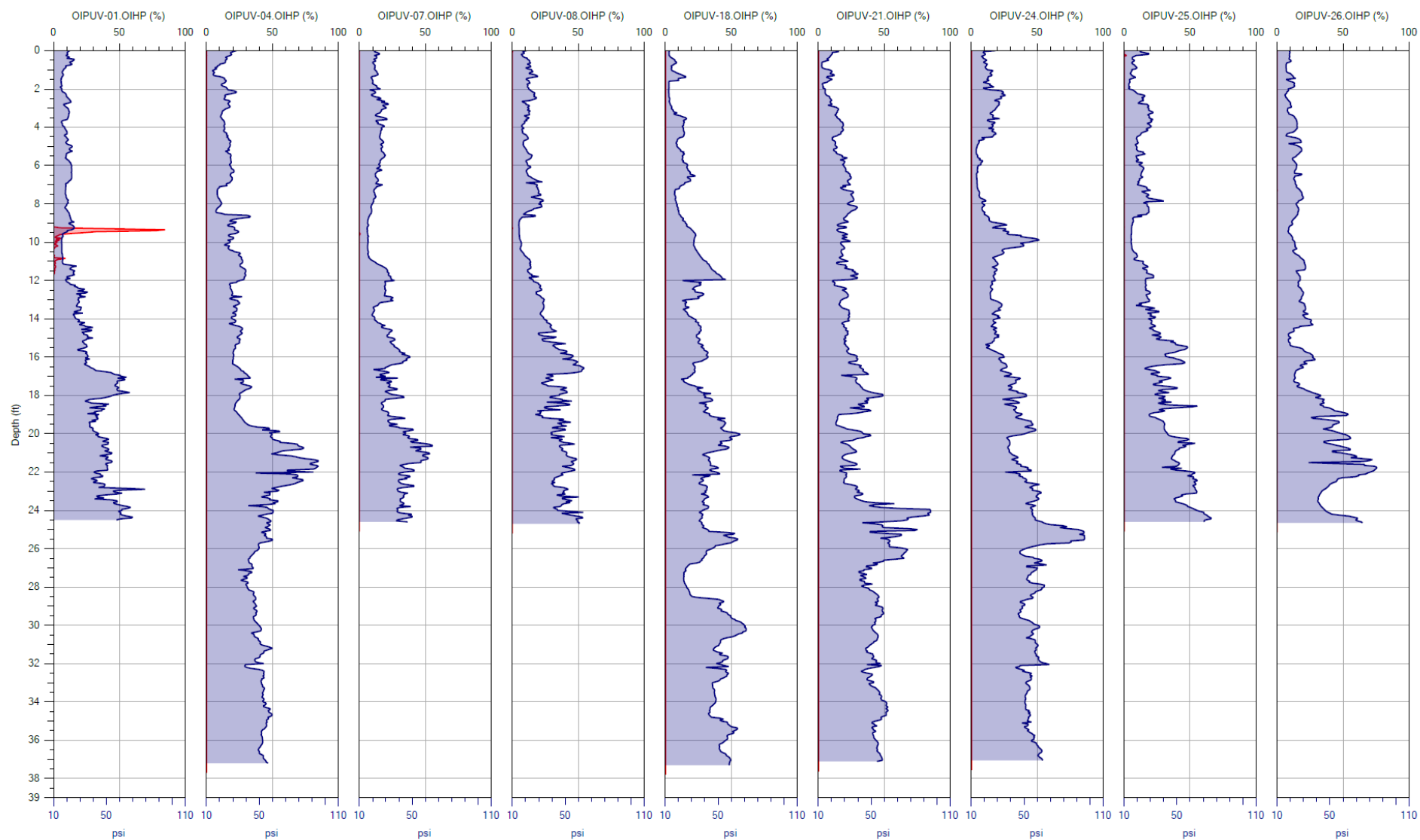
Client:

Kleinfelder

OIPG-17.OIHP 6/5/2023
 OIPG-18.OIHP 6/5/2023
 OIPG-19.OIHP 6/5/2023
 OIPG-20.OIHP 6/5/2023

OIPG-21.OIHP 6/5/2023
 OIPG-22.OIHP 6/6/2023
 OIPG-23.OIHP 6/6/2023
 OIPG-24.OIHP 6/6/2023

OIP-UV OVERLAYS – FLUORESCENCE (%) AND HPT PRESSURE (psi)

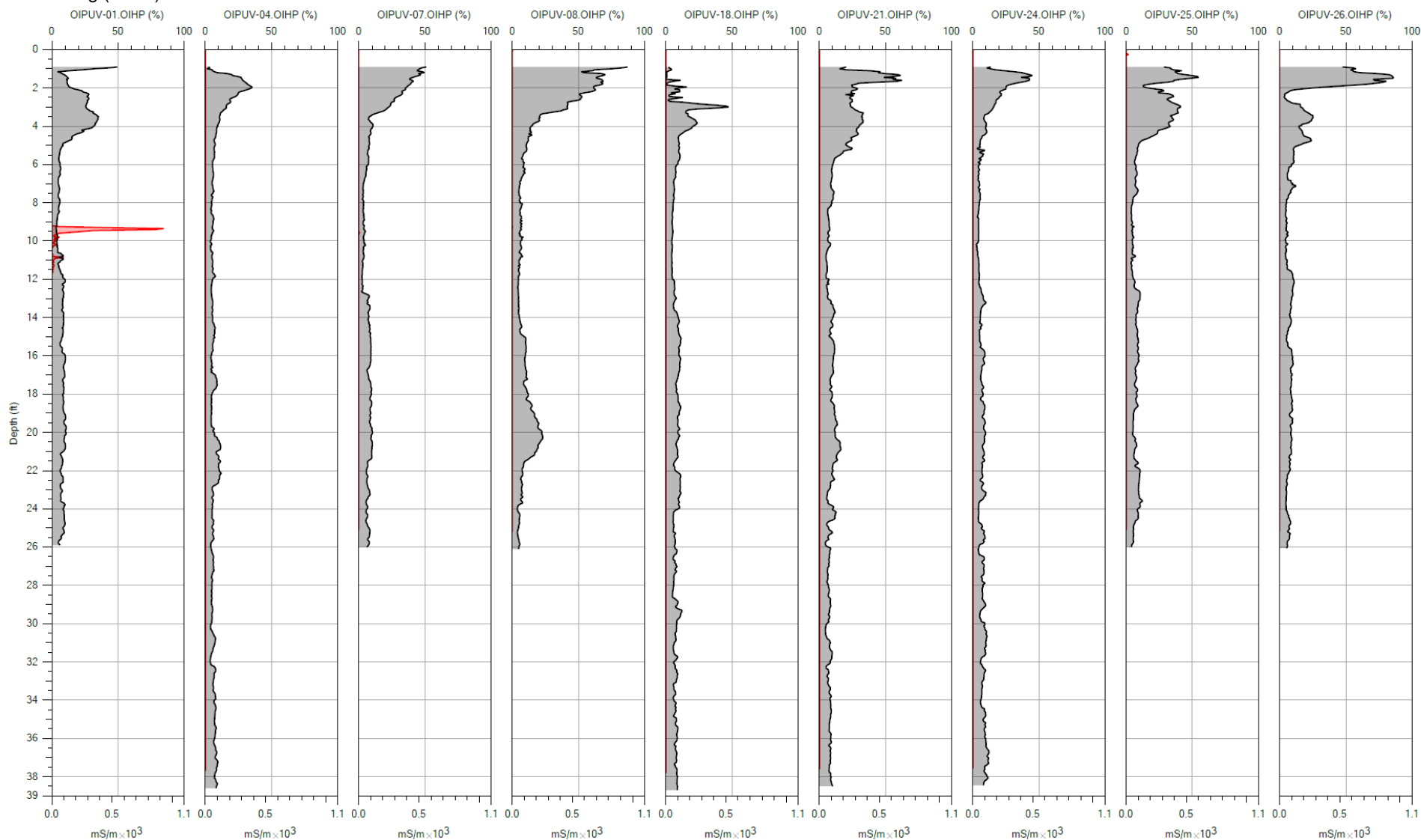


FLUOR [275GP01] / HPT Press. Max

| | | | | | | | | | |
|-------------|-------------------|-----------|-------------|---------------|-----------|---------------|-----------|---------------|-----------|
| Company: | Eagle Synergistic | Operator: | HJ | OIPUV-01.OIHP | 6/27/2023 | OIPUV-08.OIHP | 6/27/2023 | OIPUV-24.OIHP | 6/8/2023 |
| Project ID: | 23.155 | Client: | Kleinfelder | OIPUV-04.OIHP | 6/1/2023 | OIPUV-18.OIHP | 6/8/2023 | OIPUV-25.OIHP | 6/27/2023 |
| | | | | OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 | OIPUV-26.OIHP | 6/27/2023 |

OIP-UV OVERLAYS – FLUORESCENCE (%) AND EC (mS/m)

Pg (1 of 1)



FLUOR [275GP01] / EC

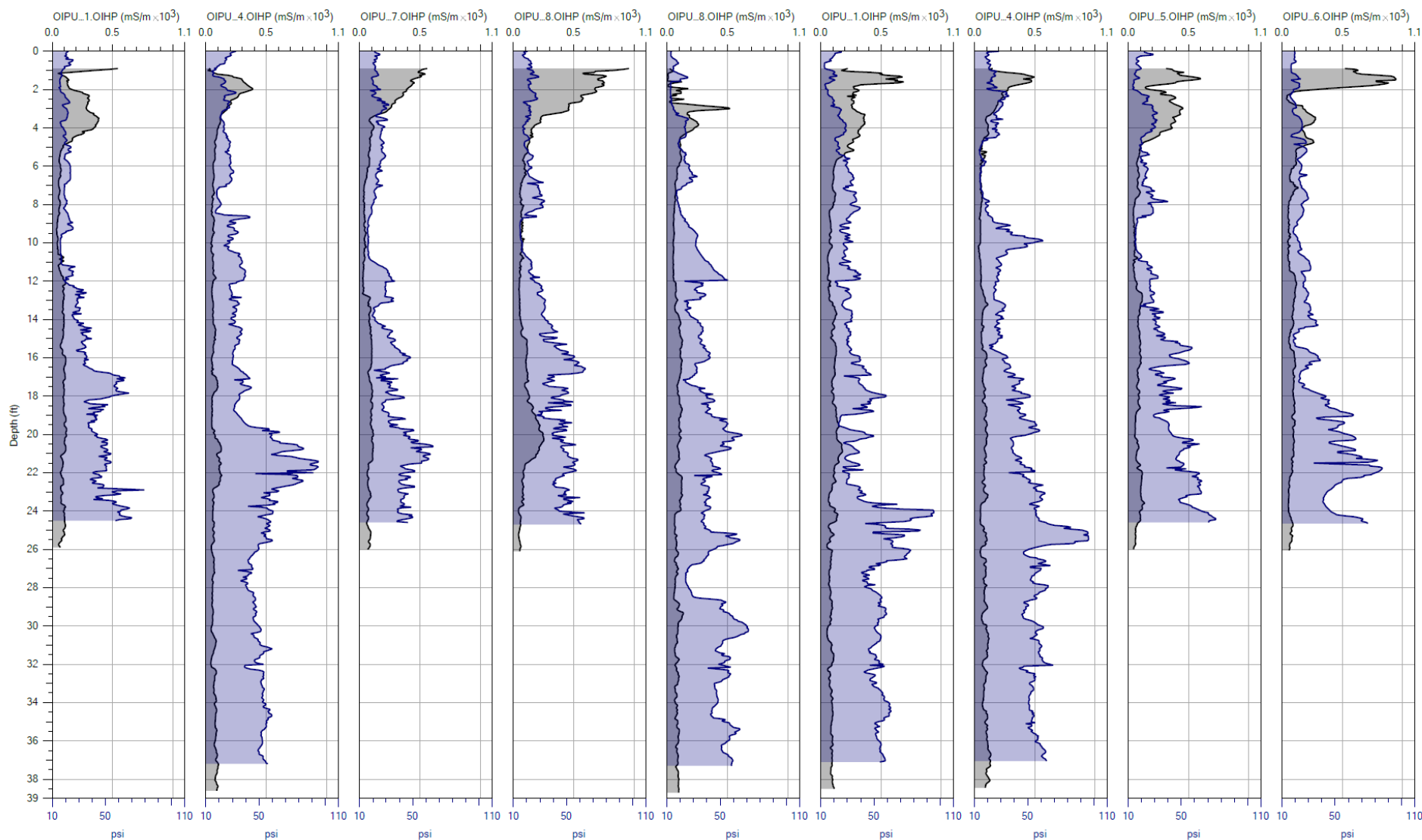
Company: Eagle Synergistic
Project ID: 23.155

Operator: HJ
Client: Kleinfelder

| | | | | | |
|---------------|-----------|---------------|-----------|---------------|-----------|
| OIPUV-01.OIHP | 6/27/2023 | OIPUV-08.OIHP | 6/27/2023 | OIPUV-24.OIHP | 6/8/2023 |
| OIPUV-04.OIHP | 6/1/2023 | OIPUV-18.OIHP | 6/8/2023 | OIPUV-25.OIHP | 6/27/2023 |
| OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 | OIPUV-26.OIHP | 6/27/2023 |

OIP-UV OVERLAYS – EC (mS/m) AND HPT PRESSURE MAX (psi)

Pg (1 of 1)



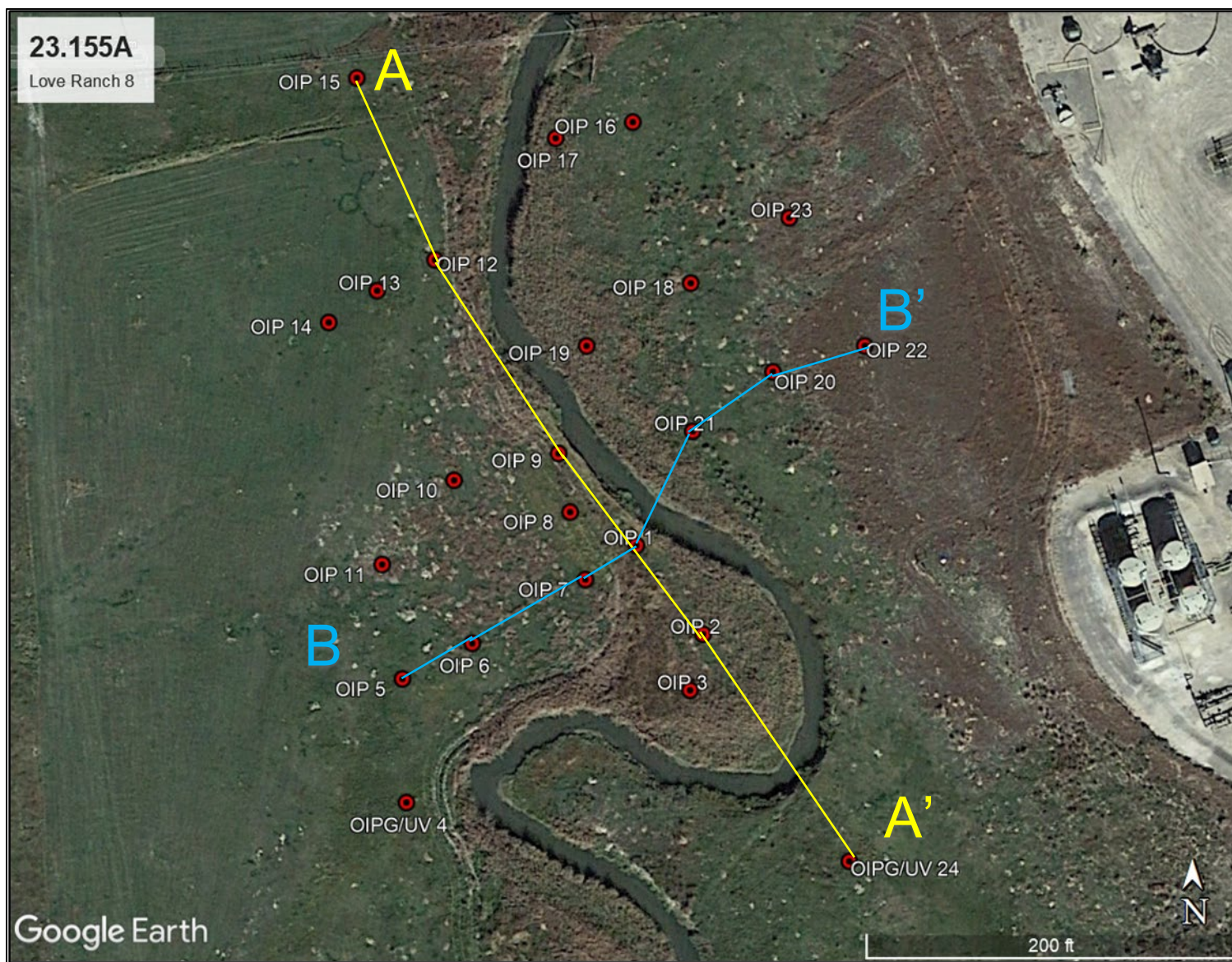
EC / HPT Press. Max

Company: Eagle Synergistic
Project ID: 23.155

Operator: HJ
Client: Kleinfelder

| | | | | | |
|---------------|-----------|---------------|-----------|---------------|-----------|
| OIPUV-01.OIHP | 6/27/2023 | OIPUV-08.OIHP | 6/27/2023 | OIPUV-24.OIHP | 6/8/2023 |
| OIPUV-04.OIHP | 6/1/2023 | OIPUV-18.OIHP | 6/8/2023 | OIPUV-25.OIHP | 6/27/2023 |
| OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 | OIPUV-26.OIHP | 6/27/2023 |

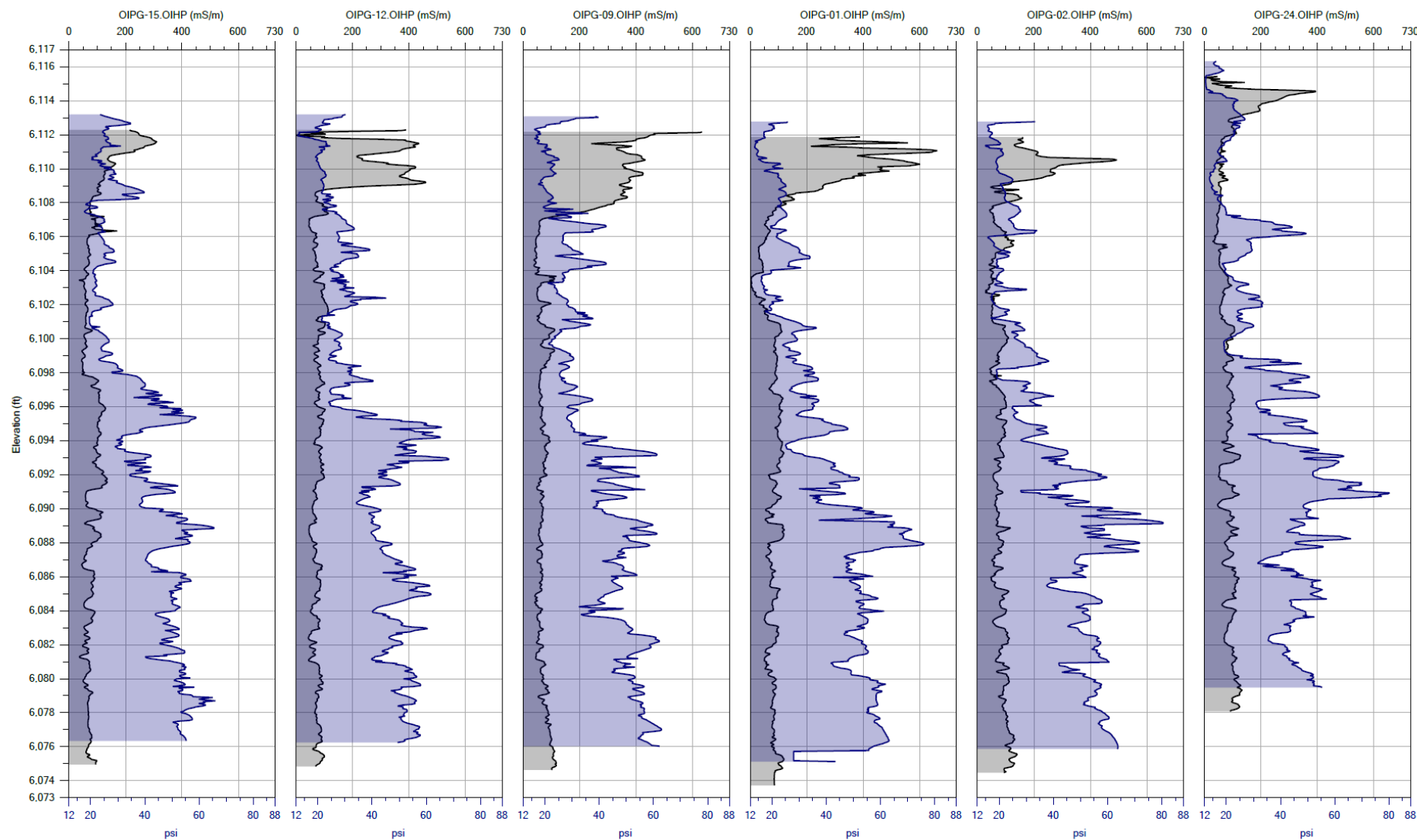
OIP CROSS SECTION MAP



OIP-G CROSS SECTIONS A-A'

EC (mS/m) With HPT Pressure Max (psi)

A

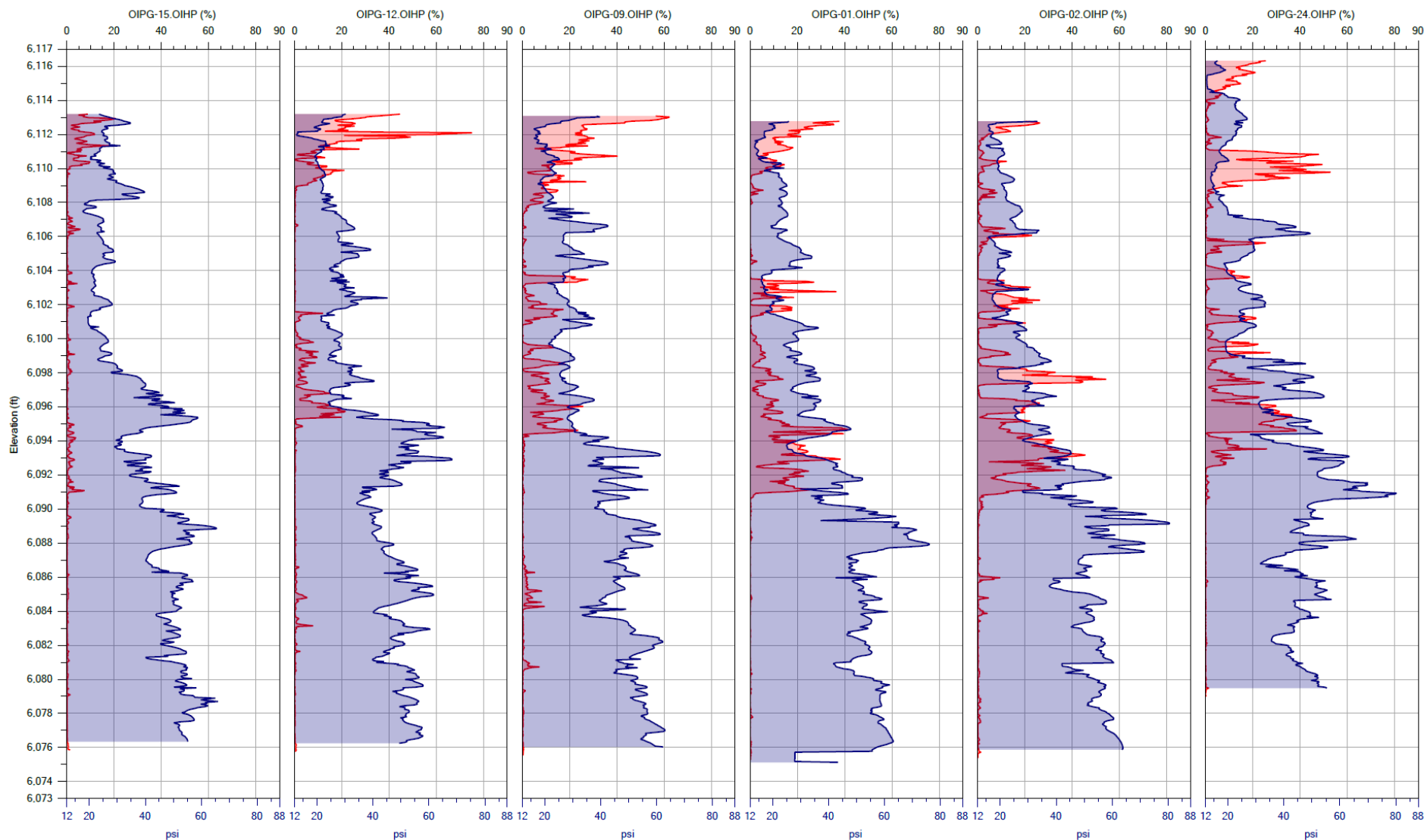


A'



| EC / HPT Press. Max | | | |
|---------------------|-------------------|--------------|-------------|
| Company: | Eagle Synergistic | Operator: | LC |
| Project ID: | 23.155 | Client: | Kleinfelder |
| OIPG-15.OIHP | 6/5/2023 | OIPG-01.OIHP | 5/31/2023 |
| OIPG-12.OIHP | 6/2/2023 | OIPG-02.OIHP | 5/31/2023 |
| OIPG-09.OIHP | 6/2/2023 | OIPG-24.OIHP | 6/8/2023 |

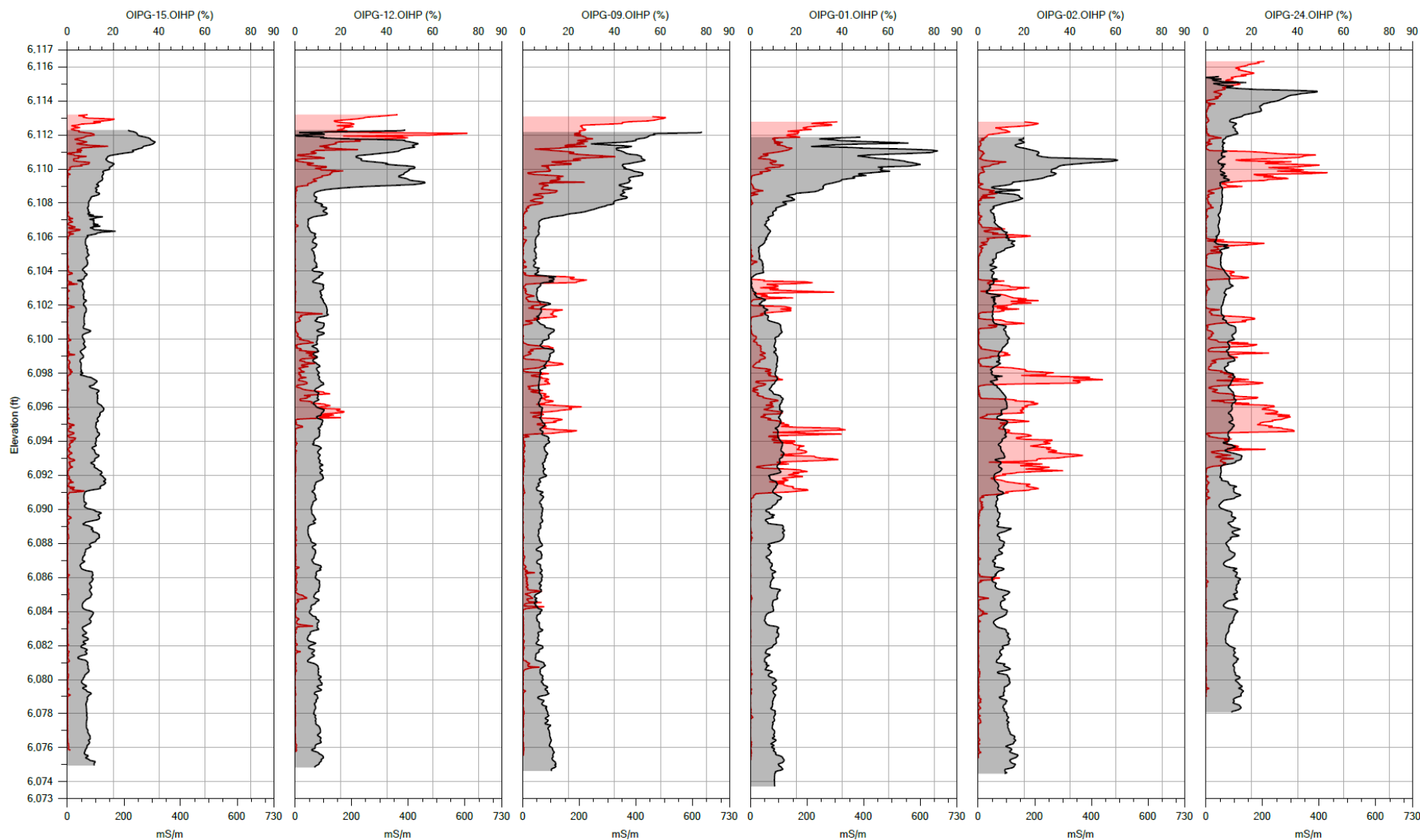
Fluorescence (%) and HPT Pressure (psi)



FLUOR [520GP02] / HPT Press. Max

| | | | | | | | |
|-------------|-------------------|-----------|-------------|--------------|----------|--------------|-----------|
| Company: | Eagle Synergistic | Operator: | LC | OIPG-15.OIHP | 6/5/2023 | OIPG-01.OIHP | 5/31/2023 |
| Project ID: | 23.155 | Client: | Kleinfelder | OIPG-12.OIHP | 6/2/2023 | OIPG-02.OIHP | 5/31/2023 |
| | | | | OIPG-09.OIHP | 6/2/2023 | OIPG-24.OIHP | 6/8/2023 |

Fluorescence (%) and EC (mS/m)



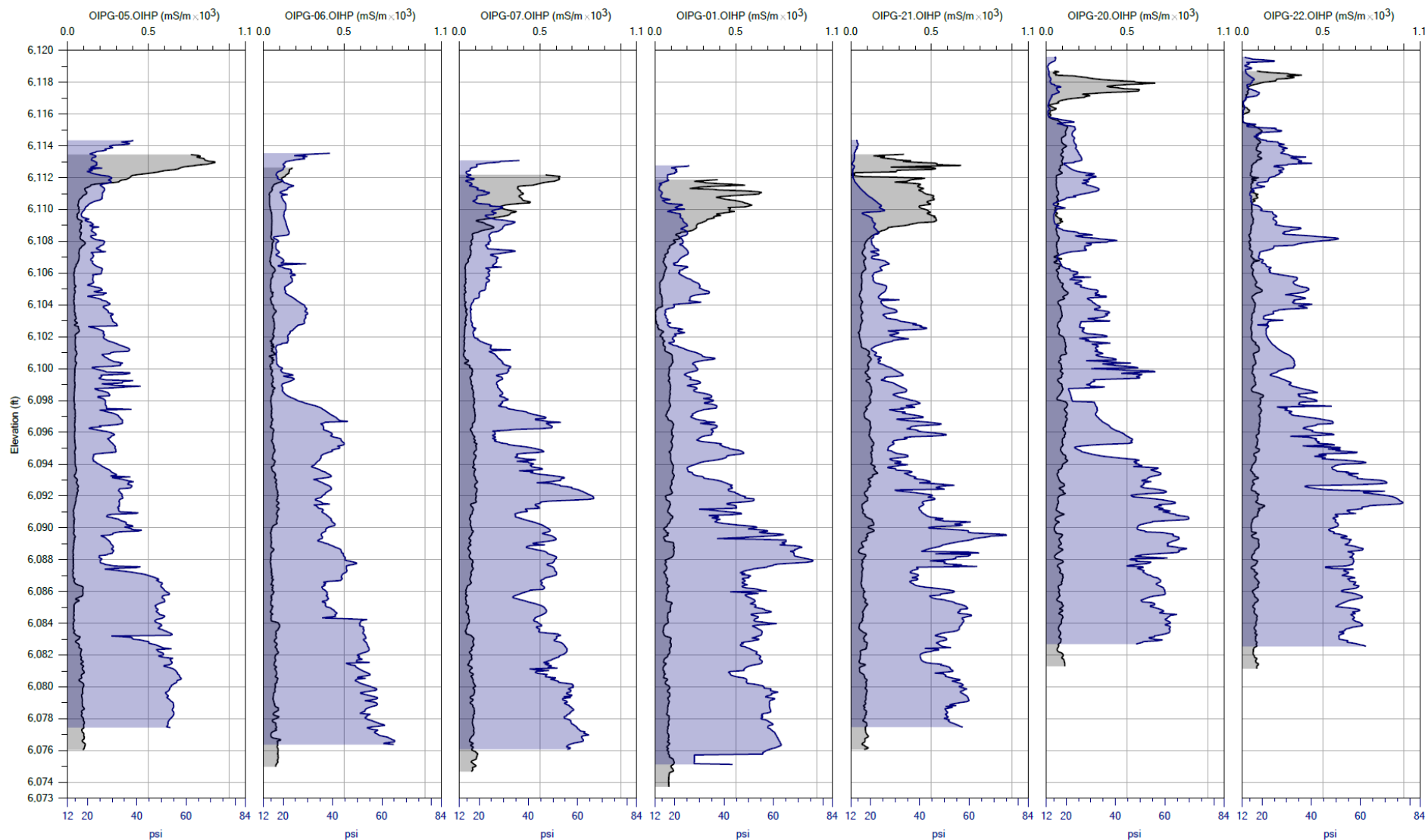
FLUOR [520GP02] / EC

| | | | | | | | |
|-------------|-------------------|-----------|-------------|--------------|----------|--------------|-----------|
| Company: | Eagle Synergistic | Operator: | LC | OIPG-15.OIHP | 6/5/2023 | OIPG-01.OIHP | 5/31/2023 |
| Project ID: | 23.155 | Client: | Kleinfelder | OIPG-12.OIHP | 6/2/2023 | OIPG-02.OIHP | 5/31/2023 |
| | | | | OIPG-09.OIHP | 6/2/2023 | OIPG-24.OIHP | 6/6/2023 |

OIP CROSS SECTIONS B-B'

EC (mS/m) With HPT Pressure Max (psi)

B



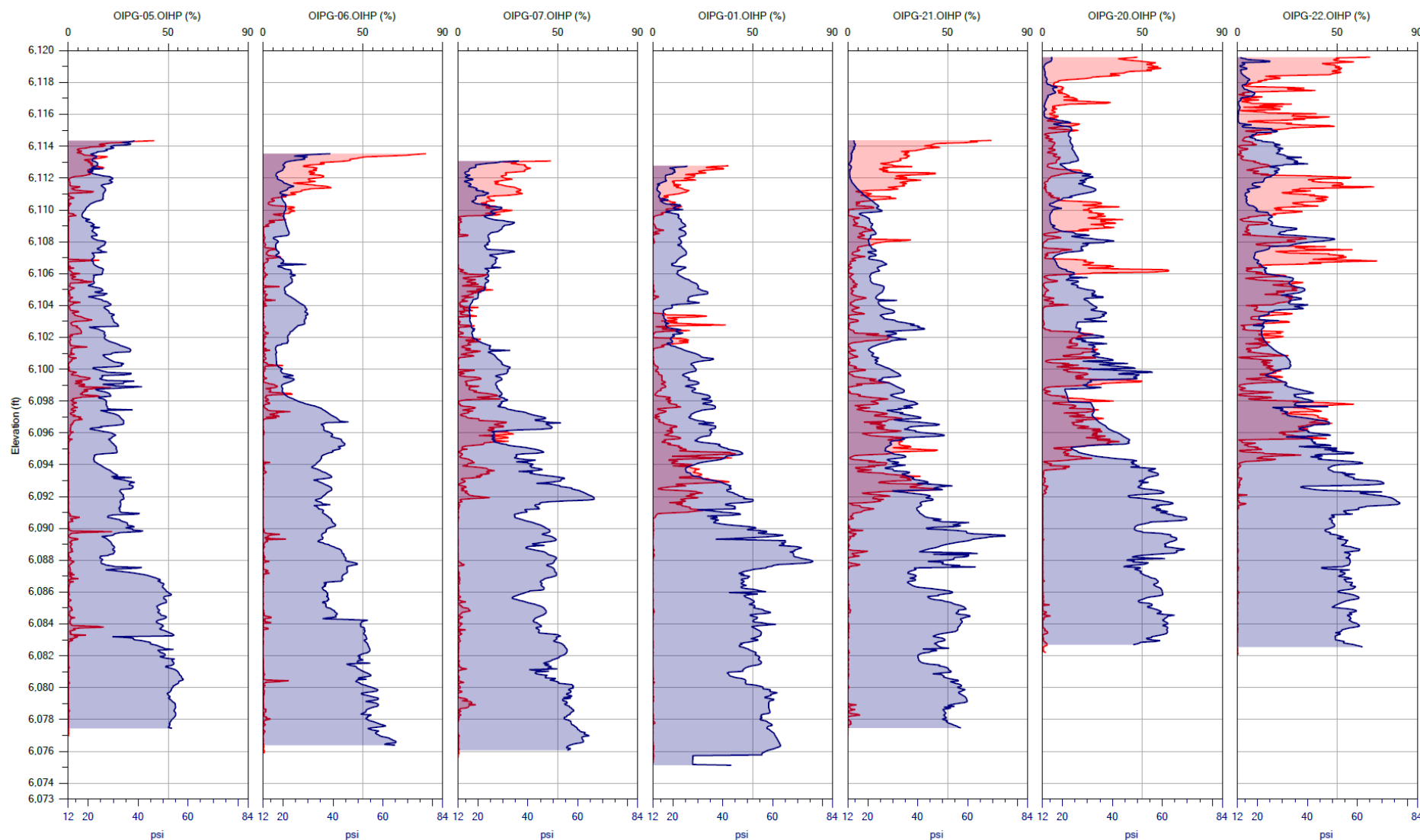
B'

EC / HPT Press. Max

| | | | | | | | | | | | |
|-------------|-------------------|-----------|-------------|--------------|----------|--------------|-----------|--------------|----------|--------------|----------|
| Company: | Eagle Synergistic | Operator: | EG | OIPG-05.OIHP | 6/1/2023 | OIPG-07.OIHP | 6/2/2023 | OIPG-21.OIHP | 6/5/2023 | OIPG-22.OIHP | 6/6/2023 |
| Project ID: | 23.155 | Client: | Kleinfelder | OIPG-06.OIHP | 6/1/2023 | OIPG-01.OIHP | 5/31/2023 | OIPG-20.OIHP | 6/5/2023 | | |

Fluorescence (%) and HPT Pressure (psi)

B



B'

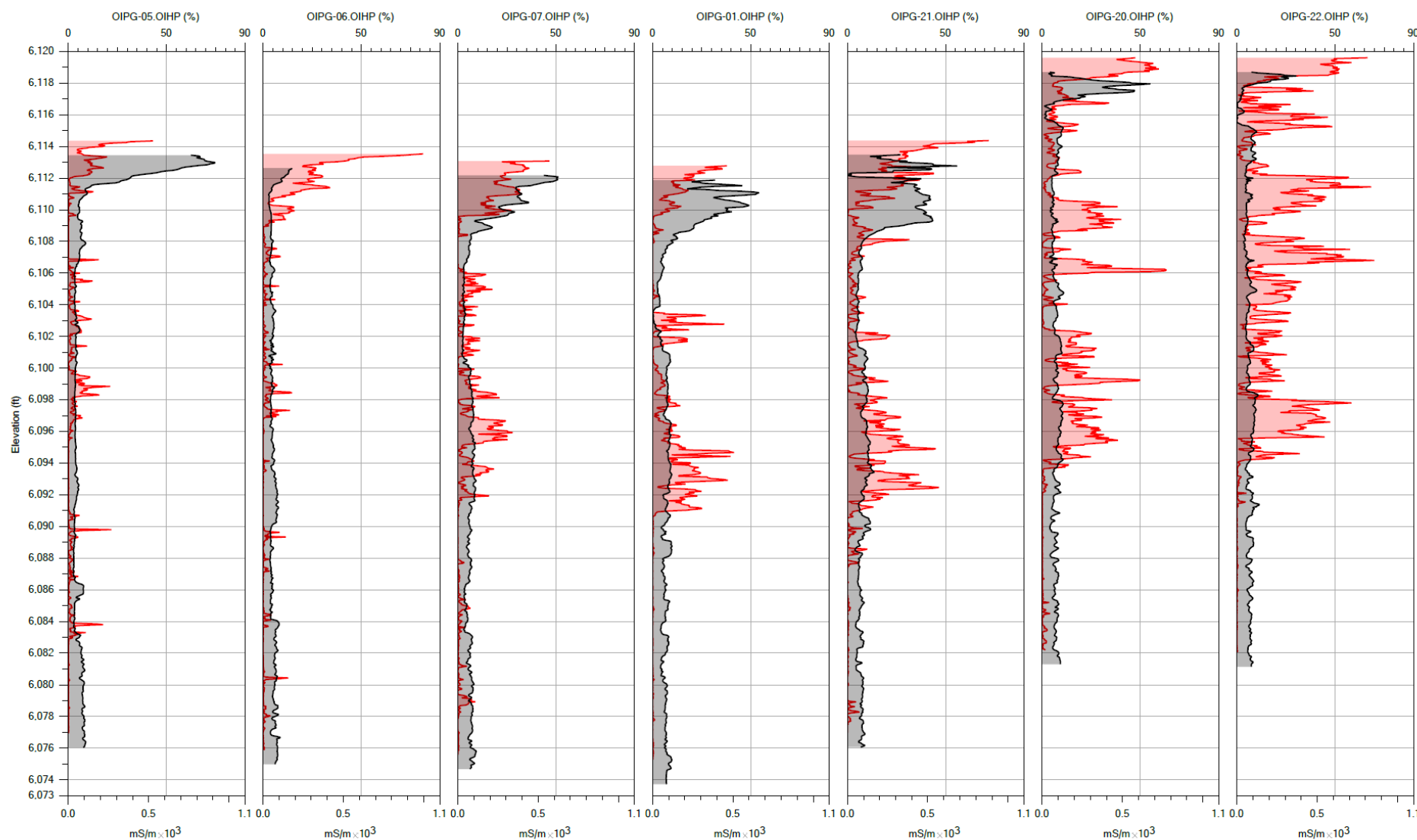


FLUOR [520GP02] / HPT Press. Max

| | | | | | | | | | | | |
|-------------|-------------------|-----------|-------------|--------------|-----------|--------------|-----------|--------------|----------|--------------|----------|
| Company: | Eagle Synergistic | Operator: | EG | OIPG-05.OIHP | 6/11/2023 | OIPG-07.OIHP | 6/2/2023 | OIPG-21.OIHP | 6/5/2023 | OIPG-22.OIHP | 6/6/2023 |
| Project ID: | 23.155 | Client: | Kleinfelder | OIPG-06.OIHP | 6/11/2023 | OIPG-01.OIHP | 5/31/2023 | OIPG-20.OIHP | 6/5/2023 | | |

Fluorescence (%) and EC (mS/m)

B



B'

FLUOR [520GP02] / EC

| | | | | | | | | | | | |
|-------------|-------------------|-----------|-------------|--------------|----------|--------------|-----------|--------------|----------|--------------|----------|
| Company: | Eagle Synergistic | Operator: | EG | OIPG-05.OIHP | 6/1/2023 | OIPG-07.OIHP | 6/2/2023 | OIPG-21.OIHP | 6/5/2023 | OIPG-22.OIHP | 6/6/2023 |
| Project ID: | 23.155 | Client: | Kleinfelder | OIPG-06.OIHP | 6/1/2023 | OIPG-01.OIHP | 5/31/2023 | OIPG-20.OIHP | 6/5/2023 | | |

NEXT STEPS

For further data please refer back to the individual logs, daily reports, and overlays. For additional explanations on your project, we would like to present via webinar or in person.

Eagle Synergistic specializes in 3D visualizations, we are happy to complete 3D models to help visualize lithology, hydrogeologic and contaminant properties.

For the next step please send additional soil and/or groundwater samples and we will correlate with the HRSC data completed on site. We are happy to include correlation sampling data within the presentation.

From all of us at Eagle Synergistic, we look forward to working with you again!

Eagle Synergistic Optimizing Technologies, LLC



Specializing in High Resolution Site Characterization Technology

Eagle Synergistic Optimizing Technologies, LLC



Specializing in High Resolution Site Characterization Technology

Karen Maestas
Kleinfelder
kmaestas@kleinfelder.com
303.550.7184

RE:
White River City, CO
Project # 23.155A

Karen,

Below is a comprehensive report detailing the HRSC investigative services conducted at your White River City, CO site Love Ranch 8. It includes an overview of logistics, individual logs, cross-sections of data, as well as a data synopsis.

Please let us know if you have any questions or requests and feel free to contact us anytime.

We strive to ensure that our client's expectations are met and exceeded in all aspects. We look forward to working with you again in the future.

Thank you,

Janet L Castle, PG, President

jcastle@EagleSynergistic.com

Eagle Synergistic

751 Pine Ridge Rd #100

Golden, CO 80403

Direct: 720-475-0022

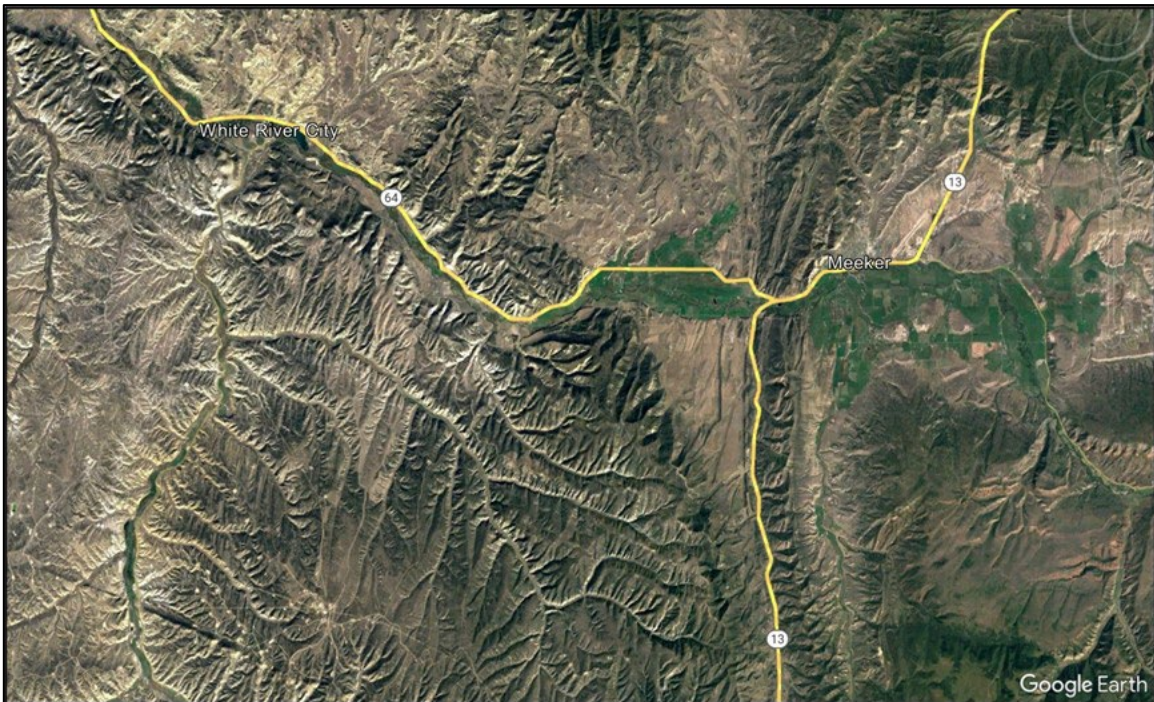
Office: 303-305-7783

www.EagleSynergistic.com

Locations Nationwide: CO, TX, CA, GA, PA, IL

WOSB

Project #23.155A
OIPUV REPORT
7/25/2023



Map Data: Google, © 2023

Caerus Love Ranch 8
White River City, CO

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| EC (mS/m) With HPT Pressure Max (psi) | 14 |
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| Thank You | 17 |

PROJECT OVERVIEW

Project Summary - Logistics

Between 5/31/23 and 6/8/23, Eagle Synergistic worked with Kleinfelder to complete an HRSC investigation of Love Ranch 8. DPT services were provided by Eagle Synergistic. This investigation included advancing the Optical Image Profiler-Green (OIPG) and four Optical Image Profiler-Ultraviolet (OIP-UV) borings to depths ranging from 19.55 to 37.85 feet below ground surface. Both tools were run in conjunction with the electrical conductivity dipole (EC) and the Hydraulic Profiling Tool (HPT). The objective of the investigation was to use the OIP-UV and OIP-G to investigate the free-phase plume on site. This report is focused on the results of the OIP-UV portion of the investigation.

On 6/27/23, Eagle Synergistic returned to the site with the objective of completing additional OIP-UV borings within the LR8 investigation area. 5 OIP-UV borings were completed to depths ranging from 25 to 25.2' bgs. The OIP-UV data overlays from Phase A have been updated to include these new datasets.

Personnel:

Eagle Synergistic – Evan Graves, Harry Jordan, Logan Cayon

Kleinfelder – Jordan Veith

Caerus – Blair Rollins

HRSC BORING LOCATIONS



DETECTOR INTERPRETATION

The OIP-UV probe is designed with UV and visible light sources which are directed out a sapphire window. As the probe is advanced into the subsurface, the UV light source will induce fluorescence of the fuel polycyclic aromatic hydrocarbons (PAHs). This fluorescence is captured by an onboard camera which operates at 30 images per second. Images are saved throughout the advancement of the log and still photos are taken using UV and visible light sources each rod addition as well as at operator-chosen depths.

In general, higher HPT pressure values indicate more compact soil. Likewise, higher EC values indicate smaller grain size, increased pore-fluid conductivity, or higher compaction. HPT is simply measuring the pressure required to maintain a set flow of water into the side-wall soil. The EC is measuring how readily an electrical current can pass through the soil. A tighter, more compact soil will display higher values than a looser, less compact soil.

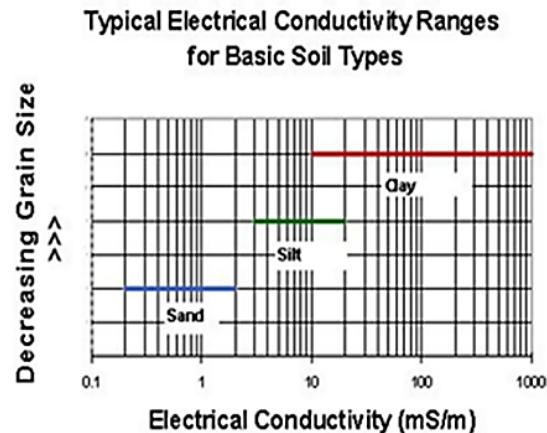
Normally, EC values and HPT pressure should trend together. When the EC reads a lower value (coarser-grained material e.g., sand or gravel) the HPT pressure tends to generally read lower in that interval as the sand/gravel will accept the injected water with ease. When the EC reads a higher value (finer-grained material, i.e., silts and clays) the HPT pressure tends to read higher. In tight, impermeable clays the HPT pressure can often reach 110 pounds per square inch (PSI), the system maximum pressure, while EC values may range from 100-400 milli Siemens per meter (mS/m). Due to regional lithological properties, some sites may display EC and HPT data trends that do not directly correlate.

This report, and the information contained herein, consists solely of qualitative information provided to the recipient for its own independent use. Eagle Synergistic will not provide to the recipient or owner(s) of the subject property any recommendations related to this report or any information contained herein, and Eagle Synergistic hereby disclaims all responsibility related to the same.

UNDERSTANDING EC AND HPT DATA

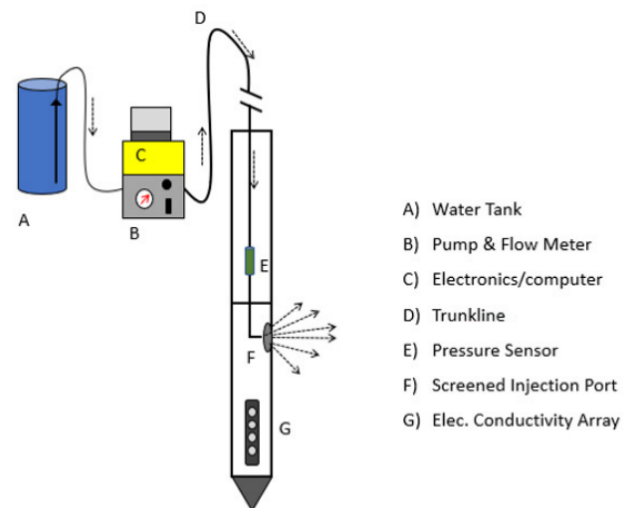
EC (Electrical Conductivity):

- Lowest relative detector on probe, located approximately 1 inch from the probe tip.
- Soil conductivity, in general, varies with grain size.
- Fine-grained soils, such as silts or clays, tend to produce higher EC signals than coarse-grained sands and gravels.
- The EC can also detect salts, metals, etc.



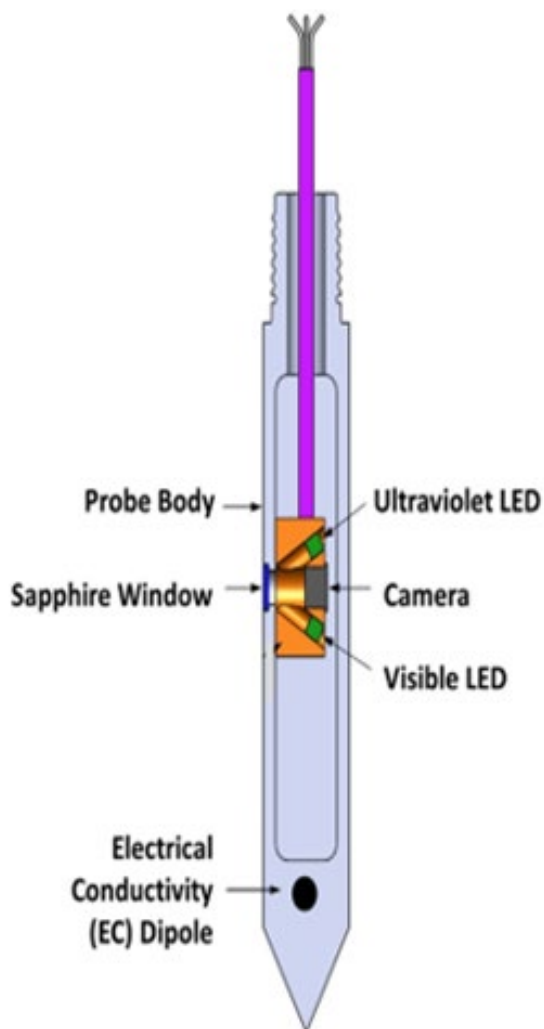
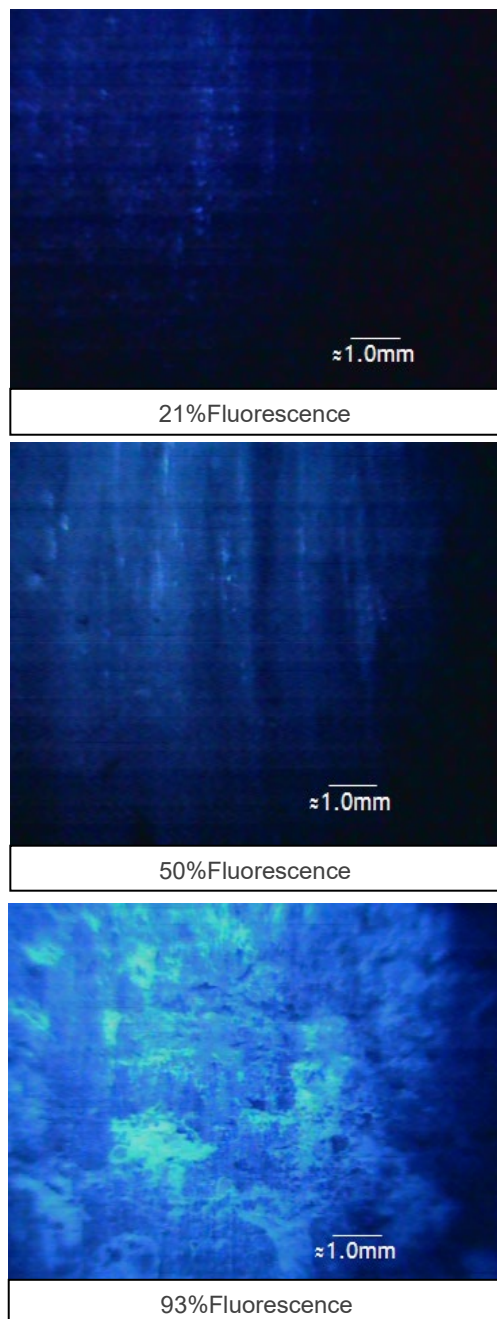
HPT Pressure

As shown in the figure below, water from a supply tank (A) is pumped by a pump (B) housed within the HPT controller at a set flow rate through the trunkline (D) and into the formation after passing through the injection screen (F). HPT system injection pressure measurements are made using a downhole pressure transducer (E). Use of a transducer in the downhole position allows measurement of the injection pressure at the HPT screen only and excludes frictional losses through the flow tube of the HPT trunkline. The downhole transducer position is also necessary for making hydrostatic pressure measurements at the probe.



UNDERSTANDING OIP FLUORESCENCE

OIP Fluorescence (%) is expressed as the percentage of the OIP camera view occupied by fluorescence, essentially indicating the degree of light non-aqueous phase liquid (LNAPL) saturation within the soil matrix. Site-specific variables such as the degree of LNAPL weathering, soil texture and LNAPL composition can affect the fluorescence intensity and appearance on the log. The images below are examples only and were not collected during on-site operations.



QUALITY ASSURANCE

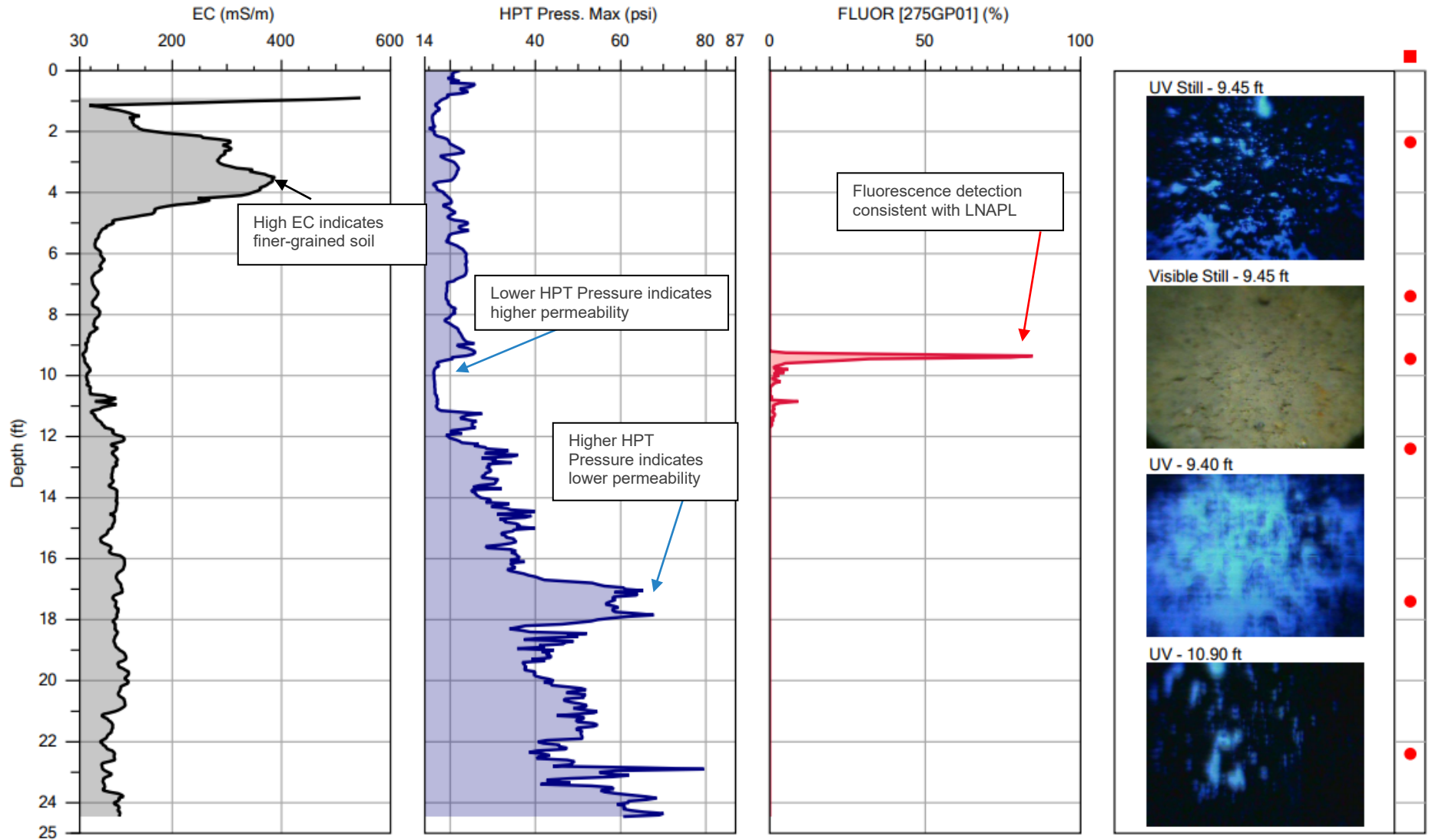
All probes contain an electrical conductivity dipole, which is tested for performance prior to the tooling being advanced. The dipole is tested using a low-value resistor and a high-value resistor, and the results for this test are presented with each boring log.

HPT ports and transducers are tested for performance prior to advancement using a reference tube, which allows the static pressure of a 6-in water column to be measured. We ensure that the transducer reads this value within a reasonable margin of error. This test is performed at the beginning and end of each boring, and the results are included.

Optical Image Profilers are tested in several ways. A visual target is held against the sapphire window to test the functionality of the visible light source. 4 mL quartz containers of Diesel fuel and motor are each held against the window to measure the effectiveness of the ultraviolet light within the probe. A blank black box is also held against the window to ensure that there are no false positives being recorded. These three tests are performed at the beginning and end of each boring and the results are recorded with each log.

These QA/Response tests are completed before and after each individual boring to ensure that the system is functioning correctly and responding well to the site-specific contaminant of concern. All QA/response logs are automatically compiled by the software and are available at Kleinfelder's request.

Individual Logs



Company: Eagle Synergistic

Operator: HJ

Project ID: 23.155

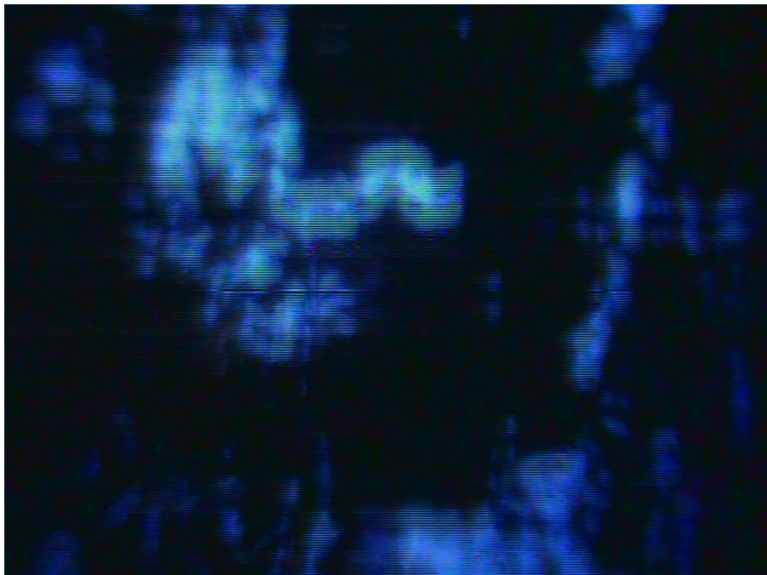
Client: Kleinfelder

File: OIPUV-01.OIHP

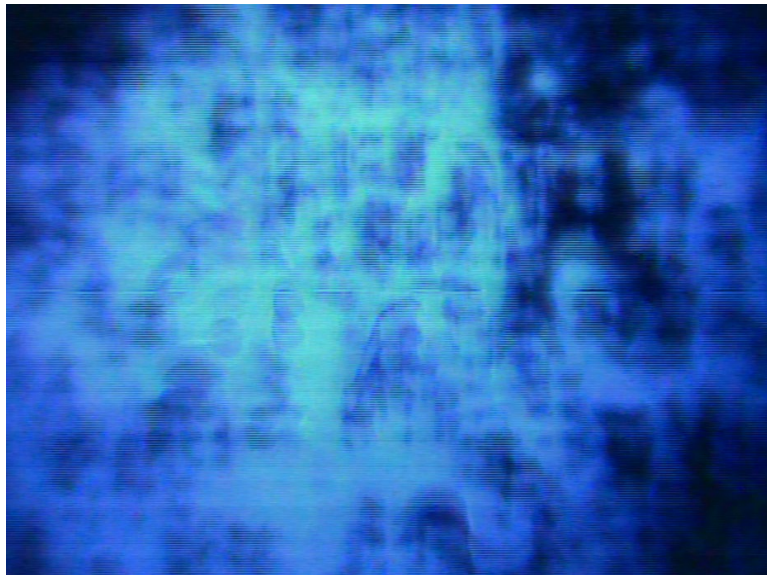
Date: 6/27/2023

Location: Meeker CO

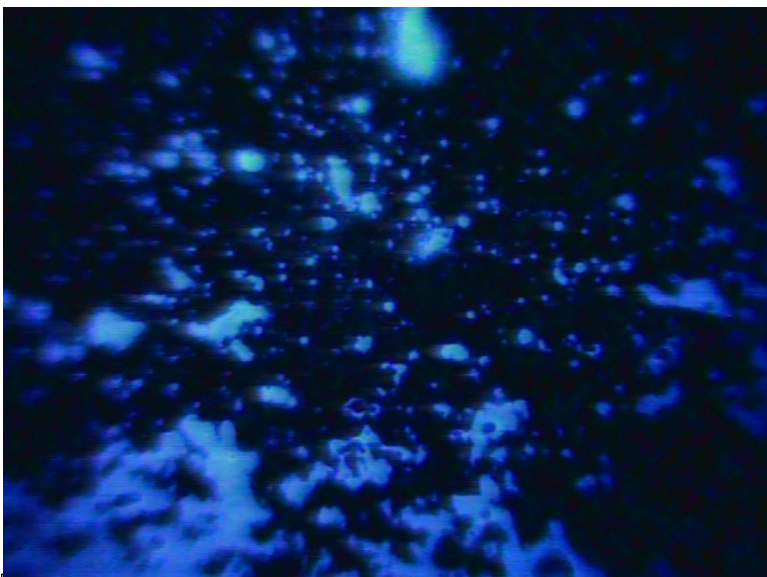
IMAGES FROM LOG OIPUV-01



1. UV image from 9.30' – 18.5% Fluorescence



2. UV image from 9.40 – 89.4% Fluorescence



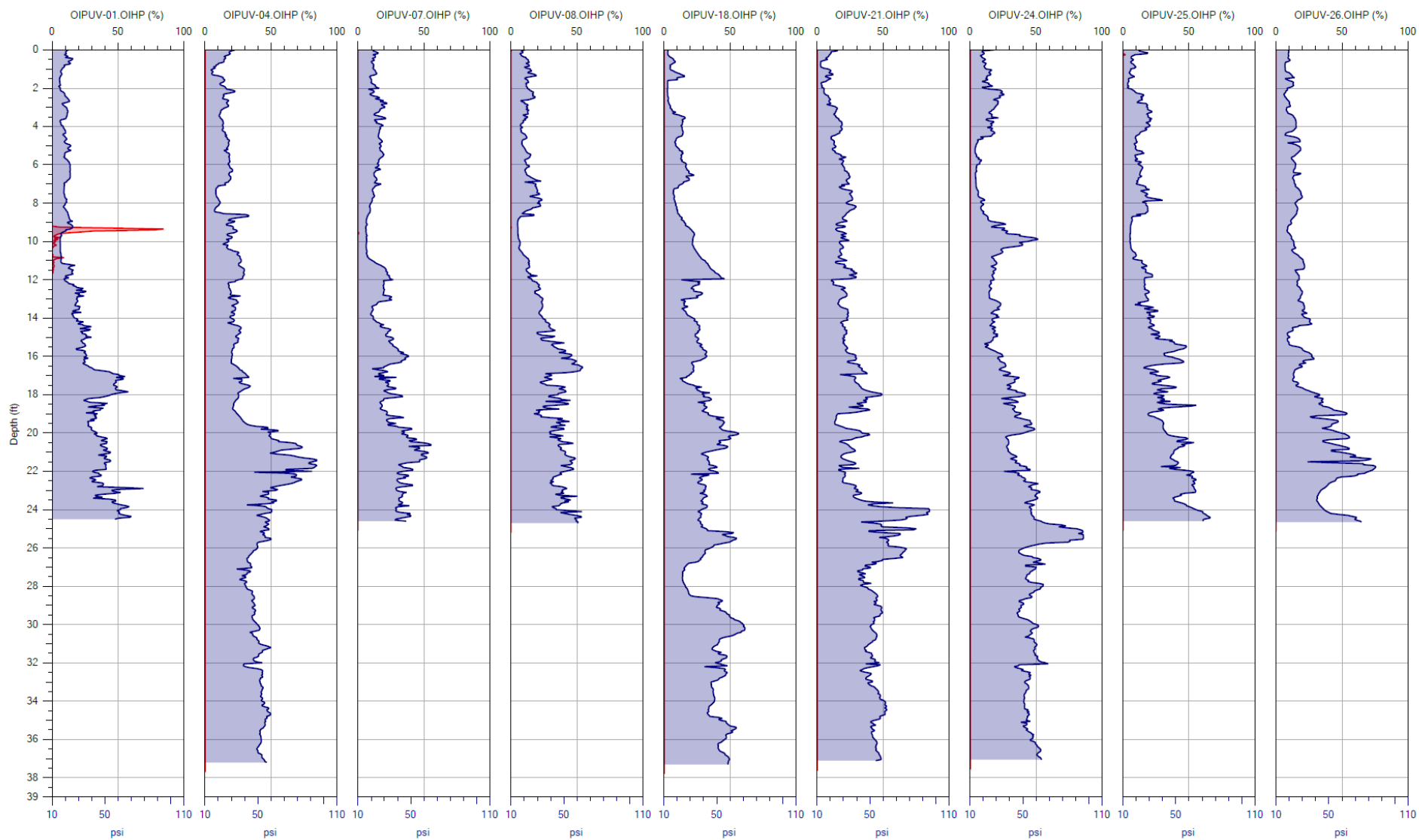
3. UV Still image from 9.45' – 28.8% Fluorescence



4. Visible Still image from 9.45'

This boring displayed a thin interval of fluorescence consistent with petroleum LNAPL. In the pair of still images captured at 9.45', globules of fluorescing product observed in the UV image (3) are also easily discernable in the Visible light image (4) as small voids within the sand. It appears that this interval of fluorescence correlates with the upper margin of a decreased HPT pressure (potential sandy deposit within clayey material).

OIPUV OVERLAYS – FLUORESCENCE (%) AND HPT PRESSURE (psi)



FLUOR [275GP01] / HPT Press. Max

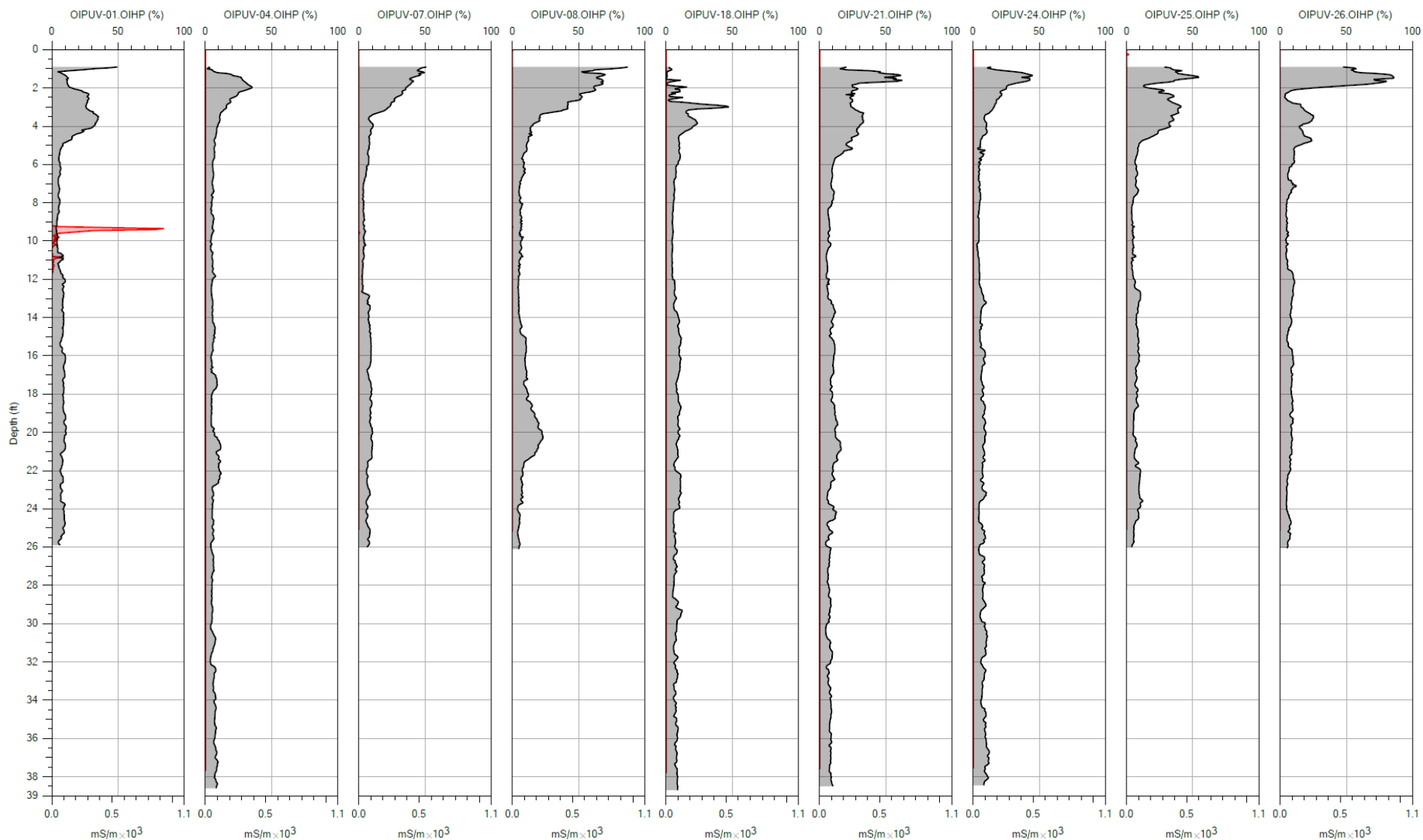
Company: Eagle Synergistic
Project ID: 23.155

Operator: HJ
Client: Kleinfelder

| | | | | | |
|---------------|-----------|---------------|-----------|---------------|-----------|
| OIPUV-01.OIHP | 6/27/2023 | OIPUV-08.OIHP | 6/27/2023 | OIPUV-24.OIHP | 6/8/2023 |
| OIPUV-04.OIHP | 6/1/2023 | OIPUV-18.OIHP | 6/8/2023 | OIPUV-25.OIHP | 6/27/2023 |
| OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 | OIPUV-26.OIHP | 6/27/2023 |



OIPUV OVERLAYS – FLUORESCENCE (%) AND EC (mS/m)



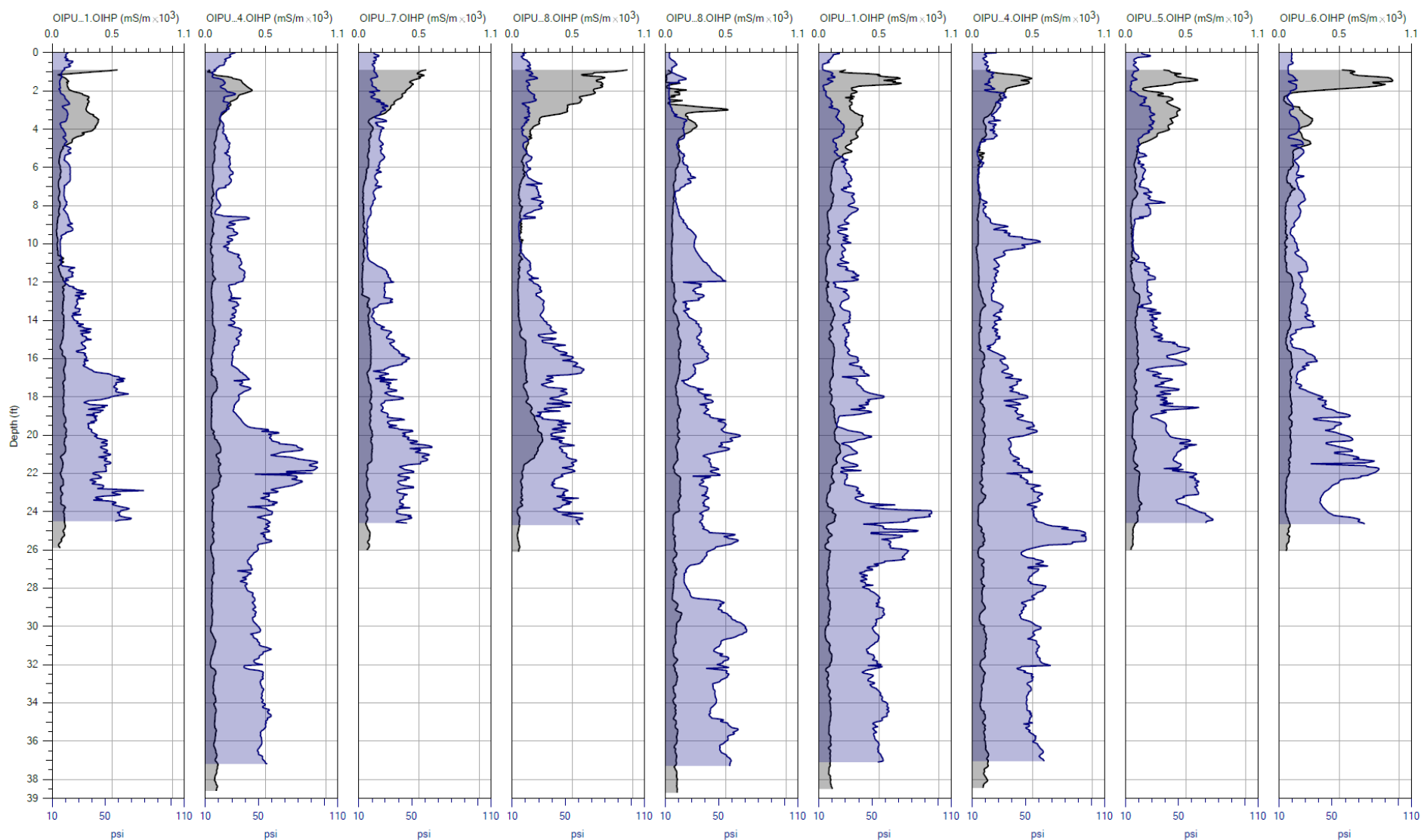
FLUOR [275GP01] / EC

Company: Eagle Synergistic
Project ID: 23.155

Operator: HJ
Client: Kleinfelder

| | | | | | |
|---------------|-----------|---------------|-----------|---------------|-----------|
| OIPUV-01.OIHP | 6/27/2023 | OIPUV-08.OIHP | 6/27/2023 | OIPUV-24.OIHP | 6/8/2023 |
| OIPUV-04.OIHP | 6/1/2023 | OIPUV-18.OIHP | 6/8/2023 | OIPUV-25.OIHP | 6/27/2023 |
| OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 | OIPUV-26.OIHP | 6/27/2023 |

OIPUV OVERLAYS – EC (mS/m) AND HPT PRESSURE MAX (psi)



EC / HPT Press. Max

Company: Eagle Synergistic
Project ID: 23.155

Operator: HJ
Client: Kleinfelder

| | | | | | |
|---------------|-----------|---------------|-----------|---------------|-----------|
| OIPUV-01.OIHP | 6/27/2023 | OIPUV-08.OIHP | 6/27/2023 | OIPUV-24.OIHP | 6/8/2023 |
| OIPUV-04.OIHP | 6/1/2023 | OIPUV-18.OIHP | 6/8/2023 | OIPUV-25.OIHP | 6/27/2023 |
| OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 | OIPUV-26.OIHP | 6/27/2023 |

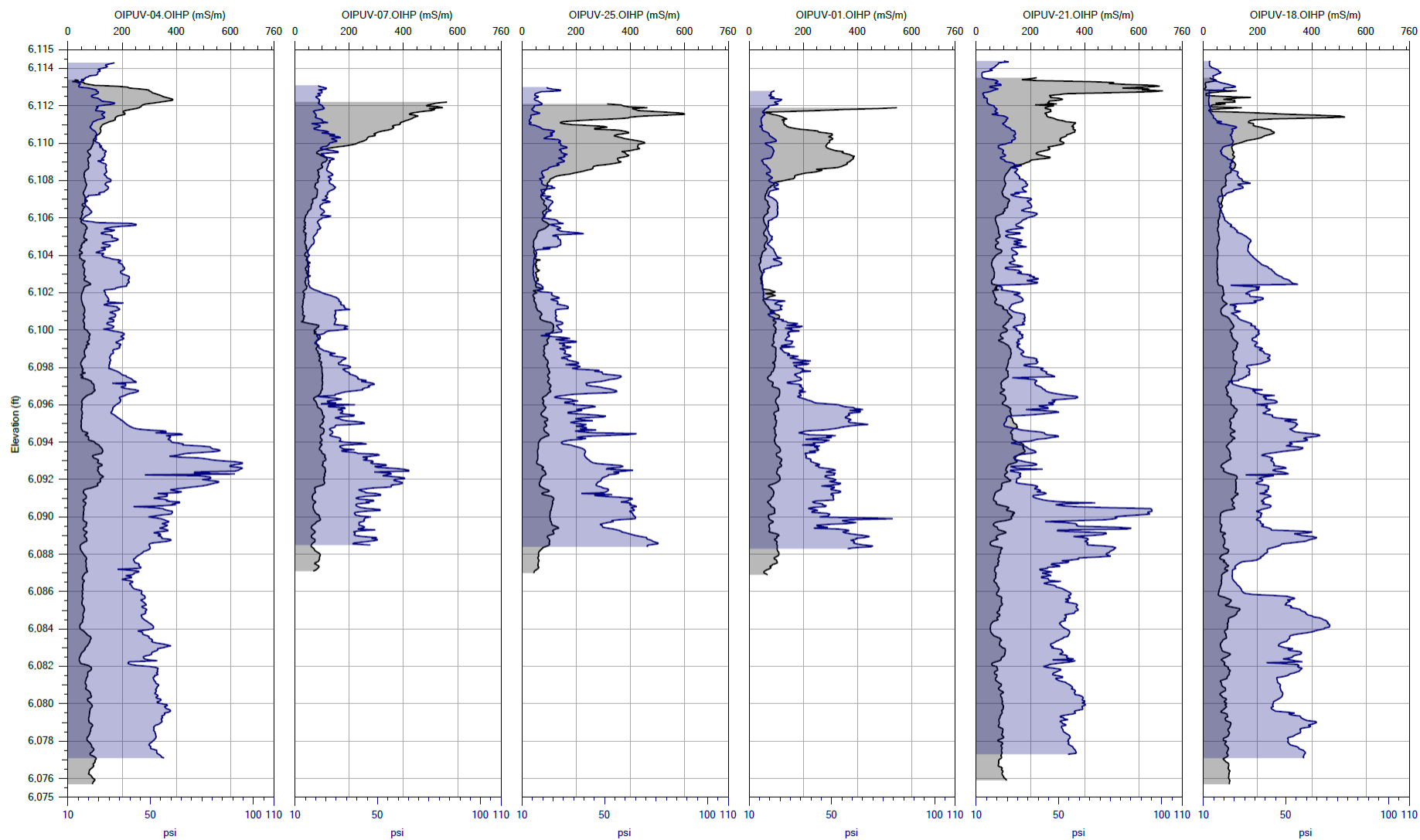
OIPUV CROSS SECTION MAP



OIPUV CROSS SECTIONS A-A'

EC (mS/m) With HPT Pressure Max (psi)

A



A'

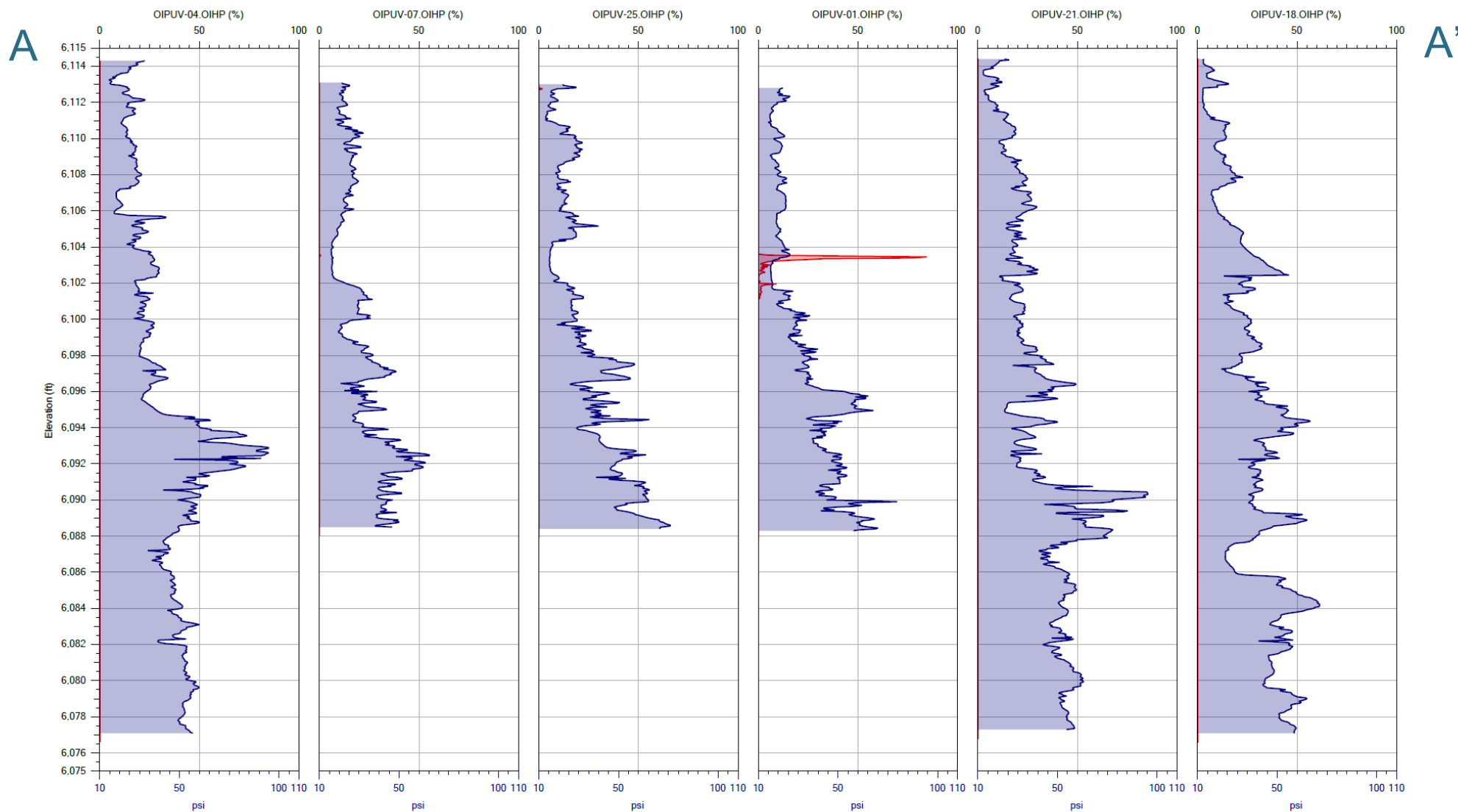


EC / HPT Press. Max

| | | | |
|-------------|-------------------|-----------|-------------|
| Company: | Eagle Synergistic | Operator: | EG |
| Project ID: | 23.155 | Client: | Kleinfelder |

| | | | |
|---------------|-----------|---------------|-----------|
| OIPUV-04.OIHP | 6/1/2023 | OIPUV-01.OIHP | 6/27/2023 |
| OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 |
| OIPUV-25.OIHP | 6/27/2023 | OIPUV-18.OIHP | 6/8/2023 |

Fluorescence (%) and HPT Pressure (psi)

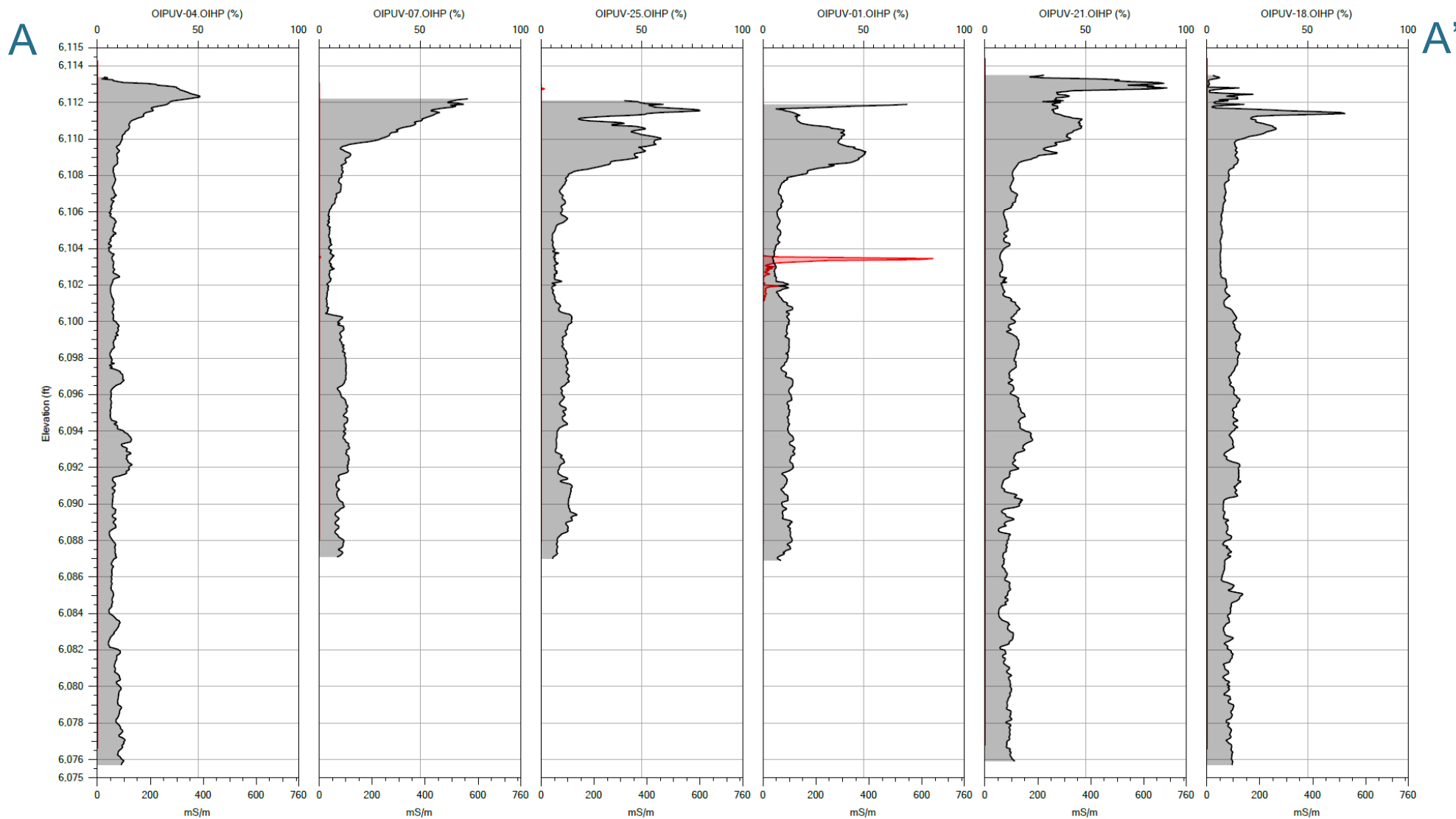


FLUOR [275GP01] / HPT Press. Max

| | | | |
|-------------|-------------------|-----------|-------------|
| Company: | Eagle Synergistic | Operator: | EG |
| Project ID: | 23.155 | Client: | Kleinfelder |

| | | | |
|---------------|-----------|---------------|-----------|
| OIPUV-04.OIHP | 6/1/2023 | OIPUV-01.OIHP | 6/27/2023 |
| OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 |
| OIPUV-25.OIHP | 6/27/2023 | OIPUV-18.OIHP | 6/8/2023 |

Fluorescence (%) and EC (mS/m)



FLUOR [275GP01] / EC

| | | | | | | | |
|-------------|-------------------|-----------|-------------|---------------|-----------|---------------|-----------|
| Company: | Eagle Synergistic | Operator: | EG | OIPUV-04.OIHP | 6/1/2023 | OIPUV-01.OIHP | 6/27/2023 |
| Project ID: | 23.155 | Client: | Kleinfelder | OIPUV-07.OIHP | 6/27/2023 | OIPUV-21.OIHP | 6/8/2023 |
| | | | | OIPUV-25.OIHP | 6/27/2023 | OIPUV-18.OIHP | 6/8/2023 |

THANK YOU

For further data please refer to the individual logs and daily/comprehensive reports. If you have any questions or comments, please contact us at your convenience.

From all of us at Eagle Synergistic, we look forward to working with you again.

Eagle Synergistic Optimizing Technologies, LLC



Specializing in High Resolution Site Characterization Technology

APPENDIX C
MONITORING TIMELINE

MONITORING TIMELINE

Kleinfelder contracted consultants completed the following field activities at the Love Ranch 8 Off-Location Flowline Release Pad May 2-4, 2023.

- May 2, 2023
 - Release (sheen) identified, emanating on Piceance Creek along a known pipeline corridor.
 - Caerus immediately initiated spill response procedures including deploying sorbent booms across Piceance Creek and adjacent irrigation channels, deploying sorbent pads immediately surrounding the point of release (POR), starting active fluid recovery via surface water and groundwater skimming near the POR with a transport truck, completing all regulatory notifications, shutting in flowlines within the pipeline corridor, and pressure testing the pipelines.
 - Twenty-two surface water samples collected from a 5.5-mile segment of Piceance Creek and shipped same-day to Pace Analytical Laboratory for full COGCC Table 915-1 analysis.
- May 3, 2023
 - Caerus spill response procedures still actively being completed at the Site.
 - Fluid recovery via surface water and groundwater skimming near the POR with a transport truck continues.
 - Surface water sampling event from May 2, 20223 is duplicated. Six additional water samples collected from the adjacent irrigation ditch. Twenty-eight surface water samples collected in total and shipped same-day to Pace Analytical Laboratory for full COGCC Table 915-1 analysis.
- May 4, 2023
 - Caerus spill response procedures still actively being completed at the Site.
 - Fluid recovery via surface water and groundwater rainbow sheen skimming near the POR with a transport truck continues.
 - Surface water sampling event from May 3, 2023 is duplicated. Twenty-eight surface water samples collected in total and shipped same-day to Pace Analytical Laboratory for full COGCC Table 915-1 analysis.
 - Exploratory hydrovac potholes (Pothole A and Pothole B) as depicted in **Figure 5** were completed directly west of the POR area to allow additional groundwater skimming and contaminant recovery.

- Kleinfelder completes initial site visit and assessment. Kleinfelder did not participate in the May 4, 2023, surface water sampling event.

Kleinfelder performed the following field activities at the Love Ranch 8 Off-Location Flowline Release Pad beginning May 5, 2023.

May 5, 2023

- Caerus reduces surface water sampling frequency of Piceance Creek to once per week following the review of surface water analytical data of samples to date.
- Kleinfelder completes weekly surface water sampling at UG02, POR, DG14, DG13, DG12, and DG11 as depicted in **Figure 3**.
- Daily photo logs and wildlife observation walks were completed upstream and downstream of the POR to monitor any abnormal environmental conditions or wildlife behavior.
- Fluid recovery via surface water and groundwater skimming near the POR with a transport truck continues.
- Rainbow sheen on water surface of Piceance Creek is primarily being contained within the sorbent booms deployed around the point of release area and subsequent boom deployments downstream of the point of release area.
- Caerus monitored the sorbent booms and pads for saturation and routinely replaced the booms and pads as needed.

May 8, 2023 through May 30, 2023

- Kleinfelder completes weekly surface water sampling at UG02, POR, DG14, DG13, DG12, and DG11 as depicted in **Figure 3**.
- Photo logs and wildlife observation walks were completed upstream and downstream of the POR to monitor any abnormal environmental conditions or wildlife behavior each day Kleinfelder visited the Site.
- Rainbow sheen on water surface of Piceance Creek is primarily being contained within the sorbent booms deployed around the point of release area and subsequent boom deployments downstream of the point of release area.
- Caerus monitored the sorbent booms and pads for saturation and routinely replaced the booms and pads as needed.
- May 8, 2023
 - Kleinfelder collected Material of Interest (MOI) water sample from the excavation within the POR area. Analytical results of this sample are summarized in **Table 2**.
- May 15, 2023

- An additional super sack sandbag is placed on top of the existing sandbags surrounding the point of release area to bolster the ability to keep surface water from entering the point of release area as much as possible.
- Sporadic rainbow sheen is observed downstream of the point of release area between Boom #5 and Boom #7 as depicted in **Figure 3**. Rainbow sheen is not observed past Boom #7.
- Kleinfelder collected Material of Interest (MOI) water sample from the excavation within the POR area. Analytical results of this sample are summarized in **Table 2**.
- May 17 and May 18, 2023
 - Eight additional exploratory hydrovac potholes as depicted in **Figure 5** were completed surrounding the POR area to allow observation of subsurface conditions and allow additional groundwater skimming of rainbow sheen and contaminant recovery, as necessary.
- May 23 and May 24, 2023
 - Five piezometers as depicted in **Figures 4A-4C** are installed by a Caerus contracted driller at the Site on the east and west sides of Piceance Creek to provide additional data on groundwater level and flow direction.
 - 811 notifications were completed under Ticket A313604401-00A. Caerus personnel issued a Caerus Ground Disturbance to for these activities.
 - Kleinfelder observed the installation of the five piezometers and monitored the removed soil for impacts via field screening by using a PID. All readings were < 1 ppm and no soil samples were collected for laboratory analysis.

May 31, 2023 through June 9, 2023

- Kleinfelder continues weekly surface water sampling at UG02 (Subsequent Sample Point), POR, DG14, DG13, DG12, and DG11 as depicted in **Figure 3**.
 - UG02 sample point moved slightly to permit safe access to Piceance Creek for surface water sampling. The initial and subsequent sample locations for UG02 are depicted in **Figure 3**.
- Photo logs and wildlife observation walks were completed upstream and downstream of the POR to monitor any abnormal environmental conditions or wildlife behavior each day Kleinfelder visited the Site.
- Rainbow sheen on water surface of Piceance Creek is primarily being contained within the sorbent booms deployed around the point of release area and subsequent boom deployments downstream of the point of release area.
- Caerus monitored the sorbent booms and pads for saturation and routinely replaced the booms and pads as needed.

- A Material of Interest (MOI) soil sample was collected from the excavation within the POR area on June 1, 2023. Field screening results of this sample are summarized in **Table 1**. Analytical results of this sample are summarized in **Table 3**.
- A Material of Interest (MOI) water sample was collected from the excavation within the POR area on June 1, 2023 and June 7, 2023. Analytical results of this sample are summarized in **Table 2**.
- Eagle Synergistic (Eagle) is contracted to provide high-resolution site characterization (HRSC), specifically a direct push rig with downhole tools including laser-induced fluorescence (LIF)/optical image profiler (OIP), hydraulic profiling tool (HPT), and electrical conductivity (EC) at the Site.
- Eagle begins soil borings at the Site beginning May 31, 2023 through June 9, 2023 in an attempt to characterize subsurface conditions surrounding the POR area.
 - 811 notifications were completed under Ticket A313604401-00A. Caerus personnel issued a Caerus Ground Disturbance to for these activities.
- Kleinfelder collected 16 soil samples from various Eagle soil borings in this date range. The soil samples were field screened using a PID and are summarized in **Table 1**. Analytical results for these soil samples are summarized in **Table 3**. The locations of these soil samples are depicted in **Figure 6**.

June 12, 2023 – Current

- Kleinfelder continues weekly surface water sampling at UG02, POR, DG14, DG13, DG12, and DG11 as depicted in **Figure 3**.
- At the direction of Caerus, Kleinfelder's site visit frequency is reduced to twice per week.
- Photo logs and wildlife observation walks were completed upstream and downstream of the POR to monitor any abnormal environmental conditions or wildlife behavior each day Kleinfelder visited the Site.
- Rainbow sheen on water surface of Piceance Creek is primarily being contained within the sorbent booms deployed around the point of release area and subsequent boom deployments downstream of the point of release area.
- Caerus monitored the sorbent booms and pads for saturation and routinely replaced the booms and pads as needed.
- June 27, 2023
 - Eagle returns to the Site to complete additional HRSC services surrounding the POR area.
 - 811 notifications were completed under Ticket A313604401-00A. Caerus personnel issued a Caerus Ground Disturbance to for these activities.
 - Kleinfelder collected one soil sample from Eagle soil boring 01 at 9-ft on this date. The soil sample was field screened using a PID and is summarized in **Table 1**. Analytical results for this soil sample is summarized in **Table 3**. The location of the soil sample is depicted in **Figure 6**.
- July 5, 2023

- Kleinfelder collected one composite soil sample of the stockpile of soil excavated from the POR area on May 2, 2023. The soil sample was field screened using a PID and is summarized in **Table 1**. Analytical results for this soil sample is summarized in **Table 3**. The location of the soil sample is depicted in **Figure 6**.
- Kleinfelder continues to complete weekly surface water sampling at UG02, POR, DG14, DG13, DG12, and DG11 as depicted in **Figure 3**. Surface water samples collected on July 17, 2023 and July 24, 2023 are pending analytical results.

Caerus identified the soil sampling locations. Kleinfelder used an EOS Arrow 100 Submeter GNSS receiver to record latitude and longitude at each sample location and the sample locations are shown on **Figure 6**.

Surface water samples were collected using five laboratory-supplied sample bottles placed directly into Piceance Creek.

Soil samples were collected using a stainless-steel trowel and placed into one laboratory-supplied, 9-ounce jar with a Teflon lid per sample. Each sample was collected directly from the hollow stem auger, from the appropriate depth, and placed into the glass jar.

The samples were immediately placed on ice in a cooler. Standard chain-of-custody (COC) procedures were used during sampling and transportation to Pace in Mount Juliet, Tennessee (via FEDEX).

Soil samples collected in unison with Eagle soil borings were analyzed for COGCC Table 915-1 Organic Compounds and TPH.

Sampling equipment (i.e., auger, soil sampler, etc.) was washed with a solution of Liquinox[®] detergent, rinsed with tap water, and then distilled water between samples.

During soil sampling activities, Kleinfelder documented staining and/or odor observations, if any, and screened the soil with a photoionization detector (PID). Kleinfelder placed the soil into a Ziploc[®] plastic bag directly from the hand auger for screening with the PID. The PID is a MiniRAE 3000[®], which is owned and maintained by Kleinfelder. Prior to use, Kleinfelder calibrated the PID, which passed calibration.

Soil sample conditions and observations are provided in **Table 1**.

APPENDIX D
LABORATORY ANALYTICAL REPORTS

May 10, 2023

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

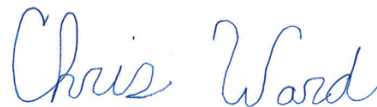
⁸ Al

⁹ Sc

Caerus Oil and Gas

Sample Delivery Group: L1613445
Samples Received: 05/06/2023
Project Number: 20234315.001A
Description:
Site: LOVE RANCH 8
Report To: Brett M. , Jake J. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

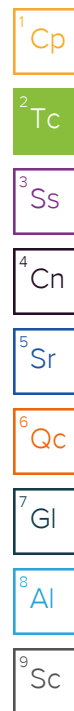
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230505-LOVE1RANCH 8-(ST-PC-UG02) L1613445-01 GW

Collected by
Tristan Schmalz

Collected date/time
05/05/23 10:25

Received date/time
05/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2055883 | 1 | 05/08/23 09:24 | 05/08/23 12:31 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2056748 | 1 | 05/09/23 20:02 | 05/09/23 20:02 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2055733 | 1 | 05/08/23 00:31 | 05/08/23 00:31 | DWR | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

20230505-LOVE RANCH 8-(ST-PC-POR) L1613445-02 GW

Collected by
Tristan Schmalz

Collected date/time
05/05/23 10:33

Received date/time
05/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2055883 | 1 | 05/08/23 09:24 | 05/08/23 12:31 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2056748 | 1 | 05/09/23 20:29 | 05/09/23 20:29 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2055733 | 1 | 05/08/23 00:52 | 05/08/23 00:52 | DWR | Mt. Juliet, TN |

20230505-LOVE RANCH 8-(ST-PC-DG14) L1613445-03 GW

Collected by
Tristan Schmalz

Collected date/time
05/05/23 10:42

Received date/time
05/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2055883 | 1 | 05/08/23 09:24 | 05/08/23 12:31 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2056748 | 1 | 05/09/23 21:23 | 05/09/23 21:23 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2055733 | 1 | 05/08/23 01:13 | 05/08/23 01:13 | DWR | Mt. Juliet, TN |

20230505-LOVE RANCH 8-(ST-PC-DG13) L1613445-04 GW

Collected by
Tristan Schmalz

Collected date/time
05/05/23 10:48

Received date/time
05/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2055883 | 1 | 05/08/23 09:24 | 05/08/23 12:31 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2056748 | 1 | 05/09/23 21:51 | 05/09/23 21:51 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2055733 | 1 | 05/08/23 01:35 | 05/08/23 01:35 | DWR | Mt. Juliet, TN |

20230505-LOVE RANCH 8-(ST-PC-DG12) L1613445-05 GW

Collected by
Tristan Schmalz

Collected date/time
05/05/23 10:56

Received date/time
05/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2055883 | 1 | 05/08/23 09:24 | 05/08/23 12:31 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2056748 | 1 | 05/09/23 22:17 | 05/09/23 22:17 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2055733 | 1 | 05/08/23 01:57 | 05/08/23 01:57 | DWR | Mt. Juliet, TN |

20230505-LOVE RANCH 8-(ST-PC-DG11) L1613445-06 GW

Collected by
Tristan Schmalz

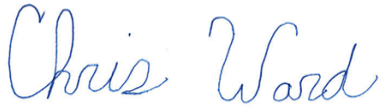
Collected date/time
05/05/23 11:04

Received date/time
05/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2055883 | 1 | 05/08/23 09:24 | 05/08/23 12:31 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2056748 | 1 | 05/09/23 22:45 | 05/09/23 22:45 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2055733 | 1 | 05/08/23 02:18 | 05/08/23 02:18 | DWR | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | | date / time | |
| Dissolved Solids | 545 | | 10.0 | 1 | 05/08/2023 12:31 | WG2055883 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|-------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Chloride | 9.09 | | 0.379 | 1.00 | 1 | 05/09/2023 20:02 | WG2056748 |
| Sulfate | 140 | | 0.594 | 5.00 | 1 | 05/09/2023 20:02 | WG2056748 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------------------------|--------|-----------|-----------|----------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/08/2023 00:31 | WG2055733 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/08/2023 00:31 | WG2055733 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/08/2023 00:31 | WG2055733 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/08/2023 00:31 | WG2055733 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/08/2023 00:31 | WG2055733 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/08/2023 00:31 | WG2055733 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/08/2023 00:31 | WG2055733 |
| (S) Toluene-d8 | 113 | | | 80.0-120 | | 05/08/2023 00:31 | WG2055733 |
| (S) 4-Bromofluorobenzene | 95.9 | | | 77.0-126 | | 05/08/2023 00:31 | WG2055733 |
| (S) 1,2-Dichloroethane-d4 | 109 | | | 70.0-130 | | 05/08/2023 00:31 | WG2055733 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 542 | | 10.0 | 1 | 05/08/2023 12:31 | WG2055883 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 8.99 | | 0.379 | 1.00 | 1 | 05/09/2023 20:29 | WG2056748 |
| Sulfate | 140 | | 0.594 | 5.00 | 1 | 05/09/2023 20:29 | WG2056748 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000955 | J | 0.0000941 | 0.00100 | 1 | 05/08/2023 00:52 | WG2055733 |
| Toluene | 0.00588 | | 0.000278 | 0.00100 | 1 | 05/08/2023 00:52 | WG2055733 |
| Ethylbenzene | 0.000532 | J | 0.000137 | 0.00100 | 1 | 05/08/2023 00:52 | WG2055733 |
| Xylenes, Total | 0.00876 | | 0.000174 | 0.00300 | 1 | 05/08/2023 00:52 | WG2055733 |
| Naphthalene | 0.00105 | J | 0.00100 | 0.00500 | 1 | 05/08/2023 00:52 | WG2055733 |
| 1,2,4-Trimethylbenzene | 0.00211 | | 0.000322 | 0.00100 | 1 | 05/08/2023 00:52 | WG2055733 |
| 1,3,5-Trimethylbenzene | 0.00171 | | 0.000104 | 0.00100 | 1 | 05/08/2023 00:52 | WG2055733 |
| (S) Toluene-d8 | 112 | | | 80.0-120 | | 05/08/2023 00:52 | WG2055733 |
| (S) 4-Bromofluorobenzene | 98.9 | | | 77.0-126 | | 05/08/2023 00:52 | WG2055733 |
| (S) 1,2-Dichloroethane-d4 | 108 | | | 70.0-130 | | 05/08/2023 00:52 | WG2055733 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 537 | | 10.0 | 1 | 05/08/2023 12:31 | WG2055883 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 8.96 | | 0.379 | 1.00 | 1 | 05/09/2023 21:23 | WG2056748 |
| Sulfate | 139 | | 0.594 | 5.00 | 1 | 05/09/2023 21:23 | WG2056748 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.0000965 | J | 0.0000941 | 0.00100 | 1 | 05/08/2023 01:13 | WG2055733 |
| Toluene | 0.000426 | J | 0.000278 | 0.00100 | 1 | 05/08/2023 01:13 | WG2055733 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/08/2023 01:13 | WG2055733 |
| Xylenes, Total | 0.000416 | J | 0.000174 | 0.00300 | 1 | 05/08/2023 01:13 | WG2055733 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/08/2023 01:13 | WG2055733 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/08/2023 01:13 | WG2055733 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/08/2023 01:13 | WG2055733 |
| (S) Toluene-d8 | 111 | | | 80.0-120 | | 05/08/2023 01:13 | WG2055733 |
| (S) 4-Bromofluorobenzene | 95.8 | | | 77.0-126 | | 05/08/2023 01:13 | WG2055733 |
| (S) 1,2-Dichloroethane-d4 | 107 | | | 70.0-130 | | 05/08/2023 01:13 | WG2055733 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 549 | | 10.0 | 1 | 05/08/2023 12:31 | WG2055883 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 8.95 | | 0.379 | 1.00 | 1 | 05/09/2023 21:51 | WG2056748 |
| Sulfate | 140 | | 0.594 | 5.00 | 1 | 05/09/2023 21:51 | WG2056748 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/08/2023 01:35 | WG2055733 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/08/2023 01:35 | WG2055733 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/08/2023 01:35 | WG2055733 |
| Xylenes, Total | 0.000210 | J | 0.000174 | 0.00300 | 1 | 05/08/2023 01:35 | WG2055733 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/08/2023 01:35 | WG2055733 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/08/2023 01:35 | WG2055733 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/08/2023 01:35 | WG2055733 |
| (S) Toluene-d8 | 107 | | | 80.0-120 | | 05/08/2023 01:35 | WG2055733 |
| (S) 4-Bromofluorobenzene | 85.8 | | | 77.0-126 | | 05/08/2023 01:35 | WG2055733 |
| (S) 1,2-Dichloroethane-d4 | 103 | | | 70.0-130 | | 05/08/2023 01:35 | WG2055733 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 536 | | 10.0 | 1 | 05/08/2023 12:31 | WG2055883 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 9.04 | | 0.379 | 1.00 | 1 | 05/09/2023 22:17 | WG2056748 |
| Sulfate | 140 | | 0.594 | 5.00 | 1 | 05/09/2023 22:17 | WG2056748 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/08/2023 01:57 | WG2055733 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/08/2023 01:57 | WG2055733 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/08/2023 01:57 | WG2055733 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/08/2023 01:57 | WG2055733 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/08/2023 01:57 | WG2055733 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/08/2023 01:57 | WG2055733 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/08/2023 01:57 | WG2055733 |
| (S) Toluene-d8 | 110 | | | 80.0-120 | | 05/08/2023 01:57 | WG2055733 |
| (S) 4-Bromofluorobenzene | 96.1 | | | 77.0-126 | | 05/08/2023 01:57 | WG2055733 |
| (S) 1,2-Dichloroethane-d4 | 108 | | | 70.0-130 | | 05/08/2023 01:57 | WG2055733 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 544 | | 10.0 | 1 | 05/08/2023 12:31 | WG2055883 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 8.97 | | 0.379 | 1.00 | 1 | 05/09/2023 22:45 | WG2056748 |
| Sulfate | 140 | | 0.594 | 5.00 | 1 | 05/09/2023 22:45 | WG2056748 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/08/2023 02:18 | WG2055733 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/08/2023 02:18 | WG2055733 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/08/2023 02:18 | WG2055733 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/08/2023 02:18 | WG2055733 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/08/2023 02:18 | WG2055733 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/08/2023 02:18 | WG2055733 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/08/2023 02:18 | WG2055733 |
| (S) Toluene-d8 | 112 | | | 80.0-120 | | 05/08/2023 02:18 | WG2055733 |
| (S) 4-Bromofluorobenzene | 92.7 | | | 77.0-126 | | 05/08/2023 02:18 | WG2055733 |
| (S) 1,2-Dichloroethane-d4 | 108 | | | 70.0-130 | | 05/08/2023 02:18 | WG2055733 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3922876-1 05/08/23 12:31

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | <div></div> | 10.0 | 10.0 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1611880-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1611880-03 05/08/23 12:31 • (DUP) R3922876-3 05/08/23 12:31

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 455 | 483 | 1 | 5.97 | <div></div> | 5 |

L1613445-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1613445-01 05/08/23 12:31 • (DUP) R3922876-4 05/08/23 12:31

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 545 | 550 | 1 | 0.913 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3922876-2 05/08/23 12:31

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8650 | 98.3 | 77.3-123 | |

Method Blank (MB)

(MB) R3923003-1 05/09/23 11:10

| | MB Result | <u>MB Qualifier</u> | MB MDL | MB RDL |
|----------|-----------|---------------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1612034-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1612034-02 05/09/23 15:57 • (DUP) R3923003-3 05/09/23 16:11

| | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 13.9 | 14.0 | 1 | 0.0903 | | 15 |
| Sulfate | 24.5 | 24.6 | 1 | 0.421 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3923003-2 05/09/23 11:23

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | <u>LCS Qualifier</u> |
|----------|--------------|------------|----------|-------------|----------------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 37.9 | 94.7 | 80.0-120 | |
| Sulfate | 40.0 | 36.5 | 91.3 | 80.0-120 | |

L1612034-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1612034-02 05/09/23 15:57 • (MS) R3923003-4 05/09/23 16:24 • (MSD) R3923003-5 05/09/23 16:38

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|---------------------|----------------------|--------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 13.9 | 62.8 | 62.9 | 97.6 | 97.9 | 1 | 80.0-120 | | | 0.253 | 15 |
| Sulfate | 50.0 | 24.5 | 71.4 | 71.4 | 93.9 | 93.9 | 1 | 80.0-120 | | | 0.0282 | 15 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3922968-2 05/07/23 16:28

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 107 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 94.3 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 105 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R3922968-1 05/07/23 15:45

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|----------------------|--------------------|---------------|------------------|---------------|
| Benzene | 0.00500 | 0.00428 | 85.6 | 70.0-123 | |
| Toluene | 0.00500 | 0.00442 | 88.4 | 79.0-120 | |
| Ethylbenzene | 0.00500 | 0.00451 | 90.2 | 79.0-123 | |
| Xylenes, Total | 0.0150 | 0.0127 | 84.7 | 79.0-123 | |
| Naphthalene | 0.00500 | 0.00410 | 82.0 | 54.0-135 | |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00451 | 90.2 | 76.0-121 | |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00466 | 93.2 | 76.0-122 | |
| (S) Toluene-d8 | | | 112 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 97.1 | 77.0-126 | |
| (S) 1,2-Dichloroethane-d4 | | | 102 | 70.0-130 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |
| Qualifier | Description |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

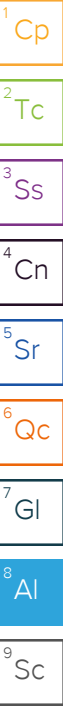
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

[illegible]

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

| | |
|--|-------------------------------|
| Email To: brollins@caerusoilandgas.com | |
| City/State Collected: Piceance Crk, CO | Please Call PT <u>MT</u> C |

Lab Project #
CAERUSPO - KLEIN

| | |
|--|--------|
| | P.O. # |
|--|--------|

| | |
|----------------|---------------------|
| Notified) | Quote # |
| Day | Date Results Needed |
| (Rad Only) | Standard TAT |
| Day (Rad Only) | |

Acctnum:
Template:
Prelogin:
PM:
PB:

| | |
|---------|---------------------|
| Remarks | Sample # (lab only) |
|---------|---------------------|

| | | |
|-----------|----------|--------------------------|
| * Matrix: | Remarks: | Sample Receipt Checklist |
|-----------|----------|--------------------------|

Remarks:

Samples returned via:
☐ UPS ☐ FedEx ☐ Courier ☐

| <u>Sample Receipt Checklist</u> | | | |
|---------------------------------|-----------|----------|----------|
| COC Seal Present/Intact: | <u>NP</u> | <u>Y</u> | <u>N</u> |
| COC Signed/Accurate: | | <u>X</u> | <u>N</u> |
| Bottles arrive intact: | | <u>X</u> | <u>N</u> |
| Correct bottles used: | | <u>X</u> | <u>N</u> |
| Sufficient volume sent: | | <u>Y</u> | <u>N</u> |
| <u>If Applicable</u> | | | |
| VOA Zero Headspace: | | <u>X</u> | <u>N</u> |

| | |
|-------|----------|
| Date: | 5/5/2023 |
| Date: | 5/5/23 |
| Date: | |

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

| | |
|---|------------------------|
| Preservation Correct/Checked: <u>Y</u> <u>N</u> | |
| RAD Screen <0.5 mR/hr: <u>Y</u> <u>N</u> | |
| If preservation required by Login: Date/Time | |
| Hold: | Condition: NCF / OK |

July 26, 2023

Revised Report

Caerus Oil and Gas

Sample Delivery Group: L1614002
Samples Received: 05/09/2023
Project Number: 20234315.001A
Description: Love Ranch 8 Liquid Line Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr


⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Entire Report Reviewed By:



Chris Ward
Project Manager

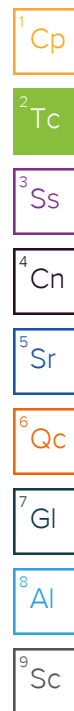
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230508-LOVE RANCH 8-(ST-PC-UG02) L1614002-01 GW

Collected by
Tristian Schmalz

Collected date/time
05/08/23 11:14

Received date/time
05/09/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2057099 | 1 | 05/10/23 06:33 | 05/10/23 11:46 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2058094 | 1 | 05/11/23 15:24 | 05/11/23 15:24 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2057042 | 1 | 05/10/23 01:19 | 05/10/23 01:19 | JAH | Mt. Juliet, TN |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20230508-LOVE RANCH 8-(ST-PC-POR) L1614002-02 GW

Collected by
Tristian Schmalz

Collected date/time
05/08/23 11:20

Received date/time
05/09/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2057099 | 1 | 05/10/23 06:33 | 05/10/23 11:46 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2059244 | 1 | 05/13/23 03:06 | 05/13/23 03:06 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2057042 | 1 | 05/10/23 01:40 | 05/10/23 01:40 | JAH | Mt. Juliet, TN |

20230508-LOVE RANCH 8-(ST-PC-DG14) L1614002-03 GW

Collected by
Tristian Schmalz

Collected date/time
05/08/23 11:26

Received date/time
05/09/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2057099 | 1 | 05/10/23 06:33 | 05/10/23 11:46 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2058094 | 1 | 05/11/23 16:47 | 05/11/23 16:47 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2057042 | 1 | 05/10/23 02:00 | 05/10/23 02:00 | JAH | Mt. Juliet, TN |

20230508-LOVE RANCH 8-(ST-PC-DG13) L1614002-04 GW

Collected by
Tristian Schmalz

Collected date/time
05/08/23 11:33

Received date/time
05/09/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2057099 | 1 | 05/10/23 06:33 | 05/10/23 11:46 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2058094 | 1 | 05/11/23 17:14 | 05/11/23 17:14 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2057042 | 1 | 05/10/23 02:20 | 05/10/23 02:20 | JAH | Mt. Juliet, TN |

20230508-LOVE RANCH 8-(ST-PC-DG12) L1614002-05 GW

Collected by
Tristian Schmalz

Collected date/time
05/08/23 11:38

Received date/time
05/09/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2057099 | 1 | 05/10/23 06:33 | 05/10/23 11:46 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2058094 | 1 | 05/11/23 17:42 | 05/11/23 17:42 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2057042 | 1 | 05/10/23 02:41 | 05/10/23 02:41 | JAH | Mt. Juliet, TN |

20230508-LOVE RANCH 8-(ST-PC-DG11) L1614002-06 GW

Collected by
Tristian Schmalz

Collected date/time
05/08/23 11:45

Received date/time
05/09/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2057099 | 1 | 05/10/23 06:33 | 05/10/23 11:46 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2058094 | 1 | 05/11/23 18:08 | 05/11/23 18:08 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2057042 | 1 | 05/10/23 03:01 | 05/10/23 03:01 | JAH | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



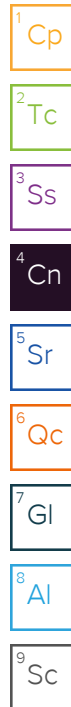
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 05/15/23 12:37

Project Narrative

Report reissued 7/26 for updated sample ID



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 586 | | 10.0 | 1 | 05/10/2023 11:46 | WG2057099 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 9.75 | | 0.379 | 1.00 | 1 | 05/11/2023 15:24 | WG2058094 |
| Sulfate | 169 | | 0.594 | 5.00 | 1 | 05/11/2023 15:24 | WG2058094 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/10/2023 01:19 | WG2057042 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/10/2023 01:19 | WG2057042 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/10/2023 01:19 | WG2057042 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/10/2023 01:19 | WG2057042 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/10/2023 01:19 | WG2057042 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/10/2023 01:19 | WG2057042 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/10/2023 01:19 | WG2057042 |
| (S) Toluene-d8 | 104 | | | 80.0-120 | | 05/10/2023 01:19 | WG2057042 |
| (S) 4-Bromofluorobenzene | 101 | | | 77.0-126 | | 05/10/2023 01:19 | WG2057042 |
| (S) 1,2-Dichloroethane-d4 | 118 | | | 70.0-130 | | 05/10/2023 01:19 | WG2057042 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 575 | | 10.0 | 1 | 05/10/2023 11:46 | WG2057099 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 9.91 | | 0.379 | 1.00 | 1 | 05/13/2023 03:06 | WG2059244 |
| Sulfate | 164 | | 0.594 | 5.00 | 1 | 05/13/2023 03:06 | WG2059244 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000201 | J | 0.0000941 | 0.00100 | 1 | 05/10/2023 01:40 | WG2057042 |
| Toluene | 0.000754 | J | 0.000278 | 0.00100 | 1 | 05/10/2023 01:40 | WG2057042 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/10/2023 01:40 | WG2057042 |
| Xylenes, Total | 0.000825 | J | 0.000174 | 0.00300 | 1 | 05/10/2023 01:40 | WG2057042 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/10/2023 01:40 | WG2057042 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/10/2023 01:40 | WG2057042 |
| 1,3,5-Trimethylbenzene | 0.000110 | J | 0.000104 | 0.00100 | 1 | 05/10/2023 01:40 | WG2057042 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 05/10/2023 01:40 | WG2057042 |
| (S) 4-Bromofluorobenzene | 98.4 | | | 77.0-126 | | 05/10/2023 01:40 | WG2057042 |
| (S) 1,2-Dichloroethane-d4 | 115 | | | 70.0-130 | | 05/10/2023 01:40 | WG2057042 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 584 | | 10.0 | 1 | 05/10/2023 11:46 | WG2057099 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 10.3 | | 0.379 | 1.00 | 1 | 05/11/2023 16:47 | WG2058094 |
| Sulfate | 172 | | 0.594 | 5.00 | 1 | 05/11/2023 16:47 | WG2058094 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/10/2023 02:00 | WG2057042 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/10/2023 02:00 | WG2057042 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/10/2023 02:00 | WG2057042 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/10/2023 02:00 | WG2057042 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/10/2023 02:00 | WG2057042 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/10/2023 02:00 | WG2057042 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/10/2023 02:00 | WG2057042 |
| (S) Toluene-d8 | 103 | | | 80.0-120 | | 05/10/2023 02:00 | WG2057042 |
| (S) 4-Bromofluorobenzene | 100 | | | 77.0-126 | | 05/10/2023 02:00 | WG2057042 |
| (S) 1,2-Dichloroethane-d4 | 115 | | | 70.0-130 | | 05/10/2023 02:00 | WG2057042 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 591 | | 10.0 | 1 | 05/10/2023 11:46 | WG2057099 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 10.2 | | 0.379 | 1.00 | 1 | 05/11/2023 17:14 | WG2058094 |
| Sulfate | 173 | | 0.594 | 5.00 | 1 | 05/11/2023 17:14 | WG2058094 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/10/2023 02:20 | WG2057042 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/10/2023 02:20 | WG2057042 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/10/2023 02:20 | WG2057042 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/10/2023 02:20 | WG2057042 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/10/2023 02:20 | WG2057042 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/10/2023 02:20 | WG2057042 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/10/2023 02:20 | WG2057042 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 05/10/2023 02:20 | WG2057042 |
| (S) 4-Bromofluorobenzene | 97.8 | | | 77.0-126 | | 05/10/2023 02:20 | WG2057042 |
| (S) 1,2-Dichloroethane-d4 | 118 | | | 70.0-130 | | 05/10/2023 02:20 | WG2057042 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 588 | | 10.0 | 1 | 05/10/2023 11:46 | WG2057099 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 9.86 | | 0.379 | 1.00 | 1 | 05/11/2023 17:42 | WG2058094 |
| Sulfate | 170 | | 0.594 | 5.00 | 1 | 05/11/2023 17:42 | WG2058094 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/10/2023 02:41 | WG2057042 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/10/2023 02:41 | WG2057042 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/10/2023 02:41 | WG2057042 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/10/2023 02:41 | WG2057042 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/10/2023 02:41 | WG2057042 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/10/2023 02:41 | WG2057042 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/10/2023 02:41 | WG2057042 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 05/10/2023 02:41 | WG2057042 |
| (S) 4-Bromofluorobenzene | 97.0 | | | 77.0-126 | | 05/10/2023 02:41 | WG2057042 |
| (S) 1,2-Dichloroethane-d4 | 120 | | | 70.0-130 | | 05/10/2023 02:41 | WG2057042 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 580 | | 10.0 | 1 | 05/10/2023 11:46 | WG2057099 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 9.97 | | 0.379 | 1.00 | 1 | 05/11/2023 18:08 | WG2058094 |
| Sulfate | 172 | | 0.594 | 5.00 | 1 | 05/11/2023 18:08 | WG2058094 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/10/2023 03:01 | WG2057042 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/10/2023 03:01 | WG2057042 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/10/2023 03:01 | WG2057042 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/10/2023 03:01 | WG2057042 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/10/2023 03:01 | WG2057042 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/10/2023 03:01 | WG2057042 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/10/2023 03:01 | WG2057042 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 05/10/2023 03:01 | WG2057042 |
| (S) 4-Bromofluorobenzene | 98.4 | | | 77.0-126 | | 05/10/2023 03:01 | WG2057042 |
| (S) 1,2-Dichloroethane-d4 | 117 | | | 70.0-130 | | 05/10/2023 03:01 | WG2057042 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3923755-1 05/10/23 11:46

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1612936-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1612936-01 05/10/23 11:46 • (DUP) R3923755-3 05/10/23 11:46

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 604 | 632 | 1 | 4.53 | | 5 |

L1614002-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1614002-01 05/10/23 11:46 • (DUP) R3923755-4 05/10/23 11:46

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 586 | 604 | 1 | 3.03 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3923755-2 05/10/23 11:46

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8490 | 96.5 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3924232-1 05/11/23 09:59

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1612443-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1612443-01 05/11/23 11:48 • (DUP) R3924232-3 05/11/23 12:01

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 41.2 | 43.0 | 1 | 4.27 | | 15 |
| Sulfate | 8.68 | 9.12 | 1 | 4.93 | | 15 |

L1612564-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1612564-02 05/11/23 19:31 • (DUP) R3924232-6 05/11/23 19:44

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 2.22 | 2.04 | 1 | 8.35 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3924232-2 05/11/23 10:13

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 39.5 | 98.8 | 80.0-120 | |
| Sulfate | 40.0 | 38.0 | 95.0 | 80.0-120 | |

L1612443-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1612443-01 05/11/23 11:48 • (MS) R3924232-4 05/11/23 12:15 • (MSD) R3924232-5 05/11/23 12:28

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 41.2 | 89.2 | 88.6 | 96.0 | 94.9 | 1 | 80.0-120 | | | 0.637 | 15 |
| Sulfate | 50.0 | 8.68 | 57.5 | 57.2 | 97.6 | 97.1 | 1 | 80.0-120 | | | 0.439 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1612564-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1612564-02 05/11/23 19:31 • (MS) R3924232-7 05/11/23 19:58

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 2.22 | 50.3 | 96.1 | 1 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3924510-1 05/12/23 20:35

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1615692-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1615692-10 05/12/23 23:51 • (DUP) R3924510-3 05/13/23 00:04

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| | mg/l | mg/l | | % | | % |
| Chloride | 8.88 | 8.92 | 1 | 0.425 | | 15 |
| Sulfate | 329 | 330 | 1 | 0.263 | E | 15 |

L1613973-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1613973-02 05/13/23 02:15 • (DUP) R3924510-5 05/13/23 02:28

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| | mg/l | mg/l | | % | | % |
| Chloride | 5.37 | 5.34 | 1 | 0.495 | | 15 |
| Sulfate | 20.0 | 20.0 | 1 | 0.0819 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3924510-2 05/12/23 20:48

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 38.0 | 94.9 | 80.0-120 | |
| Sulfate | 40.0 | 38.1 | 95.4 | 80.0-120 | |

L1615692-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1615692-10 05/12/23 23:51 • (MS) R3924510-4 05/13/23 00:17

| Analyte | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|----------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| | mg/l | mg/l | mg/l | % | | % | |
| Chloride | 50.0 | 8.88 | 57.3 | 96.9 | 1 | 80.0-120 | |
| Sulfate | 50.0 | 329 | 362 | 65.0 | 1 | 80.0-120 | E V |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1613973-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1613973-02 05/13/23 02:15 • (MS) R3924510-6 05/13/23 02:41 • (MSD) R3924510-7 05/13/23 02:54

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Chloride | 50.0 | 5.37 | 52.9 | 55.1 | 95.1 | 99.5 | 1 | 80.0-120 | | | 4.05 | 15 |
| Sulfate | 50.0 | 20.0 | 65.4 | 67.5 | 90.8 | 95.0 | 1 | 80.0-120 | | | 3.12 | 15 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3924038-3 05/09/23 23:51

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 102 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 99.1 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 117 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3924038-1 05/09/23 22:50 • (LCSD) R3924038-2 05/09/23 23:10

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00515 | 0.00500 | 103 | 100 | 70.0-123 | | | 2.96 | 20 |
| Toluene | 0.00500 | 0.00424 | 0.00415 | 84.8 | 83.0 | 79.0-120 | | | 2.15 | 20 |
| Ethylbenzene | 0.00500 | 0.00414 | 0.00403 | 82.8 | 80.6 | 79.0-123 | | | 2.69 | 20 |
| Xylenes, Total | 0.0150 | 0.0120 | 0.0119 | 80.0 | 79.3 | 79.0-123 | | | 0.837 | 20 |
| Naphthalene | 0.00500 | 0.00345 | 0.00371 | 69.0 | 74.2 | 54.0-135 | | | 7.26 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00397 | 0.00386 | 79.4 | 77.2 | 76.0-121 | | | 2.81 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00403 | 0.00401 | 80.6 | 80.2 | 76.0-122 | | | 0.498 | 20 |
| (S) Toluene-d8 | | | | 99.0 | 102 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 101 | 103 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 117 | 120 | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

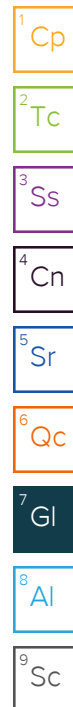
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

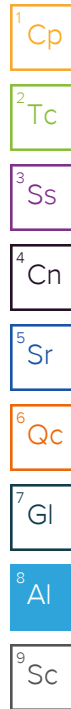
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



SDG # L164002

Table # B066

Acctnum

Template:

Prelogin:

PM:

PB:

Shipped Via:

Remarks Sample # (lab only)

Report to:

Blair Rollins

Email To:

brollins@caerusoilandgas.com

Project Description:

City/State

Collected: Piceance Crk, CO

Please Circle:

PT MT CT ET

Phone: (970) 640-6919

Client Project #

Lab Project #

2023435.001A

CAERUSPCO - KIEIN

Collected by (print):

Tristan Schmalz

Site/Facility ID #

LOVE RANCH 8

P.O. #

Collected by (signature):

Tristan Schmalz

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Quote #

Date Results Needed

Standard TAT

No.
of
Cntrs

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

20230508 - LOVE RANCH 8 - (ST-PC-L1602) Gmb

OT

—

5/8/2023

11:14

5

X

20230508 - LOVE RANCH 8 - (ST-PC-L1602) PPA

—

—

11:20

5

X

20230508 - LOVE RANCH 8 - (ST-PC-L1602) DGM

—

—

11:26

5

X

20230508 - LOVE RANCH 8 - (ST-PC-L1602) DMB

—

—

11:33

5

X

20230508 - LOVE RANCH 8 - (ST-PC-L1602) DMB

—

—

11:38

5

X

20230508 - LOVE RANCH 8 - (ST-PC-L1602) DMB

—

—

11:45

5

X

* Matrix:

SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other SURFACE WATER

Remarks:

Samples returned via:

UPS FedEx Courier

pH Temp

Flow Other

Tracking # 6126 6937 5 732

Relinquished by : (Signature)

Tristan Schmalz

Date:

5/8/2023

Time:

15:15

Received by: (Signature)

Tristan Schmalz

Trip Blank Received: Yes / No

HCL / MeOH
TBR

Relinquished by : (Signature)

Tristan Schmalz

Date:

5/8/23

Time:

1600

Received by: (Signature)

Tristan Schmalz

Temp: 14.7C Bottles Received:

4.3/024.3 29

Relinquished by : (Signature)

Tristan Schmalz

Date:

5/8/23

Time:

1:30

Received for lab by: (Signature)

Tristan Schmalz

Date: 5/8/23 Time: 1:30

Hold:

Condition:

NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

If preservation required by Login: Date/Time

Caerus Oil and Gas

Sample Delivery Group: L1614008
Samples Received: 05/09/2023
Project Number: 20234315.001A
Description: Love Ranch 8 Liquid Line Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230508-LOVE RANCH 8-(ST-PC-MOI01) L1614008-01 GW

Collected by
Tristian Schmalz

Collected date/time
05/08/23 12:14

Received date/time
05/09/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|--------------------------|-----------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2059350 | 1 | 05/13/23 06:50 | 05/13/23 08:00 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2058094 | 1 | 05/11/23 19:03 | 05/11/23 19:03 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2058938 | 25 | 05/12/23 21:34 | 05/12/23 21:34 | AV | Mt. Juliet, TN |

¹Cp ${}^2\text{Tc}$ 3S_1 ${}^4\text{Cn}$ ${}^5\text{Sr}$ ${}^6\text{Qc}$ ${}^7\text{Gf}$ ${}^8\text{Al}$ ${}^9\text{Sc}$

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



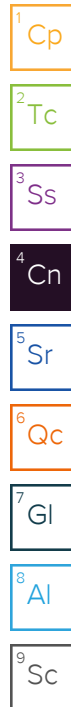
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 05/16/23 10:57

Project Narrative

Report reissued 7/26 for MDL/RDL reporting



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | | date / time | |
| Dissolved Solids | 597 | | 10.0 | 1 | 05/13/2023 08:00 | WG2059350 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|-------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Chloride | 10.9 | | 0.379 | 1.00 | 1 | 05/11/2023 19:03 | WG2058094 |
| Sulfate | 174 | | 0.594 | 5.00 | 1 | 05/11/2023 19:03 | WG2058094 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------------------------|---------|-----------|---------|----------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Benzene | 0.934 | | 0.00235 | 0.0250 | 25 | 05/12/2023 21:34 | WG2058938 |
| Toluene | 0.836 | | 0.00695 | 0.0250 | 25 | 05/12/2023 21:34 | WG2058938 |
| Ethylbenzene | 0.0736 | | 0.00343 | 0.0250 | 25 | 05/12/2023 21:34 | WG2058938 |
| Xylenes, Total | 0.254 | | 0.00435 | 0.0750 | 25 | 05/12/2023 21:34 | WG2058938 |
| Naphthalene | U | | 0.0250 | 0.125 | 25 | 05/12/2023 21:34 | WG2058938 |
| 1,2,4-Trimethylbenzene | 0.0254 | | 0.00805 | 0.0250 | 25 | 05/12/2023 21:34 | WG2058938 |
| 1,3,5-Trimethylbenzene | 0.00636 | J | 0.00260 | 0.0250 | 25 | 05/12/2023 21:34 | WG2058938 |
| (S) Toluene-d8 | 103 | | | 80.0-120 | | 05/12/2023 21:34 | WG2058938 |
| (S) 4-Bromofluorobenzene | 98.6 | | | 77.0-126 | | 05/12/2023 21:34 | WG2058938 |
| (S) 1,2-Dichloroethane-d4 | 107 | | | 70.0-130 | | 05/12/2023 21:34 | WG2058938 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3925099-1 05/13/23 08:00

| | MB Result | <u>MB Qualifier</u> | MB MDL | MB RDL |
|------------------|-----------|---------------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1614008-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1614008-01 05/13/23 08:00 • (DUP) R3925099-3 05/13/23 08:00

| | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 597 | 618 | 1 | 3.46 | | 5 |

L1614260-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1614260-01 05/13/23 08:00 • (DUP) R3925099-4 05/13/23 08:00

| | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 600 | 618 | 1 | 2.96 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3925099-2 05/13/23 08:00

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | <u>LCS Qualifier</u> |
|------------------|--------------|------------|----------|-------------|----------------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 7800 | 88.6 | 77.3-123 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3924232-1 05/11/23 09:59

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1612443-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1612443-01 05/11/23 11:48 • (DUP) R3924232-3 05/11/23 12:01

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 41.2 | 43.0 | 1 | 4.27 | | 15 |
| Sulfate | 8.68 | 9.12 | 1 | 4.93 | | 15 |

L1612564-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1612564-02 05/11/23 19:31 • (DUP) R3924232-6 05/11/23 19:44

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 2.22 | 2.04 | 1 | 8.35 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3924232-2 05/11/23 10:13

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 39.5 | 98.8 | 80.0-120 | |
| Sulfate | 40.0 | 38.0 | 95.0 | 80.0-120 | |

L1612443-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1612443-01 05/11/23 11:48 • (MS) R3924232-4 05/11/23 12:15 • (MSD) R3924232-5 05/11/23 12:28

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 41.2 | 89.2 | 88.6 | 96.0 | 94.9 | 1 | 80.0-120 | | | 0.637 | 15 |
| Sulfate | 50.0 | 8.68 | 57.5 | 57.2 | 97.6 | 97.1 | 1 | 80.0-120 | | | 0.439 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1612564-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1612564-02 05/11/23 19:31 • (MS) R3924232-7 05/11/23 19:58

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 2.22 | 50.3 | 96.1 | 1 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3924464-3 05/12/23 13:13

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 105 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 99.7 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 105 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3924464-1 05/12/23 11:27 • (LCSD) R3924464-2 05/12/23 11:48

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00512 | 0.00469 | 102 | 93.8 | 70.0-123 | | | 8.77 | 20 |
| Toluene | 0.00500 | 0.00472 | 0.00438 | 94.4 | 87.6 | 79.0-120 | | | 7.47 | 20 |
| Ethylbenzene | 0.00500 | 0.00462 | 0.00416 | 92.4 | 83.2 | 79.0-123 | | | 10.5 | 20 |
| Xylenes, Total | 0.0150 | 0.0138 | 0.0125 | 92.0 | 83.3 | 79.0-123 | | | 9.89 | 20 |
| Naphthalene | 0.00500 | 0.00294 | 0.00313 | 58.8 | 62.6 | 54.0-135 | | | 6.26 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00414 | 0.00394 | 82.8 | 78.8 | 76.0-121 | | | 4.95 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00426 | 0.00399 | 85.2 | 79.8 | 76.0-122 | | | 6.55 | 20 |
| (S) Toluene-d8 | | | | 99.8 | 99.4 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 97.0 | 96.7 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 106 | 106 | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|---|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
|---|---|

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

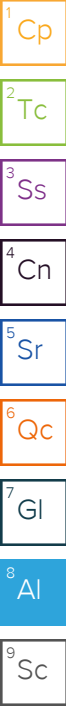
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



Report to:
Blair Rollins

Email To:
brollins@caerusoilandgas.com

Project Description:
Love Ranch 8 Liquid Line Investigation

City/State Collected: Piceance Crk, CO
Please Circle: PT MT CT ET

Phone: (970) 640-6919

Client Project #
20234315.001A

Lab Project #

Collected by (print):
Tristan Schmalz

Site/Facility ID #
Love Ranch 8

P.O. #

Collected by (signature):
Tristan Schmalz

Rush? (Lab MUST Be Notified)

Quote #

☐ Same Day ☐ Five Day
☐ Next Day ☐ 5 Day (Rad Only)
☐ Two Day ☐ 10 Day (Rad Only)
☒ Three Day

Date Results Needed

Standard TAT

Immediately
Packed on Ice N ☐ Y ☒

No.
of
Cntrs

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

COGCC Table 915-1 Water

EC, pH, SAR

Arsenic, Boron

COGCC Table 910-1

SDG #

L1614008
B067

Table

Acct

Template:

Prelogin:

PM:

PB:

Shipped Via:

Remarks

Sample # (lab only)

20230508-LOVE RANCH 8 (ST-PC-MTDI) Grab

OT

5/18/2023

12:14

5

X

-01

Tristan Schmalz

* Matrix:

SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other **Surface water**

Remarks:

Samples returned via:

☐ UPS ☐ FedEx ☐ Courier

Tracking #

6126 6527 4732

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: ☐ NP ☒ Y ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
If Applicable
VOA Zero Headspace: ☐ Y ☒ N
Preservation Correct/Checked: ☐ Y ☒ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

Relinquished by: (Signature)

Tristan Schmalz

Date:

5/18/2023

Time:

15:15

Received by: (Signature)

[Signature]

Trip Blank Received: Yes ☒ No ☐
HCL / MeOH
TBR

Temp: **NSA 7°C** Bottles Received: **4.3 10.3 4.3 9**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

[Signature]

Date: **5.18.23** Time: **2:10**

Hold: Condition: NCF / **OK**

Caerus Oil and Gas

Sample Delivery Group: L1616578
Samples Received: 05/16/2023
Project Number: 20234315.001A
Description: Love Ranch 8 Liquid Line Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

20230515-LOVE RANCH 8-(ST-PC-UG02) L1616578-01 GW

Collected by
Tristan Schmalz

Collected date/time
05/15/23 00:00

Received date/time
05/16/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2061051 | 1 | 05/16/23 22:47 | 05/16/23 23:55 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 1 | 05/18/23 20:16 | 05/18/23 20:16 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 5 | 05/18/23 20:30 | 05/18/23 20:30 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2062737 | 1 | 05/19/23 09:20 | 05/19/23 09:20 | MGF | Mt. Juliet, TN |

20230515-LOVE RANCH 8-(ST-PC-MOI01) L1616578-02 GW

Collected by
Tristan Schmalz

Collected date/time
05/15/23 00:00

Received date/time
05/16/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2061054 | 1 | 05/17/23 08:19 | 05/17/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 1 | 05/18/23 20:44 | 05/18/23 20:44 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 5 | 05/18/23 20:57 | 05/18/23 20:57 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2063078 | 5 | 05/19/23 14:34 | 05/19/23 14:34 | MGF | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2063381 | 5 | 05/20/23 02:52 | 05/20/23 02:52 | DWR | Mt. Juliet, TN |

20230515-LOVE RANCH 8-(ST-PC-POR) L1616578-03 GW

Collected by
Tristan Schmalz

Collected date/time
05/15/23 00:00

Received date/time
05/16/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2061054 | 1 | 05/17/23 08:19 | 05/17/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 1 | 05/18/23 21:38 | 05/18/23 21:38 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 5 | 05/18/23 21:52 | 05/18/23 21:52 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2062737 | 1 | 05/19/23 04:01 | 05/19/23 04:01 | MGF | Mt. Juliet, TN |

20230515-LOVE RANCH 8-(ST-PC-DG14) L1616578-04 GW

Collected by
Tristan Schmalz

Collected date/time
05/15/23 00:00

Received date/time
05/16/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2061054 | 1 | 05/17/23 08:19 | 05/17/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 1 | 05/18/23 22:04 | 05/18/23 22:04 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 5 | 05/18/23 22:17 | 05/18/23 22:17 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2062737 | 1 | 05/19/23 04:22 | 05/19/23 04:22 | MGF | Mt. Juliet, TN |

20230515-LOVE RANCH 8-(ST-PC-DG13) L1616578-05 GW

Collected by
Tristan Schmalz

Collected date/time
05/15/23 00:00

Received date/time
05/16/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2061054 | 1 | 05/17/23 08:19 | 05/17/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 1 | 05/18/23 22:30 | 05/18/23 22:30 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 5 | 05/18/23 22:43 | 05/18/23 22:43 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2062737 | 1 | 05/19/23 04:44 | 05/19/23 04:44 | MGF | Mt. Juliet, TN |

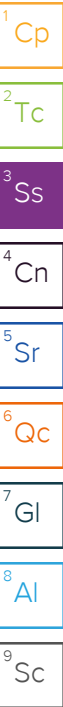
20230515-LOVE RANCH 8-(ST-PC-DG12) L1616578-06 GW

Collected by
Tristan Schmalz

Collected date/time
05/15/23 00:00

Received date/time
05/16/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2061054 | 1 | 05/17/23 08:19 | 05/17/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 1 | 05/18/23 22:56 | 05/18/23 22:56 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 5 | 05/18/23 23:09 | 05/18/23 23:09 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2062737 | 1 | 05/19/23 05:05 | 05/19/23 05:05 | MGF | Mt. Juliet, TN |



SAMPLE SUMMARY

20230515-LOVE RANCH 8-(ST-PC-DG11) L1616578-07 GW

Collected by
Tristan Schmalz

Collected date/time
05/15/23 00:00

Received date/time
05/16/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|--------------------------|-----------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2061054 | 1 | 05/17/23 08:19 | 05/17/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 1 | 05/18/23 23:22 | 05/18/23 23:22 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2062318 | 5 | 05/18/23 23:34 | 05/18/23 23:34 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2062737 | 1 | 05/19/23 05:26 | 05/19/23 05:26 | MGF | Mt. Juliet, TN |

¹Cp ${}^2\text{Tc}$ 3S_1 ${}^4\text{Cn}$ ${}^5\text{Sr}$ ${}^6\text{Qc}$ ${}^7\text{Gf}$ ${}^8\text{Al}$ ${}^9\text{Sc}$

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



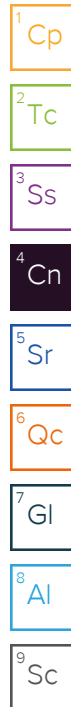
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 05/22/23 11:47

Project Narrative

Report reissued 7/26 for MDL/RDL reporting



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 4960 | | 100 | 1 | 05/16/2023 23:55 | WG2061051 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 10.8 | | 0.379 | 1.00 | 1 | 05/18/2023 20:16 | WG2062318 |
| Sulfate | 198 | | 2.97 | 25.0 | 5 | 05/18/2023 20:30 | WG2062318 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 05/19/2023 09:20 | WG2062737 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 05/19/2023 09:20 | WG2062737 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/19/2023 09:20 | WG2062737 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/19/2023 09:20 | WG2062737 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/19/2023 09:20 | WG2062737 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/19/2023 09:20 | WG2062737 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/19/2023 09:20 | WG2062737 |
| (S) Toluene-d8 | 116 | | | 80.0-120 | | 05/19/2023 09:20 | WG2062737 |
| (S) 4-Bromofluorobenzene | 111 | | | 77.0-126 | | 05/19/2023 09:20 | WG2062737 |
| (S) 1,2-Dichloroethane-d4 | 118 | | | 70.0-130 | | 05/19/2023 09:20 | WG2062737 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 675 | | 13.3 | 1 | 05/17/2023 09:52 | WG2061054 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 14.1 | | 0.379 | 1.00 | 1 | 05/18/2023 20:44 | WG2062318 |
| Sulfate | 218 | | 2.97 | 25.0 | 5 | 05/18/2023 20:57 | WG2062318 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.0980 | | 0.000471 | 0.00500 | 5 | 05/19/2023 14:34 | WG2063078 |
| Toluene | 0.221 | | 0.00139 | 0.00500 | 5 | 05/19/2023 14:34 | WG2063078 |
| Ethylbenzene | 0.0131 | | 0.000685 | 0.00500 | 5 | 05/19/2023 14:34 | WG2063078 |
| Xylenes, Total | 0.221 | | 0.000870 | 0.0150 | 5 | 05/19/2023 14:34 | WG2063078 |
| Naphthalene | 0.0113 | J | 0.00500 | 0.0250 | 5 | 05/20/2023 02:52 | WG2063381 |
| 1,2,4-Trimethylbenzene | 0.0454 | | 0.00161 | 0.00500 | 5 | 05/19/2023 14:34 | WG2063078 |
| 1,3,5-Trimethylbenzene | 0.0384 | | 0.000520 | 0.00500 | 5 | 05/19/2023 14:34 | WG2063078 |
| (S) Toluene-d8 | 110 | | | 80.0-120 | | 05/19/2023 14:34 | WG2063078 |
| (S) Toluene-d8 | 108 | | | 80.0-120 | | 05/20/2023 02:52 | WG2063381 |
| (S) 4-Bromofluorobenzene | 111 | | | 77.0-126 | | 05/19/2023 14:34 | WG2063078 |
| (S) 4-Bromofluorobenzene | 98.1 | | | 77.0-126 | | 05/20/2023 02:52 | WG2063381 |
| (S) 1,2-Dichloroethane-d4 | 116 | | | 70.0-130 | | 05/19/2023 14:34 | WG2063078 |
| (S) 1,2-Dichloroethane-d4 | 114 | | | 70.0-130 | | 05/20/2023 02:52 | WG2063381 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 871 | | 13.3 | 1 | 05/17/2023 09:52 | WG2061054 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 10.8 | | 0.379 | 1.00 | 1 | 05/18/2023 21:38 | WG2062318 |
| Sulfate | 197 | | 2.97 | 25.0 | 5 | 05/18/2023 21:52 | WG2062318 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000312 | J | 0.0000941 | 0.00100 | 1 | 05/19/2023 04:01 | WG2062737 |
| Toluene | 0.00164 | | 0.000278 | 0.00100 | 1 | 05/19/2023 04:01 | WG2062737 |
| Ethylbenzene | 0.000166 | J | 0.000137 | 0.00100 | 1 | 05/19/2023 04:01 | WG2062737 |
| Xylenes, Total | 0.00268 | J | 0.000174 | 0.00300 | 1 | 05/19/2023 04:01 | WG2062737 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/19/2023 04:01 | WG2062737 |
| 1,2,4-Trimethylbenzene | 0.000430 | J | 0.000322 | 0.00100 | 1 | 05/19/2023 04:01 | WG2062737 |
| 1,3,5-Trimethylbenzene | 0.000404 | J | 0.000104 | 0.00100 | 1 | 05/19/2023 04:01 | WG2062737 |
| (S) Toluene-d8 | 117 | | | 80.0-120 | | 05/19/2023 04:01 | WG2062737 |
| (S) 4-Bromofluorobenzene | 112 | | | 77.0-126 | | 05/19/2023 04:01 | WG2062737 |
| (S) 1,2-Dichloroethane-d4 | 113 | | | 70.0-130 | | 05/19/2023 04:01 | WG2062737 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 629 | | 13.3 | 1 | 05/17/2023 09:52 | WG2061054 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 10.7 | | 0.379 | 1.00 | 1 | 05/18/2023 22:04 | WG2062318 |
| Sulfate | 198 | | 2.97 | 25.0 | 5 | 05/18/2023 22:17 | WG2062318 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000198 | J | 0.0000941 | 0.00100 | 1 | 05/19/2023 04:22 | WG2062737 |
| Toluene | 0.000547 | J | 0.000278 | 0.00100 | 1 | 05/19/2023 04:22 | WG2062737 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/19/2023 04:22 | WG2062737 |
| Xylenes, Total | 0.000289 | J | 0.000174 | 0.00300 | 1 | 05/19/2023 04:22 | WG2062737 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/19/2023 04:22 | WG2062737 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/19/2023 04:22 | WG2062737 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/19/2023 04:22 | WG2062737 |
| (S) Toluene-d8 | 115 | | | 80.0-120 | | 05/19/2023 04:22 | WG2062737 |
| (S) 4-Bromofluorobenzene | 113 | | | 77.0-126 | | 05/19/2023 04:22 | WG2062737 |
| (S) 1,2-Dichloroethane-d4 | 114 | | | 70.0-130 | | 05/19/2023 04:22 | WG2062737 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 637 | | 13.3 | 1 | 05/17/2023 09:52 | WG2061054 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 10.7 | | 0.379 | 1.00 | 1 | 05/18/2023 22:30 | WG2062318 |
| Sulfate | 196 | | 2.97 | 25.0 | 5 | 05/18/2023 22:43 | WG2062318 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000101 | J | 0.0000941 | 0.00100 | 1 | 05/19/2023 04:44 | WG2062737 |
| Toluene | 0.000349 | J | 0.000278 | 0.00100 | 1 | 05/19/2023 04:44 | WG2062737 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/19/2023 04:44 | WG2062737 |
| Xylenes, Total | 0.000851 | J | 0.000174 | 0.00300 | 1 | 05/19/2023 04:44 | WG2062737 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/19/2023 04:44 | WG2062737 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/19/2023 04:44 | WG2062737 |
| 1,3,5-Trimethylbenzene | 0.000180 | J | 0.000104 | 0.00100 | 1 | 05/19/2023 04:44 | WG2062737 |
| (S) Toluene-d8 | 115 | | | 80.0-120 | | 05/19/2023 04:44 | WG2062737 |
| (S) 4-Bromofluorobenzene | 112 | | | 77.0-126 | | 05/19/2023 04:44 | WG2062737 |
| (S) 1,2-Dichloroethane-d4 | 115 | | | 70.0-130 | | 05/19/2023 04:44 | WG2062737 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 628 | | 13.3 | 1 | 05/17/2023 09:52 | WG2061054 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 10.6 | | 0.379 | 1.00 | 1 | 05/18/2023 22:56 | WG2062318 |
| Sulfate | 199 | | 2.97 | 25.0 | 5 | 05/18/2023 23:09 | WG2062318 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000104 | J | 0.0000941 | 0.00100 | 1 | 05/19/2023 05:05 | WG2062737 |
| Toluene | 0.000309 | J | 0.000278 | 0.00100 | 1 | 05/19/2023 05:05 | WG2062737 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/19/2023 05:05 | WG2062737 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/19/2023 05:05 | WG2062737 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/19/2023 05:05 | WG2062737 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/19/2023 05:05 | WG2062737 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/19/2023 05:05 | WG2062737 |
| (S) Toluene-d8 | 114 | | | 80.0-120 | | 05/19/2023 05:05 | WG2062737 |
| (S) 4-Bromofluorobenzene | 112 | | | 77.0-126 | | 05/19/2023 05:05 | WG2062737 |
| (S) 1,2-Dichloroethane-d4 | 114 | | | 70.0-130 | | 05/19/2023 05:05 | WG2062737 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 639 | | 13.3 | 1 | 05/17/2023 09:52 | WG2061054 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 10.6 | | 0.379 | 1.00 | 1 | 05/18/2023 23:22 | WG2062318 |
| Sulfate | 198 | | 2.97 | 25.0 | 5 | 05/18/2023 23:34 | WG2062318 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000113 | J | 0.0000941 | 0.00100 | 1 | 05/19/2023 05:26 | WG2062737 |
| Toluene | 0.000298 | J | 0.000278 | 0.00100 | 1 | 05/19/2023 05:26 | WG2062737 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/19/2023 05:26 | WG2062737 |
| Xylenes, Total | 0.000204 | J | 0.000174 | 0.00300 | 1 | 05/19/2023 05:26 | WG2062737 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/19/2023 05:26 | WG2062737 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/19/2023 05:26 | WG2062737 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/19/2023 05:26 | WG2062737 |
| (S) Toluene-d8 | 114 | | | 80.0-120 | | 05/19/2023 05:26 | WG2062737 |
| (S) 4-Bromofluorobenzene | 112 | | | 77.0-126 | | 05/19/2023 05:26 | WG2062737 |
| (S) 1,2-Dichloroethane-d4 | 115 | | | 70.0-130 | | 05/19/2023 05:26 | WG2062737 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3926795-1 05/16/23 23:55

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1614910-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1614910-07 05/16/23 23:55 • (DUP) R3926795-3 05/16/23 23:55

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | ND | ND | 1 | 200 | P1 | 5 |

L1615795-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1615795-21 05/16/23 23:55 • (DUP) R3926795-4 05/16/23 23:55

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | ND | ND | 1 | 200 | P1 | 5 |

Laboratory Control Sample (LCS)

(LCS) R3926795-2 05/16/23 23:55

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 7790 | 88.5 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3926805-1 05/17/23 09:52

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | ⬇ | 10.0 | 10.0 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1615665-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1615665-01 05/17/23 09:52 • (DUP) R3926805-3 05/17/23 09:52

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 687 | 712 | 1 | 3.62 | | 5 |

L1615666-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1615666-02 05/17/23 09:52 • (DUP) R3926805-4 05/17/23 09:52

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 635 | 669 | 1 | 5.32 | ⬇3 | 5 |

Laboratory Control Sample (LCS)

(LCS) R3926805-2 05/17/23 09:52

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 7550 | 85.8 | 77.3-123 | |

Method Blank (MB)

(MB) R3926992-1 05/18/23 11:48

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1615054-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1615054-04 05/18/23 14:09 • (DUP) R3926992-6 05/18/23 14:23

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | | | % | | % |
| Chloride | 50.4 | | 1 | 0.712 | | 15 |
| Sulfate | 1820 | | 1 | 0.204 | E | 15 |

L1615551-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1615551-01 05/19/23 00:13 • (DUP) R3926992-9 05/19/23 00:26

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 5.39 | 5.49 | 1 | 1.73 | | 15 |
| Sulfate | 45.9 | 45.6 | 1 | 0.564 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3926992-2 05/18/23 12:01

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 39.6 | 98.9 | 80.0-120 | |
| Sulfate | 40.0 | 38.6 | 96.4 | 80.0-120 | |

L1615054-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1615054-04 05/18/23 14:09 • (MS) R3926992-7 05/18/23 14:36 • (MSD) R3926992-8 05/18/23 14:50

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | | 97.9 | 98.0 | 95.6 | 95.9 | 1 | 80.0-120 | | | 0.138 | 15 |
| Sulfate | 50.0 | | 1800 | 1810 | 0.000 | 0.000 | 1 | 80.0-120 | E V | E V | 0.788 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1615551-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1615551-01 05/19/23 00:13 • (MS) R3926992-10 05/19/23 00:39

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 5.39 | 56.3 | 102 | 1 | 80.0-120 | |
| Sulfate | 50.0 | 45.9 | 95.3 | 98.8 | 1 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3926867-3 05/18/23 23:34

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 116 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 114 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 112 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3926867-1 05/18/23 21:48 • (LCSD) R3926867-2 05/18/23 23:13

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00471 | 0.00510 | 94.2 | 102 | 70.0-123 | | | 7.95 | 20 |
| Toluene | 0.00500 | 0.00453 | 0.00482 | 90.6 | 96.4 | 79.0-120 | | | 6.20 | 20 |
| Ethylbenzene | 0.00500 | 0.00444 | 0.00481 | 88.8 | 96.2 | 79.0-123 | | | 8.00 | 20 |
| Xylenes, Total | 0.0150 | 0.0134 | 0.0138 | 89.3 | 92.0 | 79.0-123 | | | 2.94 | 20 |
| Naphthalene | 0.00500 | 0.00431 | 0.00414 | 86.2 | 82.8 | 54.0-135 | | | 4.02 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00458 | 0.00459 | 91.6 | 91.8 | 76.0-121 | | | 0.218 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00456 | 0.00472 | 91.2 | 94.4 | 76.0-122 | | | 3.45 | 20 |
| (S) Toluene-d8 | | | | 112 | 112 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 111 | 110 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 110 | 109 | 70.0-130 | | | | |

L1617482-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1617482-01 05/19/23 02:57 • (MS) R3926867-4 05/19/23 10:02 • (MSD) R3926867-5 05/19/23 10:23

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 0.00500 | 0.000126 | 0.00579 | 0.00560 | 113 | 109 | 1 | 17.0-158 | | | 3.34 | 27 |
| Toluene | 0.00500 | U | 0.00530 | 0.00521 | 106 | 104 | 1 | 26.0-154 | | | 1.71 | 28 |
| Ethylbenzene | 0.00500 | U | 0.00535 | 0.00527 | 107 | 105 | 1 | 30.0-155 | | | 1.51 | 27 |
| Xylenes, Total | 0.0150 | U | 0.0155 | 0.0152 | 103 | 101 | 1 | 29.0-154 | | | 1.95 | 28 |
| Naphthalene | 0.00500 | U | 0.00562 | 0.00547 | 112 | 109 | 1 | 12.0-156 | | | 2.71 | 35 |
| 1,2,4-Trimethylbenzene | 0.00500 | U | 0.00522 | 0.00511 | 104 | 102 | 1 | 26.0-154 | | | 2.13 | 27 |
| 1,3,5-Trimethylbenzene | 0.00500 | U | 0.00523 | 0.00518 | 105 | 104 | 1 | 28.0-153 | | | 0.961 | 27 |



L1617482-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1617482-01 05/19/23 02:57 • (MS) R3926867-4 05/19/23 10:02 • (MSD) R3926867-5 05/19/23 10:23

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD % | RPD Limits % |
|---------------------------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| (S) Toluene-d8 | | | | | 109 | 109 | | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 112 | 111 | | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 116 | 116 | | 70.0-130 | | | | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3927099-3 05/19/23 12:31

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 115 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 111 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 116 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R3927099-1 05/19/23 11:27

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|----------------------|--------------------|---------------|------------------|---------------|
| Benzene | 0.00500 | 0.00470 | 94.0 | 70.0-123 | |
| Toluene | 0.00500 | 0.00443 | 88.6 | 79.0-120 | |
| Ethylbenzene | 0.00500 | 0.00442 | 88.4 | 79.0-123 | |
| Xylenes, Total | 0.0150 | 0.0129 | 86.0 | 79.0-123 | |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00443 | 88.6 | 76.0-121 | |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00451 | 90.2 | 76.0-122 | |
| (S) Toluene-d8 | | | 110 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 106 | 77.0-126 | |
| (S) 1,2-Dichloroethane-d4 | | | 115 | 70.0-130 | |

1
Cp

2
Tc

3
Ss

4
Cn

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Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3927182-3 05/19/23 19:33

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Naphthalene | U | | 0.00100 | 0.00500 |
| (S) Toluene-d8 | 110 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 101 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 116 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3927182-1 05/19/23 15:55 • (LCSD) R3927182-2 05/19/23 16:14

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Naphthalene | 0.00500 | 0.00441 | 0.00440 | 88.2 | 88.0 | 54.0-135 | | | 0.227 | 20 |
| (S) Toluene-d8 | | | | 109 | 110 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 96.6 | 96.5 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 117 | 113 | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

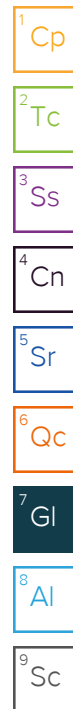
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

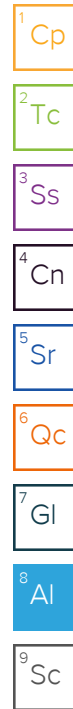
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Blair Rollins

Email To:
brollins@caerusoilandgas.com

Project Description:

City/State
Collected: Piceance Crk, CO

Please Circle:
PT MT CT ET

ONE RANCH 8 Liquid Line Release Investigation

Phone: (970) 640-6919

Client Project #

20234315.001A

Lab Project #

CAERUSCO-KLEIN

Collected by (print):

Tristan Schmalz

Site/Facility ID #

ONE RANCH 8

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
☒ Three Day

Quote #

Date Results Needed

Standard TAT

Immediately
Packed on Ice N Y ☒

No.
of
Cnts

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

COGCC Table 915-1 WATER

EC, pH, SAR

Arsenic, Boron

COGCC Table 910-1

Shipped Via:

Remarks

Sample # (lab only)

20230515 - LOVE RANCH 8 - (ST-PC-UGR) Grab

OT

5/15/2023

5

X

-01

20230515 - LOVE RANCH 8 - (ST-PC-MOT02)

5

X

-02

20230515 - LOVE RANCH 8 - (ST-PC-POR)

5

X

-03

20230515 - LOVE RANCH 8 - (ST-PC-DG14)

5

X

-04

20230515 - LOVE RANCH 8 - (ST-PC-DG13)

5

X

-05

20230515 - LOVE RANCH 8 - (ST-PC-DG12)

5

X

-06

20230515 - LOVE RANCH 8 - (ST-PC-DG11)

5

X

-07

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other SURFACE WATER

Remarks:

Samples returned via:

UPS FedEx Courier

Tracking # 6126 6537 3707

Relinquished by: (Signature)

Tristan Schmalz

Date:

5/15/2023

Time:

1430

Received by: (Signature)

[Signature]

Trip Blank Received: Yes ☒ No

HCL / MeoH
TBR

Relinquished by: (Signature)

[Signature]

Date:

5/15/23

Time:

1700

Received by: (Signature)

[Signature]

Temp: NSA 7C

Bottles Received:

1-21-2

35

If preservation required by Login: Date/Time

Relinquished by: (Signature)

[Signature]

Date:

[Signature]

Time:

[Signature]

Received for lab by: (Signature)

[Signature]

Date:

5-16-23

Time:

9:00

Hold:

Condition:

NCF OK

Sample Receipt Checklist

COC Seal Present/Intact: ☒ NP ☒ N
COC Signed/Accurate: ☒ Y ☒ N
Bottles arrive intact: ☒ Y ☒ N
Correct bottles used: ☒ Y ☒ N
Sufficient volume sent: ☒ Y ☒ N
If Applicable
VOA Zero Headspace: ☒ Y ☒ N
Preservation Correct/Checked: ☒ Y ☒ N
RAD Screen <0.5 mR/hr: ☒ Y ☒ N

Caerus Oil and Gas

Sample Delivery Group: L1619036
Samples Received: 05/23/2023
Project Number: 20234315.001A
Description: Love Ranch 8 Liquid Line Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



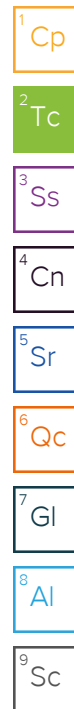
Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230522-LOVE RANCH 8-(ST-PC-UG02) L1619036-01 GW

Collected by
Tristan Schmalz

Collected date/time
05/22/23 10:05

Received date/time
05/23/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2066607 | 1 | 05/25/23 12:10 | 05/25/23 15:53 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070509 | 1 | 06/02/23 19:04 | 06/02/23 19:04 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070509 | 5 | 06/02/23 19:17 | 06/02/23 19:17 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2069499 | 1 | 06/01/23 18:45 | 06/01/23 18:45 | JBE | Mt. Juliet, TN |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20230522-LOVE RANCH 8-(ST-PC-POR) L1619036-02 GW

Collected by
Tristan Schmalz

Collected date/time
05/22/23 10:14

Received date/time
05/23/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2066607 | 1 | 05/25/23 12:10 | 05/25/23 15:53 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070509 | 1 | 06/02/23 19:31 | 06/02/23 19:31 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070509 | 5 | 06/02/23 19:44 | 06/02/23 19:44 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2068437 | 1 | 05/31/23 08:14 | 05/31/23 08:14 | AV | Mt. Juliet, TN |

20230522-LOVE RANCH 8-(ST-PC-DG14) L1619036-03 GW

Collected by
Tristan Schmalz

Collected date/time
05/22/23 10:20

Received date/time
05/23/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2066607 | 1 | 05/25/23 12:10 | 05/25/23 15:53 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070509 | 1 | 06/02/23 19:58 | 06/02/23 19:58 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070509 | 5 | 06/02/23 20:11 | 06/02/23 20:11 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2068437 | 1 | 05/31/23 08:33 | 05/31/23 08:33 | AV | Mt. Juliet, TN |

20230522-LOVE RANCH 8-(ST-PC-DG13) L1619036-04 GW

Collected by
Tristan Schmalz

Collected date/time
05/22/23 10:30

Received date/time
05/23/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2066607 | 1 | 05/25/23 12:10 | 05/25/23 15:53 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070509 | 1 | 06/02/23 20:24 | 06/02/23 20:24 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070509 | 5 | 06/02/23 20:38 | 06/02/23 20:38 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2068437 | 1 | 05/31/23 08:53 | 05/31/23 08:53 | AV | Mt. Juliet, TN |

20230522-LOVE RANCH 8-(ST-PC-DG12) L1619036-05 GW

Collected by
Tristan Schmalz

Collected date/time
05/22/23 10:37

Received date/time
05/23/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2066607 | 1 | 05/25/23 12:10 | 05/25/23 15:53 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070729 | 1 | 06/02/23 21:43 | 06/02/23 21:43 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070729 | 5 | 06/02/23 21:55 | 06/02/23 21:55 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2068437 | 1 | 05/31/23 09:12 | 05/31/23 09:12 | AV | Mt. Juliet, TN |

20230522-LOVE RANCH 8-(ST-PC-DG11) L1619036-06 GW

Collected by
Tristan Schmalz

Collected date/time
05/22/23 10:46

Received date/time
05/23/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2066607 | 1 | 05/25/23 12:10 | 05/25/23 15:53 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070729 | 1 | 06/02/23 22:08 | 06/02/23 22:08 | LBR | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2070729 | 5 | 06/02/23 22:20 | 06/02/23 22:20 | LBR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2068437 | 1 | 05/31/23 09:32 | 05/31/23 09:32 | AV | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



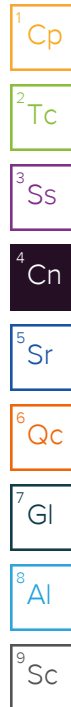
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 06/05/23 12:11

Project Narrative

Report reissued 7/26 for MDL/RDL reporting



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 729 | | 13.3 | 1 | 05/25/2023 15:53 | WG2066607 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.0 | | 0.379 | 1.00 | 1 | 06/02/2023 19:04 | WG2070509 |
| Sulfate | 249 | | 2.97 | 25.0 | 5 | 06/02/2023 19:17 | WG2070509 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 06/01/2023 18:45 | WG2069499 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 06/01/2023 18:45 | WG2069499 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/01/2023 18:45 | WG2069499 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 06/01/2023 18:45 | WG2069499 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/01/2023 18:45 | WG2069499 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/01/2023 18:45 | WG2069499 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/01/2023 18:45 | WG2069499 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 06/01/2023 18:45 | WG2069499 |
| (S) 4-Bromofluorobenzene | 101 | | | 77.0-126 | | 06/01/2023 18:45 | WG2069499 |
| (S) 1,2-Dichloroethane-d4 | 99.8 | | | 70.0-130 | | 06/01/2023 18:45 | WG2069499 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 697 | | 13.3 | 1 | 05/25/2023 15:53 | WG2066607 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.2 | | 0.379 | 1.00 | 1 | 06/02/2023 19:31 | WG2070509 |
| Sulfate | 271 | | 2.97 | 25.0 | 5 | 06/02/2023 19:44 | WG2070509 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-------------------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000242 | J | 0.0000941 | 0.00100 | 1 | 05/31/2023 08:14 | WG2068437 |
| Toluene | 0.00204 | | 0.000278 | 0.00100 | 1 | 05/31/2023 08:14 | WG2068437 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/31/2023 08:14 | WG2068437 |
| Xylenes, Total | 0.00336 | | 0.000174 | 0.00300 | 1 | 05/31/2023 08:14 | WG2068437 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/31/2023 08:14 | WG2068437 |
| 1,2,4-Trimethylbenzene | 0.000473 | J | 0.000322 | 0.00100 | 1 | 05/31/2023 08:14 | WG2068437 |
| 1,3,5-Trimethylbenzene | 0.000464 | J | 0.000104 | 0.00100 | 1 | 05/31/2023 08:14 | WG2068437 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 05/31/2023 08:14 | WG2068437 |
| (S) 4-Bromofluorobenzene | 108 | | | 77.0-126 | | 05/31/2023 08:14 | WG2068437 |
| (S) 1,2-Dichloroethane-d4 | 111 | | | 70.0-130 | | 05/31/2023 08:14 | WG2068437 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 725 | | 13.3 | 1 | 05/25/2023 15:53 | WG2066607 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 11.7 | | 0.379 | 1.00 | 1 | 06/02/2023 19:58 | WG2070509 |
| Sulfate | 250 | | 2.97 | 25.0 | 5 | 06/02/2023 20:11 | WG2070509 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000604 | J | 0.0000941 | 0.00100 | 1 | 05/31/2023 08:33 | WG2068437 |
| Toluene | 0.00105 | | 0.000278 | 0.00100 | 1 | 05/31/2023 08:33 | WG2068437 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/31/2023 08:33 | WG2068437 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/31/2023 08:33 | WG2068437 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/31/2023 08:33 | WG2068437 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/31/2023 08:33 | WG2068437 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/31/2023 08:33 | WG2068437 |
| (S) Toluene-d8 | 100 | | | 80.0-120 | | 05/31/2023 08:33 | WG2068437 |
| (S) 4-Bromofluorobenzene | 102 | | | 77.0-126 | | 05/31/2023 08:33 | WG2068437 |
| (S) 1,2-Dichloroethane-d4 | 108 | | | 70.0-130 | | 05/31/2023 08:33 | WG2068437 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 711 | | 13.3 | 1 | 05/25/2023 15:53 | WG2066607 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 11.6 | | 0.379 | 1.00 | 1 | 06/02/2023 20:24 | WG2070509 |
| Sulfate | 248 | | 2.97 | 25.0 | 5 | 06/02/2023 20:38 | WG2070509 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-------------------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000271 | J | 0.0000941 | 0.00100 | 1 | 05/31/2023 08:53 | WG2068437 |
| Toluene | 0.000537 | J | 0.000278 | 0.00100 | 1 | 05/31/2023 08:53 | WG2068437 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/31/2023 08:53 | WG2068437 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/31/2023 08:53 | WG2068437 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/31/2023 08:53 | WG2068437 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/31/2023 08:53 | WG2068437 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/31/2023 08:53 | WG2068437 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 05/31/2023 08:53 | WG2068437 |
| (S) 4-Bromofluorobenzene | 100 | | | 77.0-126 | | 05/31/2023 08:53 | WG2068437 |
| (S) 1,2-Dichloroethane-d4 | 110 | | | 70.0-130 | | 05/31/2023 08:53 | WG2068437 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 708 | | 13.3 | 1 | 05/25/2023 15:53 | WG2066607 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.0 | | 0.379 | 1.00 | 1 | 06/02/2023 21:43 | WG2070729 |
| Sulfate | 237 | | 2.97 | 25.0 | 5 | 06/02/2023 21:55 | WG2070729 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000226 | J | 0.0000941 | 0.00100 | 1 | 05/31/2023 09:12 | WG2068437 |
| Toluene | 0.000570 | J | 0.000278 | 0.00100 | 1 | 05/31/2023 09:12 | WG2068437 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/31/2023 09:12 | WG2068437 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 05/31/2023 09:12 | WG2068437 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/31/2023 09:12 | WG2068437 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/31/2023 09:12 | WG2068437 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/31/2023 09:12 | WG2068437 |
| (S) Toluene-d8 | 107 | | | 80.0-120 | | 05/31/2023 09:12 | WG2068437 |
| (S) 4-Bromofluorobenzene | 100 | | | 77.0-126 | | 05/31/2023 09:12 | WG2068437 |
| (S) 1,2-Dichloroethane-d4 | 104 | | | 70.0-130 | | 05/31/2023 09:12 | WG2068437 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 727 | | 13.3 | 1 | 05/25/2023 15:53 | WG2066607 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.0 | | 0.379 | 1.00 | 1 | 06/02/2023 22:08 | WG2070729 |
| Sulfate | 235 | | 2.97 | 25.0 | 5 | 06/02/2023 22:20 | WG2070729 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000244 | J | 0.0000941 | 0.00100 | 1 | 05/31/2023 09:32 | WG2068437 |
| Toluene | 0.000588 | J | 0.000278 | 0.00100 | 1 | 05/31/2023 09:32 | WG2068437 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 05/31/2023 09:32 | WG2068437 |
| Xylenes, Total | 0.000356 | J | 0.000174 | 0.00300 | 1 | 05/31/2023 09:32 | WG2068437 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 05/31/2023 09:32 | WG2068437 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 05/31/2023 09:32 | WG2068437 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 05/31/2023 09:32 | WG2068437 |
| (S) Toluene-d8 | 108 | | | 80.0-120 | | 05/31/2023 09:32 | WG2068437 |
| (S) 4-Bromofluorobenzene | 110 | | | 77.0-126 | | 05/31/2023 09:32 | WG2068437 |
| (S) 1,2-Dichloroethane-d4 | 109 | | | 70.0-130 | | 05/31/2023 09:32 | WG2068437 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3930664-1 05/25/23 15:53

| | MB Result | <u>MB Qualifier</u> | MB MDL | MB RDL |
|------------------|-----------|---------------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1619036-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1619036-01 05/25/23 15:53 • (DUP) R3930664-3 05/25/23 15:53

| | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 729 | 728 | 1 | 0.183 | | 5 |

L1619060-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1619060-01 05/25/23 15:53 • (DUP) R3930664-4 05/25/23 15:53

| | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 249 | 258 | 1 | 3.55 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3930664-2 05/25/23 15:53

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | <u>LCS Qualifier</u> |
|------------------|--------------|------------|----------|-------------|----------------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8400 | 95.5 | 77.3-123 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3932449-1 06/02/23 10:24

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1618619-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1618619-01 06/02/23 14:22 • (DUP) R3932449-6 06/02/23 14:35

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| | mg/l | mg/l | | % | | % |
| Chloride | 393 | 394 | 1 | 0.303 | E | 15 |
| Sulfate | 0.658 | 0.672 | 1 | 0.000 | | 15 |

L1620463-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1620463-11 06/02/23 21:45 • (DUP) R3932449-9 06/02/23 21:58

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| | mg/l | mg/l | | % | | % |
| Chloride | 8.02 | 8.35 | 1 | 4.00 | | 15 |
| Sulfate | 33.7 | 35.0 | 1 | 4.02 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3932449-2 06/02/23 10:38

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 38.4 | 95.9 | 80.0-120 | |
| Sulfate | 40.0 | 39.7 | 99.3 | 80.0-120 | |

L1618619-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1618619-01 06/02/23 14:22 • (MS) R3932449-7 06/02/23 14:49 • (MSD) R3932449-8 06/02/23 15:02

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 393 | 420 | 419 | 54.2 | 52.8 | 1 | 80.0-120 | E V | E V | 0.166 | 15 |
| Sulfate | 50.0 | 0.658 | 51.1 | 50.4 | 101 | 99.5 | 1 | 80.0-120 | | | 1.32 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1620463-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L1620463-11 06/02/23 21:45 • (MS) R3932449-10 06/02/23 22:12

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 8.02 | 57.5 | 99.0 | 1 | 80.0-120 | |
| Sulfate | 50.0 | 33.7 | 84.7 | 102 | 1 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3932480-1 06/02/23 18:21

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|----------|-------------------|--------------|----------------|----------------|
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1618969-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1618969-04 06/02/23 18:46 • (DUP) R3932480-3 06/02/23 18:59

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|----------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Chloride | 5.50 | 5.56 | 1 | 1.03 | | 15 |
| Sulfate | 1.59 | 1.58 | 1 | 0.682 | U | 15 |

L1619060-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1619060-07 06/03/23 01:17 • (DUP) R3932480-6 06/03/23 01:54

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|----------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Chloride | 0.948 | 0.963 | 1 | 1.56 | U | 15 |
| Sulfate | 7.78 | 7.84 | 1 | 0.750 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3932480-2 06/02/23 18:34

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------|----------------------|--------------------|---------------|------------------|---------------|
| Chloride | 40.0 | 39.5 | 98.8 | 80.0-120 | |
| Sulfate | 40.0 | 40.0 | 100 | 80.0-120 | |

L1618969-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1618969-04 06/02/23 18:46 • (MS) R3932480-4 06/02/23 19:12 • (MSD) R3932480-5 06/02/23 19:24

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Chloride | 50.0 | 5.50 | 54.8 | 54.8 | 98.5 | 98.6 | 1 | 80.0-120 | | | 0.110 | 15 |
| Sulfate | 50.0 | 1.59 | 50.5 | 50.5 | 97.8 | 97.9 | 1 | 80.0-120 | | | 0.0770 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1619060-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1619060-07 06/03/23 01:17 • (MS) R3932480-7 06/03/23 02:07

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 0.948 | 50.3 | 98.8 | 1 | 80.0-120 | |
| Sulfate | 50.0 | 7.78 | 56.7 | 97.9 | 1 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3931628-3 05/31/23 03:25

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 101 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 99.1 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 101 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3931628-1 05/31/23 02:26 • (LCSD) R3931628-2 05/31/23 02:46

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00471 | 0.00482 | 94.2 | 96.4 | 70.0-123 | | | 2.31 | 20 |
| Toluene | 0.00500 | 0.00426 | 0.00427 | 85.2 | 85.4 | 79.0-120 | | | 0.234 | 20 |
| Ethylbenzene | 0.00500 | 0.00463 | 0.00449 | 92.6 | 89.8 | 79.0-123 | | | 3.07 | 20 |
| Xylenes, Total | 0.0150 | 0.0133 | 0.0135 | 88.7 | 90.0 | 79.0-123 | | | 1.49 | 20 |
| Naphthalene | 0.00500 | 0.00464 | 0.00473 | 92.8 | 94.6 | 54.0-135 | | | 1.92 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00426 | 0.00429 | 85.2 | 85.8 | 76.0-121 | | | 0.702 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00398 | 0.00380 | 79.6 | 76.0 | 76.0-122 | | | 4.63 | 20 |
| (S) Toluene-d8 | | | | 101 | 98.2 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 107 | 107 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 102 | 97.5 | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3932061-2 06/01/23 16:51

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 103 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 103 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 100 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R3932061-1 06/01/23 16:32

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|----------------------|--------------------|---------------|------------------|---------------|
| Benzene | 0.00500 | 0.00504 | 101 | 70.0-123 | |
| Toluene | 0.00500 | 0.00480 | 96.0 | 79.0-120 | |
| Ethylbenzene | 0.00500 | 0.00508 | 102 | 79.0-123 | |
| Xylenes, Total | 0.0150 | 0.0167 | 111 | 79.0-123 | |
| Naphthalene | 0.00500 | 0.00526 | 105 | 54.0-135 | |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00546 | 109 | 76.0-121 | |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00570 | 114 | 76.0-122 | |
| (S) Toluene-d8 | | | 101 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 121 | 77.0-126 | |
| (S) 1,2-Dichloroethane-d4 | | | 100 | 70.0-130 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|---|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

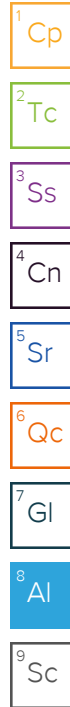
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122




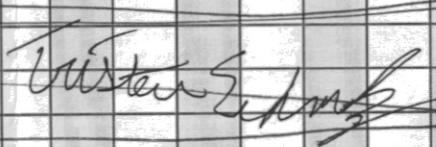
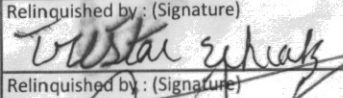
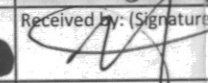
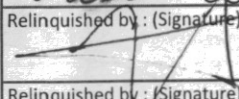
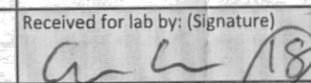
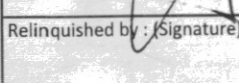
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|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



| | | | | | | | | | | | | | | | | | | |
|--|--|---|---|--|-----------|--|---|----------------|---------------------|--|--|--|--|--|--|--|--|--|
| Caerus Oil and Gas 143 Diamond Avenue Parachute, CO 81635 | | | Billing Information: | | | Analysis / Container / Preservative | | | | | | | | | | Chain of Custody Page ____ of ____ | | |
| | | | SAME AS LEFT | | | | | | | | | | | | |  12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 | | |
| Report to: | | | Email To: | | | WATER COGCC Table 915-1 EC, pH, SAR Arsenic, Boron COGCC Table 910-1 | | | | | | | | | |  SDG # <u>L1619036</u> H108 | | |
| Blair Rollins | | | brollins@caerusoilandgas.com | | | | | | | | | | | | | | | |
| Project Description: | | | City/State Collected: | | | | | | | | | | | | | | | |
| LOVE RANCH Liquid Line Release Investigation | | | Piceance Crk, CO | | | | | | | | | | | | | | | |
| Phone: (970) 640-6919 | | | Client Project # | | | Lab Project # | | | Please Circle: | | | Acctnum: Template: Prelogin: PM: PB: Shipped Via: | | | | | | |
| | | | 20234315.001A | | | | | | PT MI CT ET | | | | | | | | | |
| Collected by (print): | | | Site/Facility ID # | | | P.O. # | | | | | | | | | | | | |
| Tristan Schmalz | | | LOVE RANCH 8 | | | | | | | | | | | | | | | |
| Collected by (signature): | | | Rush? (Lab MUST Be Notified) | | | Quote # | | | Date Results Needed | | | No. of Cntrs | | | | | | |
|  Immediately Packed on Ice N ___ Y <u>X</u> | | | <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day | | | <input checked="" type="checkbox"/> Standard TAT | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Sample ID | | Comp/Grab | Matrix* | Depth | Date | Time | | | | | | | | | | | | |
| 20230522-LOVE RANCH 8-(ST-PC-LXG02) | | Grab OT | | - | 5/22/2023 | 10:05 | 5 | X | | | | | | | | | | |
| 20230522-LOVE RANCH 8-(ST-PC-POR) | | | | - | | 10:14 | 5 | X | | | | | | | | | | |
| 20230522-LOVE RANCH 8-(ST-PC-DG14) | | | | - | | 10:20 | 5 | X | | | | | | | | | | |
| 20230522-LOVE RANCH 8-(ST-PC-DG13) | | | | - | | 10:31 | 5 | X | | | | | | | | | | |
| 20230522-LOVE RANCH 8-(ST-PC-DG12) | | | | - | | 10:37 | 5 | X | | | | | | | | | | |
| 20230522-LOVE RANCH 8-(ST-PC-DG11) | | | | - | | 10:46 | 5 | X | | | | | | | | | | |
| 5/22/2023 | |  | | | | | | | | | | | | | | | | |
| * Matrix: | | Remarks: | | | | | | | | | | | | | | | | |
| SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other <u>SURFACE WATER</u> | | pH _____ Temp _____ Flow _____ Other _____ Samples returned via: ___ UPS ___ FedEx ___ Courier ___ _____ Tracking # <u>6126 6937 4037</u> | | | | | | | | | | | | | | | | |
| Relinquished by: (Signature) | | Date: | Time: | Received by: (Signature) | | Trip Blank Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | HCL / MeOH TBR | | | | Bottles Received: | | If preservation required by Login: Date/Time | | | | |
|  | | 5/22/2023 | 1630 |  | | | | 1.5 to 2.5 | | | | 30 | | | | | | |
| Relinquished by: (Signature) | | Date: | Time: | Received by: (Signature) | | Temp: 15.17°C | | | | | | | | | | | | |
|  | | 5/22/23 | |  | | 5/23/23 0900 | | | | | | | | | | | | |
| Relinquished by: (Signature) | | Date: | Time: | Received for lab by: (Signature) | | Date: | | Time: | | | | Hold: | | Condition: NCF / OK | | | | |
|  | | | | | | | | | | | | | | | | | | |

| Sample Receipt Checklist | |
|-------------------------------|---|
| COC Seal Present/Intact: | NP <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| COC Signed/Accurate: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| Bottles arrive intact: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| Correct bottles used: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| Sufficient volume sent: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| If Applicable | |
| VOA Zero Headspace: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| Preservation Correct/Checked: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |
| RAD Screen <0.5 mR/hr: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N |

Caerus Oil and Gas

Sample Delivery Group: L1621522
Samples Received: 05/31/2023
Project Number: 20234315.001A
Description: Love Ranch 8 Liquid Line Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



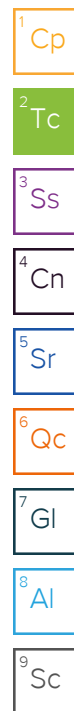
Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230530-LOVE RANCH8-(ST-PC-UG02) L1621522-01 GW

Collected by
Tristan Schmalz

Collected date/time
05/30/23 08:18

Received date/time
05/31/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2070908 | 1 | 06/02/23 17:00 | 06/02/23 21:01 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 1 | 06/06/23 20:41 | 06/06/23 20:41 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 5 | 06/06/23 21:20 | 06/06/23 21:20 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2072083 | 1 | 06/06/23 05:52 | 06/06/23 05:52 | JAH | Mt. Juliet, TN |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20230530-LOVE RANCH8-(ST-PC-POR) L1621522-02 GW

Collected by
Tristan Schmalz

Collected date/time
05/30/23 08:22

Received date/time
05/31/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2070908 | 1 | 06/02/23 17:00 | 06/02/23 21:01 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 1 | 06/06/23 21:32 | 06/06/23 21:32 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 5 | 06/06/23 21:45 | 06/06/23 21:45 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2072083 | 1 | 06/06/23 06:12 | 06/06/23 06:12 | JAH | Mt. Juliet, TN |

20230530-LOVE RANCH8-(ST-PC-DG14) L1621522-03 GW

Collected by
Tristan Schmalz

Collected date/time
05/30/23 08:33

Received date/time
05/31/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2070908 | 1 | 06/02/23 17:00 | 06/02/23 21:01 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 1 | 06/06/23 21:58 | 06/06/23 21:58 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 5 | 06/06/23 22:10 | 06/06/23 22:10 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2072083 | 1 | 06/06/23 06:32 | 06/06/23 06:32 | JAH | Mt. Juliet, TN |

20230530-LOVE RANCH8-(ST-PC-DG13) L1621522-04 GW

Collected by
Tristan Schmalz

Collected date/time
05/30/23 08:35

Received date/time
05/31/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2070908 | 1 | 06/02/23 17:00 | 06/02/23 21:01 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 1 | 06/06/23 22:23 | 06/06/23 22:23 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 5 | 06/06/23 22:36 | 06/06/23 22:36 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2072083 | 1 | 06/06/23 06:52 | 06/06/23 06:52 | JAH | Mt. Juliet, TN |

20230530-LOVE RANCH8-(ST-PC-DG12) L1621522-05 GW

Collected by
Tristan Schmalz

Collected date/time
05/30/23 08:39

Received date/time
05/31/23 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2070908 | 1 | 06/02/23 17:00 | 06/02/23 21:01 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 1 | 06/06/23 22:49 | 06/06/23 22:49 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 5 | 06/06/23 23:01 | 06/06/23 23:01 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2072083 | 1 | 06/06/23 07:13 | 06/06/23 07:13 | JAH | Mt. Juliet, TN |

20230530-LOVE RANCH8-(ST-PC-DG11) L1621522-06 GW

Collected by
Tristan Schmalz

Collected date/time
05/30/23 08:49

Received date/time
05/31/23 09:30

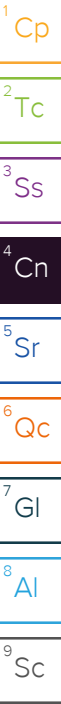
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2070908 | 1 | 06/02/23 17:00 | 06/02/23 21:01 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 1 | 06/06/23 23:14 | 06/06/23 23:14 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2072267 | 5 | 06/06/23 23:52 | 06/06/23 23:52 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2072083 | 1 | 06/06/23 07:33 | 06/06/23 07:33 | JAH | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Jason Romer
Project Manager



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 808 | | 13.3 | 1 | 06/02/2023 21:01 | WG2070908 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.7 | | 0.379 | 1.00 | 1 | 06/06/2023 20:41 | WG2072267 |
| Sulfate | 312 | | 2.97 | 25.0 | 5 | 06/06/2023 21:20 | WG2072267 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|--------------------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 06/06/2023 05:52 | WG2072083 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 06/06/2023 05:52 | WG2072083 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/06/2023 05:52 | WG2072083 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 06/06/2023 05:52 | WG2072083 |
| Naphthalene | U | J3 | 0.00100 | 0.00500 | 1 | 06/06/2023 05:52 | WG2072083 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/06/2023 05:52 | WG2072083 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/06/2023 05:52 | WG2072083 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 06/06/2023 05:52 | WG2072083 |
| (S) 4-Bromofluorobenzene | 101 | | | 77.0-126 | | 06/06/2023 05:52 | WG2072083 |
| (S) 1,2-Dichloroethane-d4 | 103 | | | 70.0-130 | | 06/06/2023 05:52 | WG2072083 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 796 | | 13.3 | 1 | 06/02/2023 21:01 | WG2070908 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.8 | | 0.379 | 1.00 | 1 | 06/06/2023 21:32 | WG2072267 |
| Sulfate | 316 | | 2.97 | 25.0 | 5 | 06/06/2023 21:45 | WG2072267 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|--------------------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000295 | J | 0.0000941 | 0.00100 | 1 | 06/06/2023 06:12 | WG2072083 |
| Toluene | 0.00102 | | 0.000278 | 0.00100 | 1 | 06/06/2023 06:12 | WG2072083 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/06/2023 06:12 | WG2072083 |
| Xylenes, Total | 0.00103 | J | 0.000174 | 0.00300 | 1 | 06/06/2023 06:12 | WG2072083 |
| Naphthalene | U | J3 | 0.00100 | 0.00500 | 1 | 06/06/2023 06:12 | WG2072083 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/06/2023 06:12 | WG2072083 |
| 1,3,5-Trimethylbenzene | 0.000113 | J | 0.000104 | 0.00100 | 1 | 06/06/2023 06:12 | WG2072083 |
| (S) Toluene-d8 | 98.8 | | | 80.0-120 | | 06/06/2023 06:12 | WG2072083 |
| (S) 4-Bromofluorobenzene | 96.3 | | | 77.0-126 | | 06/06/2023 06:12 | WG2072083 |
| (S) 1,2-Dichloroethane-d4 | 106 | | | 70.0-130 | | 06/06/2023 06:12 | WG2072083 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 793 | | 13.3 | 1 | 06/02/2023 21:01 | WG2070908 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.7 | | 0.379 | 1.00 | 1 | 06/06/2023 21:58 | WG2072267 |
| Sulfate | 319 | | 2.97 | 25.0 | 5 | 06/06/2023 22:10 | WG2072267 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|--------------------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000895 | J | 0.0000941 | 0.00100 | 1 | 06/06/2023 06:32 | WG2072083 |
| Toluene | 0.00179 | | 0.000278 | 0.00100 | 1 | 06/06/2023 06:32 | WG2072083 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/06/2023 06:32 | WG2072083 |
| Xylenes, Total | 0.000770 | J | 0.000174 | 0.00300 | 1 | 06/06/2023 06:32 | WG2072083 |
| Naphthalene | U | J3 | 0.00100 | 0.00500 | 1 | 06/06/2023 06:32 | WG2072083 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/06/2023 06:32 | WG2072083 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/06/2023 06:32 | WG2072083 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 06/06/2023 06:32 | WG2072083 |
| (S) 4-Bromofluorobenzene | 96.5 | | | 77.0-126 | | 06/06/2023 06:32 | WG2072083 |
| (S) 1,2-Dichloroethane-d4 | 104 | | | 70.0-130 | | 06/06/2023 06:32 | WG2072083 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 807 | | 13.3 | 1 | 06/02/2023 21:01 | WG2070908 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.7 | | 0.379 | 1.00 | 1 | 06/06/2023 22:23 | WG2072267 |
| Sulfate | 330 | | 2.97 | 25.0 | 5 | 06/06/2023 22:36 | WG2072267 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|--------------------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000374 | J | 0.0000941 | 0.00100 | 1 | 06/06/2023 06:52 | WG2072083 |
| Toluene | 0.000869 | J | 0.000278 | 0.00100 | 1 | 06/06/2023 06:52 | WG2072083 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/06/2023 06:52 | WG2072083 |
| Xylenes, Total | 0.000355 | J | 0.000174 | 0.00300 | 1 | 06/06/2023 06:52 | WG2072083 |
| Naphthalene | U | J3 | 0.00100 | 0.00500 | 1 | 06/06/2023 06:52 | WG2072083 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/06/2023 06:52 | WG2072083 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/06/2023 06:52 | WG2072083 |
| (S) Toluene-d8 | 99.9 | | | 80.0-120 | | 06/06/2023 06:52 | WG2072083 |
| (S) 4-Bromofluorobenzene | 93.8 | | | 77.0-126 | | 06/06/2023 06:52 | WG2072083 |
| (S) 1,2-Dichloroethane-d4 | 106 | | | 70.0-130 | | 06/06/2023 06:52 | WG2072083 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 811 | | 13.3 | 1 | 06/02/2023 21:01 | WG2070908 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 12.8 | | 0.379 | 1.00 | 1 | 06/06/2023 22:49 | WG2072267 |
| Sulfate | 320 | | 2.97 | 25.0 | 5 | 06/06/2023 23:01 | WG2072267 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|--------------------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000432 | J | 0.0000941 | 0.00100 | 1 | 06/06/2023 07:13 | WG2072083 |
| Toluene | 0.00101 | | 0.000278 | 0.00100 | 1 | 06/06/2023 07:13 | WG2072083 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/06/2023 07:13 | WG2072083 |
| Xylenes, Total | 0.000388 | J | 0.000174 | 0.00300 | 1 | 06/06/2023 07:13 | WG2072083 |
| Naphthalene | U | J3 | 0.00100 | 0.00500 | 1 | 06/06/2023 07:13 | WG2072083 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/06/2023 07:13 | WG2072083 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/06/2023 07:13 | WG2072083 |
| (S) Toluene-d8 | 100 | | | 80.0-120 | | 06/06/2023 07:13 | WG2072083 |
| (S) 4-Bromofluorobenzene | 95.4 | | | 77.0-126 | | 06/06/2023 07:13 | WG2072083 |
| (S) 1,2-Dichloroethane-d4 | 104 | | | 70.0-130 | | 06/06/2023 07:13 | WG2072083 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | | date / time | |
| Dissolved Solids | 808 | | 13.3 | 1 | 06/02/2023 21:01 | WG2070908 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|-------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Chloride | 13.0 | | 0.379 | 1.00 | 1 | 06/06/2023 23:14 | WG2072267 |
| Sulfate | 320 | | 2.97 | 25.0 | 5 | 06/06/2023 23:52 | WG2072267 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------------------------|----------|--------------------|-----------|----------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Benzene | 0.000433 | J | 0.0000941 | 0.00100 | 1 | 06/06/2023 07:33 | WG2072083 |
| Toluene | 0.000990 | J | 0.000278 | 0.00100 | 1 | 06/06/2023 07:33 | WG2072083 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/06/2023 07:33 | WG2072083 |
| Xylenes, Total | 0.000426 | J | 0.000174 | 0.00300 | 1 | 06/06/2023 07:33 | WG2072083 |
| Naphthalene | U | J3 | 0.00100 | 0.00500 | 1 | 06/06/2023 07:33 | WG2072083 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/06/2023 07:33 | WG2072083 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/06/2023 07:33 | WG2072083 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 06/06/2023 07:33 | WG2072083 |
| (S) 4-Bromofluorobenzene | 97.1 | | | 77.0-126 | | 06/06/2023 07:33 | WG2072083 |
| (S) 1,2-Dichloroethane-d4 | 102 | | | 70.0-130 | | 06/06/2023 07:33 | WG2072083 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3933994-1 06/02/23 21:01

| | MB Result | <u>MB Qualifier</u> | MB MDL | MB RDL |
|------------------|-----------|---------------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1621522-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1621522-06 06/02/23 21:01 • (DUP) R3933994-3 06/02/23 21:01

| | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 808 | 821 | 1 | 1.64 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3933994-2 06/02/23 21:01

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | <u>LCS Qualifier</u> |
|------------------|--------------|------------|----------|-------------|----------------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8310 | 94.4 | 77.3-123 | |

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3934217-1 06/06/23 14:06

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | 0.396 | ⌵ | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1621498-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1621498-05 06/06/23 16:52 • (DUP) R3934217-3 06/06/23 17:05

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 88.0 | 86.5 | 1 | 1.79 | | 15 |
| Sulfate | 12.3 | 12.0 | 1 | 2.97 | | 15 |

L1622478-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1622478-03 06/07/23 03:03 • (DUP) R3934217-6 06/07/23 03:29

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 1290 | 1290 | 1 | 0.574 | ⚡ | 15 |
| Sulfate | 41.4 | 41.5 | 1 | 0.206 | | 15 |

L1622478-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1622478-03 06/07/23 03:16 • (DUP) R3934217-7 06/07/23 03:42

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 1270 | 1300 | 20 | 2.29 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3934217-2 06/06/23 14:19

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 38.5 | 96.1 | 80.0-120 | |
| Sulfate | 40.0 | 42.0 | 105 | 80.0-120 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1621498-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621498-05 06/06/23 16:52 • (MS) R3934217-4 06/06/23 17:17 • (MSD) R3934217-5 06/06/23 17:30

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD % | RPD Limits % |
|----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Chloride | 50.0 | 88.0 | 130 | 130 | 83.5 | 83.3 | 1 | 80.0-120 | | | 0.0987 | 15 |
| Sulfate | 50.0 | 12.3 | 63.5 | 63.8 | 102 | 103 | 1 | 80.0-120 | | | 0.483 | 15 |

Sample Narrative:
MS: Matrix spike failure due to matrix.
MSD: Matrix spike failure due to matrix.

L1622478-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1622478-03 06/07/23 03:03 • (MS) R3934217-8 06/07/23 03:54

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 1290 | 1240 | 0.000 | 1 | 80.0-120 | <u>E V</u> |
| Sulfate | 50.0 | 41.4 | 92.6 | 102 | 1 | 80.0-120 | |

Sample Narrative:
MS: Matrix spike failure due to matrix.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3933892-3 06/06/23 00:43

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 103 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 98.2 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 98.8 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3933892-1 06/05/23 23:43 • (LCSD) R3933892-2 06/06/23 00:03

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00548 | 0.00594 | 110 | 119 | 70.0-123 | | | 8.06 | 20 |
| Toluene | 0.00500 | 0.00536 | 0.00564 | 107 | 113 | 79.0-120 | | | 5.09 | 20 |
| Ethylbenzene | 0.00500 | 0.00526 | 0.00569 | 105 | 114 | 79.0-123 | | | 7.85 | 20 |
| Xylenes, Total | 0.0150 | 0.0156 | 0.0167 | 104 | 111 | 79.0-123 | | | 6.81 | 20 |
| Naphthalene | 0.00500 | 0.00353 | 0.00443 | 70.6 | 88.6 | 54.0-135 | | J3 | 22.6 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00502 | 0.00558 | 100 | 112 | 76.0-121 | | | 10.6 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00512 | 0.00559 | 102 | 112 | 76.0-122 | | | 8.78 | 20 |
| (S) Toluene-d8 | | | | 101 | 101 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 101 | 100 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 100 | 97.7 | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

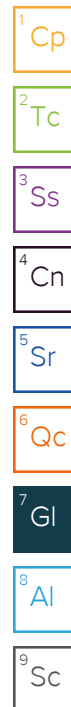
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

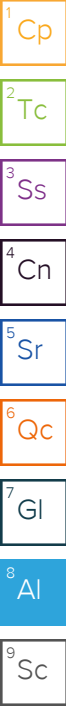
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas

Sample Delivery Group: L1623077
Samples Received: 06/06/2023
Project Number:
Description: Love Ranch 8 Liquid Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:



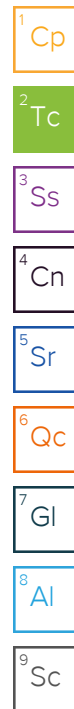
Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230605-LOVE RANCH 8-(ST-PC-UG02) L1623077-01 GW

Collected by
Jordan Veith

Collected date/time
06/05/23 12:24

Received date/time
06/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2073495 | 1 | 06/07/23 23:36 | 06/08/23 01:11 | ARD | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/16/23 18:24 | 06/16/23 18:24 | SMC | Allen, TX |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/17/23 10:34 | 06/17/23 10:34 | SMC | Allen, TX |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2074165 | 1 | 06/10/23 00:18 | 06/10/23 00:18 | JAH | Mt. Juliet, TN |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20230605-LOVE RANCH 8-(ST-PC-POR) L1623077-02 GW

Collected by
Jordan Veith

Collected date/time
06/05/23 12:30

Received date/time
06/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2073514 | 1 | 06/09/23 08:13 | 06/09/23 09:45 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/16/23 18:44 | 06/16/23 18:44 | SMC | Allen, TX |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/17/23 11:34 | 06/17/23 11:34 | SMC | Allen, TX |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2074165 | 1 | 06/10/23 00:39 | 06/10/23 00:39 | JAH | Mt. Juliet, TN |

20230605-LOVE RANCH 8-(ST-PC-DG14) L1623077-03 GW

Collected by
Jordan Veith

Collected date/time
06/05/23 12:35

Received date/time
06/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2073514 | 1 | 06/09/23 08:13 | 06/09/23 09:45 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/16/23 19:04 | 06/16/23 19:04 | SMC | Allen, TX |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/17/23 12:33 | 06/17/23 12:33 | SMC | Allen, TX |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2074165 | 1 | 06/10/23 01:01 | 06/10/23 01:01 | JAH | Mt. Juliet, TN |

20230605-LOVE RANCH 8-(ST-PC-DG13) L1623077-04 GW

Collected by
Jordan Veith

Collected date/time
06/05/23 12:40

Received date/time
06/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2073514 | 1 | 06/09/23 08:13 | 06/09/23 09:45 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/16/23 19:24 | 06/16/23 19:24 | SMC | Allen, TX |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/17/23 12:53 | 06/17/23 12:53 | SMC | Allen, TX |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2074165 | 1 | 06/10/23 01:23 | 06/10/23 01:23 | JAH | Mt. Juliet, TN |

20230605-LOVE RANCH 8-(ST-PC-DG12) L1623077-05 GW

Collected by
Jordan Veith

Collected date/time
06/05/23 12:44

Received date/time
06/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2073514 | 1 | 06/09/23 08:13 | 06/09/23 09:45 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/16/23 19:44 | 06/16/23 19:44 | SMC | Allen, TX |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/17/23 13:13 | 06/17/23 13:13 | SMC | Allen, TX |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2074165 | 1 | 06/10/23 01:45 | 06/10/23 01:45 | JAH | Mt. Juliet, TN |

20230605-LOVE RANCH 8-(ST-PC-DG11) L1623077-06 GW

Collected by
Jordan Veith

Collected date/time
06/05/23 12:46

Received date/time
06/06/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2073514 | 1 | 06/09/23 08:13 | 06/09/23 09:45 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/16/23 20:04 | 06/16/23 20:04 | SMC | Allen, TX |
| Wet Chemistry by Method 9056A | WG2077297 | 1 | 06/17/23 13:33 | 06/17/23 13:33 | SMC | Allen, TX |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2074165 | 1 | 06/10/23 02:06 | 06/10/23 02:06 | JAH | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



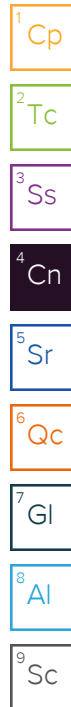
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 06/13/23 12:12

Project Narrative

Report reissued 7/25 for corrected sample ID



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|-----------|
| Dissolved Solids | 844 | J3 | 20.0 | 1 | 06/08/2023 01:11 | WG2073495 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Chloride | 14.1 | | 0.0541 | 0.800 | 1 | 06/16/2023 18:24 | WG2077297 |
| Sulfate | 292 | | 0.199 | 0.700 | 1 | 06/17/2023 10:34 | WG2077297 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 06/10/2023 00:18 | WG2074165 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 06/10/2023 00:18 | WG2074165 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/10/2023 00:18 | WG2074165 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 06/10/2023 00:18 | WG2074165 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/10/2023 00:18 | WG2074165 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/10/2023 00:18 | WG2074165 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/10/2023 00:18 | WG2074165 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 06/10/2023 00:18 | WG2074165 |
| (S) 4-Bromofluorobenzene | 92.0 | | | 77.0-126 | | 06/10/2023 00:18 | WG2074165 |
| (S) 1,2-Dichloroethane-d4 | 88.6 | | | 70.0-130 | | 06/10/2023 00:18 | WG2074165 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 898 | | 20.0 | 1 | 06/09/2023 09:45 | WG2073514 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 14.0 | | 0.0541 | 0.800 | 1 | 06/16/2023 18:44 | WG2077297 |
| Sulfate | 289 | | 0.199 | 0.700 | 1 | 06/17/2023 11:34 | WG2077297 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000413 | J | 0.0000941 | 0.00100 | 1 | 06/10/2023 00:39 | WG2074165 |
| Toluene | 0.00158 | | 0.000278 | 0.00100 | 1 | 06/10/2023 00:39 | WG2074165 |
| Ethylbenzene | 0.000311 | J | 0.000137 | 0.00100 | 1 | 06/10/2023 00:39 | WG2074165 |
| Xylenes, Total | 0.00563 | | 0.000174 | 0.00300 | 1 | 06/10/2023 00:39 | WG2074165 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/10/2023 00:39 | WG2074165 |
| 1,2,4-Trimethylbenzene | 0.00179 | | 0.000322 | 0.00100 | 1 | 06/10/2023 00:39 | WG2074165 |
| 1,3,5-Trimethylbenzene | 0.00141 | | 0.000104 | 0.00100 | 1 | 06/10/2023 00:39 | WG2074165 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 06/10/2023 00:39 | WG2074165 |
| (S) 4-Bromofluorobenzene | 94.8 | | | 77.0-126 | | 06/10/2023 00:39 | WG2074165 |
| (S) 1,2-Dichloroethane-d4 | 86.9 | | | 70.0-130 | | 06/10/2023 00:39 | WG2074165 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 874 | | 20.0 | 1 | 06/09/2023 09:45 | WG2073514 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 14.0 | | 0.0541 | 0.800 | 1 | 06/16/2023 19:04 | WG2077297 |
| Sulfate | 293 | | 0.199 | 0.700 | 1 | 06/17/2023 12:33 | WG2077297 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000635 | J | 0.0000941 | 0.00100 | 1 | 06/10/2023 01:01 | WG2074165 |
| Toluene | 0.00138 | | 0.000278 | 0.00100 | 1 | 06/10/2023 01:01 | WG2074165 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/10/2023 01:01 | WG2074165 |
| Xylenes, Total | 0.000632 | J | 0.000174 | 0.00300 | 1 | 06/10/2023 01:01 | WG2074165 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/10/2023 01:01 | WG2074165 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/10/2023 01:01 | WG2074165 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/10/2023 01:01 | WG2074165 |
| (S) Toluene-d8 | 97.0 | | | 80.0-120 | | 06/10/2023 01:01 | WG2074165 |
| (S) 4-Bromofluorobenzene | 92.1 | | | 77.0-126 | | 06/10/2023 01:01 | WG2074165 |
| (S) 1,2-Dichloroethane-d4 | 87.8 | | | 70.0-130 | | 06/10/2023 01:01 | WG2074165 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 862 | | 20.0 | 1 | 06/09/2023 09:45 | WG2073514 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 14.3 | | 0.0541 | 0.800 | 1 | 06/16/2023 19:24 | WG2077297 |
| Sulfate | 286 | | 0.199 | 0.700 | 1 | 06/17/2023 12:53 | WG2077297 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000395 | J | 0.0000941 | 0.00100 | 1 | 06/10/2023 01:23 | WG2074165 |
| Toluene | 0.000923 | J | 0.000278 | 0.00100 | 1 | 06/10/2023 01:23 | WG2074165 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/10/2023 01:23 | WG2074165 |
| Xylenes, Total | 0.000377 | J | 0.000174 | 0.00300 | 1 | 06/10/2023 01:23 | WG2074165 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/10/2023 01:23 | WG2074165 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/10/2023 01:23 | WG2074165 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/10/2023 01:23 | WG2074165 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 06/10/2023 01:23 | WG2074165 |
| (S) 4-Bromofluorobenzene | 91.7 | | | 77.0-126 | | 06/10/2023 01:23 | WG2074165 |
| (S) 1,2-Dichloroethane-d4 | 87.3 | | | 70.0-130 | | 06/10/2023 01:23 | WG2074165 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 896 | | 20.0 | 1 | 06/09/2023 09:45 | WG2073514 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 14.1 | | 0.0541 | 0.800 | 1 | 06/16/2023 19:44 | WG2077297 |
| Sulfate | 288 | | 0.199 | 0.700 | 1 | 06/17/2023 13:13 | WG2077297 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000427 | J | 0.0000941 | 0.00100 | 1 | 06/10/2023 01:45 | WG2074165 |
| Toluene | 0.00105 | | 0.000278 | 0.00100 | 1 | 06/10/2023 01:45 | WG2074165 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/10/2023 01:45 | WG2074165 |
| Xylenes, Total | 0.000422 | J | 0.000174 | 0.00300 | 1 | 06/10/2023 01:45 | WG2074165 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/10/2023 01:45 | WG2074165 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/10/2023 01:45 | WG2074165 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/10/2023 01:45 | WG2074165 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 06/10/2023 01:45 | WG2074165 |
| (S) 4-Bromofluorobenzene | 92.8 | | | 77.0-126 | | 06/10/2023 01:45 | WG2074165 |
| (S) 1,2-Dichloroethane-d4 | 84.6 | | | 70.0-130 | | 06/10/2023 01:45 | WG2074165 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 854 | | 20.0 | 1 | 06/09/2023 09:45 | WG2073514 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 14.2 | | 0.0541 | 0.800 | 1 | 06/16/2023 20:04 | WG2077297 |
| Sulfate | 287 | | 0.199 | 0.700 | 1 | 06/17/2023 13:33 | WG2077297 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000371 | J | 0.0000941 | 0.00100 | 1 | 06/10/2023 02:06 | WG2074165 |
| Toluene | 0.000986 | J | 0.000278 | 0.00100 | 1 | 06/10/2023 02:06 | WG2074165 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/10/2023 02:06 | WG2074165 |
| Xylenes, Total | 0.000392 | J | 0.000174 | 0.00300 | 1 | 06/10/2023 02:06 | WG2074165 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/10/2023 02:06 | WG2074165 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/10/2023 02:06 | WG2074165 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/10/2023 02:06 | WG2074165 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 06/10/2023 02:06 | WG2074165 |
| (S) 4-Bromofluorobenzene | 94.1 | | | 77.0-126 | | 06/10/2023 02:06 | WG2074165 |
| (S) 1,2-Dichloroethane-d4 | 83.1 | | | 70.0-130 | | 06/10/2023 02:06 | WG2074165 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3934873-1 06/08/23 01:11

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1623077-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1623077-01 06/08/23 01:11 • (DUP) R3934873-3 06/08/23 01:11

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 844 | 890 | 1 | 5.31 | J3 | 5 |

L1623480-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1623480-03 06/08/23 01:11 • (DUP) R3934873-4 06/08/23 01:11

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 28.0 | 29.0 | 1 | 3.51 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3934873-2 06/08/23 01:11

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8180 | 93.0 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3935711-1 06/09/23 09:45

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1622976-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1622976-02 06/09/23 09:45 • (DUP) R3935711-3 06/09/23 09:45

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 498 | 499 | 1 | 0.201 | | 5 |

L1622976-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1622976-10 06/09/23 09:45 • (DUP) R3935711-4 06/09/23 09:45

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 532 | 532 | 1 | 0.000 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3935711-2 06/09/23 09:45

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8330 | 94.7 | 77.3-123 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3938204-1 06/16/23 17:45

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | 0.0633 | ⌵ | 0.0541 | 0.800 |
| Sulfate | U | | 0.199 | 0.700 |

Laboratory Control Sample (LCS)

(LCS) R3938204-2 06/16/23 18:04

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 5.00 | 5.05 | 101 | 80.0-120 | |
| Sulfate | 5.00 | 4.83 | 96.6 | 80.0-120 | |

L1623077-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623077-01 06/16/23 18:24 • (MS) R3938204-3 06/17/23 02:21 • (MSD) R3938204-4 06/17/23 02:41

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 14.1 | 64.8 | 64.9 | 102 | 102 | 1 | 80.0-120 | | | 0.116 | 20 |

L1623077-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623077-02 06/16/23 18:44 • (MS) R3938204-5 06/17/23 03:01 • (MSD) R3938204-6 06/17/23 03:21

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 14.0 | 65.2 | 64.8 | 102 | 102 | 1 | 80.0-120 | | | 0.609 | 20 |

L1623077-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623077-01 06/17/23 10:34 • (MS) R3938204-7 06/17/23 10:54 • (MSD) R3938204-8 06/17/23 11:14

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Sulfate | 500 | 292 | 757 | 758 | 93.0 | 93.2 | 1 | 80.0-120 | | | 0.106 | 20 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1623077-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623077-02 06/17/23 11:34 • (MS) R3938204-9 06/17/23 11:53 • (MSD) R3938204-10 06/17/23 12:13

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD % | RPD Limits % |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Sulfate | 500 | 289 | 759 | 762 | 94.0 | 94.6 | 1 | 80.0-120 | | | 0.389 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3935624-2 06/09/23 20:33

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 103 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 95.3 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 87.5 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R3935624-1 06/09/23 19:06

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|----------------------|--------------------|---------------|------------------|---------------|
| Benzene | 0.00500 | 0.00485 | 97.0 | 70.0-123 | |
| Toluene | 0.00500 | 0.00485 | 97.0 | 79.0-120 | |
| Ethylbenzene | 0.00500 | 0.00497 | 99.4 | 79.0-123 | |
| Xylenes, Total | 0.0150 | 0.0144 | 96.0 | 79.0-123 | |
| Naphthalene | 0.00500 | 0.00499 | 99.8 | 54.0-135 | |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00478 | 95.6 | 76.0-121 | |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00475 | 95.0 | 76.0-122 | |
| (S) Toluene-d8 | | | 99.4 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 95.1 | 77.0-126 | |
| (S) 1,2-Dichloroethane-d4 | | | 91.1 | 70.0-130 | |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

GLOSSARY OF TERMS

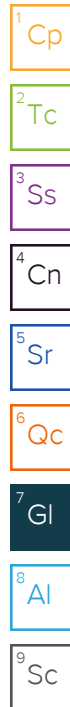
Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| MDL | Method Detection Limit. |
|------------------------------|--|
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |
| Qualifier | Description |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

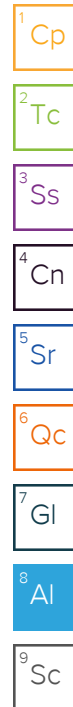
Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

| | | | |
|-----------|---------|----------|------------------|
| Arkansas | 88-0647 | Kansas | E10388 |
| Florida | E871118 | Texas | T104704232-22-37 |
| Iowa | 408 | Oklahoma | 8727 |
| Louisiana | 30686 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

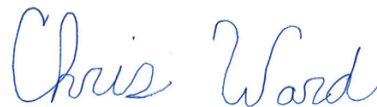
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas

Sample Delivery Group: L1624642
Samples Received: 06/09/2023
Project Number:
Description: Love Ranch 8 Liquid Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

20230607-LOVE RANCH 8-MOI01 L1624642-01 Solid

Collected by
Jordan Veith

Collected date/time
06/07/23 09:00

Received date/time
06/09/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2077042 | 1000 | 06/13/23 09:09 | 06/14/23 09:42 | NCC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2076978 | 80 | 06/13/23 09:09 | 06/14/23 05:44 | JBE | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2076331 | 5 | 06/14/23 21:17 | 06/15/23 03:50 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2076336 | 1 | 06/13/23 20:07 | 06/14/23 07:36 | DSH | Mt. Juliet, TN |

20230607-LOVE RANCH 8-(ST-PC-MOI01) L1624642-02 GW

Collected by
Jordan Veith

Collected date/time
06/07/23 09:10

Received date/time
06/09/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2078819 | 500 | 06/16/23 13:24 | 06/16/23 13:24 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2078122 | 500 | 06/15/23 19:12 | 06/15/23 19:12 | DWR | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 3511/8015 | WG2076360 | 20 | 06/13/23 22:11 | 06/17/23 00:19 | HLJ | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

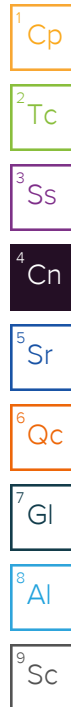


Chris Ward
Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

| <u>Lab Sample ID</u> | <u>Project Sample ID</u> | <u>Method</u> |
|-----------------------------|---|------------------|
| L1624642-02 | 20230607-LOVE RANCH 8-(ST-PC-MOI01) | 8260B, 8015D/GRO |



Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 1610 | | 21.7 | 100 | 1000 | 06/14/2023 09:42 | WG2077042 |
| (S) a,a,a-Trifluorotoluene(FID) | 101 | | | 77.0-120 | | 06/14/2023 09:42 | WG2077042 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | 4.47 | | 0.0374 | 0.0800 | 80 | 06/14/2023 05:44 | WG2076978 |
| Toluene | 34.2 | | 0.104 | 0.400 | 80 | 06/14/2023 05:44 | WG2076978 |
| Ethylbenzene | 4.60 | | 0.0590 | 0.200 | 80 | 06/14/2023 05:44 | WG2076978 |
| Xylenes, Total | 74.0 | | 0.0704 | 0.520 | 80 | 06/14/2023 05:44 | WG2076978 |
| 1,2,4-Trimethylbenzene | 12.1 | | 0.126 | 0.400 | 80 | 06/14/2023 05:44 | WG2076978 |
| 1,3,5-Trimethylbenzene | 12.3 | | 0.160 | 0.400 | 80 | 06/14/2023 05:44 | WG2076978 |
| (S) Toluene-d8 | 109 | | | 75.0-131 | | 06/14/2023 05:44 | WG2076978 |
| (S) 4-Bromofluorobenzene | 103 | | | 67.0-138 | | 06/14/2023 05:44 | WG2076978 |
| (S) 1,2-Dichloroethane-d4 | 95.1 | | | 70.0-130 | | 06/14/2023 05:44 | WG2076978 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 491 | | 8.05 | 20.0 | 5 | 06/15/2023 03:50 | WG2076331 |
| C28-C36 Motor Oil Range | U | | 1.37 | 20.0 | 5 | 06/15/2023 03:50 | WG2076331 |
| (S) o-Terphenyl | 59.7 | | | 18.0-148 | | 06/15/2023 03:50 | WG2076331 |

Sample Narrative:

L1624642-01 WG2076331: Dilution due to matrix.

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|--------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | 0.0195 | | 0.00209 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Fluorene | 0.0456 | | 0.00205 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| 1-Methylnaphthalene | 0.629 | | 0.00449 | 0.0200 | 1 | 06/14/2023 07:36 | WG2076336 |
| 2-Methylnaphthalene | 1.99 | | 0.00427 | 0.0200 | 1 | 06/14/2023 07:36 | WG2076336 |
| Naphthalene | 0.898 | | 0.00408 | 0.0200 | 1 | 06/14/2023 07:36 | WG2076336 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| (S) p-Terphenyl-d14 | 111 | | | 23.0-120 | | 06/14/2023 07:36 | WG2076336 |
| (S) Nitrobenzene-d5 | 0.000 | J2 | | 14.0-149 | | 06/14/2023 07:36 | WG2076336 |
| (S) 2-Fluorobiphenyl | 84.9 | | | 34.0-125 | | 06/14/2023 07:36 | WG2076336 |

Sample Narrative:

L1624642-01 WG2076336: Surrogate failure due to matrix interference

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 99.0 | | 15.7 | 50.0 | 500 | 06/16/2023 13:24 | WG2078819 |
| (S) a,a,a-Trifluorotoluene(FID) | 112 | | | 78.0-120 | | 06/16/2023 13:24 | WG2078819 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 10.0 | | 0.0471 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| Toluene | 18.8 | | 0.139 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| Ethylbenzene | 0.397 | J | 0.0685 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| Xylenes, Total | 8.33 | | 0.0870 | 1.50 | 500 | 06/15/2023 19:12 | WG2078122 |
| Naphthalene | U | | 0.500 | 2.50 | 500 | 06/15/2023 19:12 | WG2078122 |
| 1,2,4-Trimethylbenzene | 0.446 | J | 0.161 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| 1,3,5-Trimethylbenzene | 0.349 | J | 0.0520 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| (S) Toluene-d8 | 96.3 | | | 80.0-120 | | 06/15/2023 19:12 | WG2078122 |
| (S) 4-Bromofluorobenzene | 103 | | | 77.0-126 | | 06/15/2023 19:12 | WG2078122 |
| (S) 1,2-Dichloroethane-d4 | 123 | | | 70.0-130 | | 06/15/2023 19:12 | WG2078122 |

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 59.3 | | 0.494 | 2.00 | 20 | 06/17/2023 00:19 | WG2076360 |
| (S) o-Terphenyl | 0.000 | J7 | | 31.0-160 | | 06/17/2023 00:19 | WG2076360 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937440-2 06/14/23 01:04

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | 1.16 | ⬇ | 0.543 | 2.50 |
| (S) a,a,a-Trifluorotoluene(FID) | 95.0 | | | 77.0-120 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3937440-1 06/13/23 23:22 • (LCSD) R3937440-3 06/14/23 11:44

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|------------------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH (GC/FID) Low Fraction | 5.50 | 6.76 | 6.77 | 123 | 123 | 72.0-127 | | | 0.148 | 20 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | 103 | 106 | 77.0-120 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937773-3 06/16/23 05:41

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|------------------------------------|-------------------|--------------|----------------|----------------|
| TPH (GC/FID) Low Fraction | U | | 0.0314 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) | 111 | | | 78.0-120 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3937773-1 06/16/23 04:35 • (LCSD) R3937773-2 06/16/23 04:57

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|------------------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH (GC/FID) Low Fraction | 5.50 | 5.80 | 5.82 | 105 | 106 | 72.0-127 | | | 0.344 | 20 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | 109 | 109 | 78.0-120 | | | | |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3936744-3 06/13/23 22:41

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene | U | | 0.000467 | 0.00100 |
| Toluene | U | | 0.00130 | 0.00500 |
| Ethylbenzene | U | | 0.000737 | 0.00250 |
| Xylenes, Total | U | | 0.000880 | 0.00650 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 |
| (S) Toluene-d8 | 108 | | | 75.0-131 |
| (S) 4-Bromofluorobenzene | 99.6 | | | 67.0-138 |
| (S) 1,2-Dichloroethane-d4 | 85.5 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3936744-1 06/13/23 20:54 • (LCSD) R3936744-2 06/13/23 21:16

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.125 | 0.117 | 0.113 | 93.6 | 90.4 | 70.0-123 | | | 3.48 | 20 |
| Toluene | 0.125 | 0.125 | 0.121 | 100 | 96.8 | 75.0-121 | | | 3.25 | 20 |
| Ethylbenzene | 0.125 | 0.139 | 0.134 | 111 | 107 | 74.0-126 | | | 3.66 | 20 |
| Xylenes, Total | 0.375 | 0.392 | 0.377 | 105 | 101 | 72.0-127 | | | 3.90 | 20 |
| 1,2,4-Trimethylbenzene | 0.125 | 0.113 | 0.106 | 90.4 | 84.8 | 70.0-126 | | | 6.39 | 20 |
| 1,3,5-Trimethylbenzene | 0.125 | 0.111 | 0.108 | 88.8 | 86.4 | 73.0-127 | | | 2.74 | 20 |
| (S) Toluene-d8 | | | | 105 | 107 | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | 104 | 101 | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 97.3 | 99.1 | 70.0-130 | | | | |

L1624612-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624612-01 06/14/23 03:55 • (MS) R3936744-4 06/14/23 06:27 • (MSD) R3936744-5 06/14/23 06:49

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 10.0 | U | 9.83 | 9.93 | 98.3 | 99.3 | 80 | 10.0-149 | | | 1.01 | 37 |
| Toluene | 10.0 | 0.300 | 10.9 | 10.7 | 109 | 107 | 80 | 10.0-156 | | | 1.85 | 38 |
| Ethylbenzene | 10.0 | 0.626 | 12.3 | 11.5 | 123 | 115 | 80 | 10.0-160 | | | 6.72 | 38 |
| Xylenes, Total | 30.0 | 3.67 | 38.1 | 36.0 | 115 | 108 | 80 | 10.0-160 | | | 5.67 | 38 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.9 | 24.2 | 23.6 | 123 | 117 | 80 | 10.0-160 | | | 2.51 | 36 |
| 1,3,5-Trimethylbenzene | 10.0 | 2.71 | 11.1 | 12.9 | 111 | 129 | 80 | 10.0-160 | | | 15.0 | 38 |
| (S) Toluene-d8 | | | | | 107 | 105 | | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 107 | 103 | | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 98.3 | 99.6 | | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937700-3 06/15/23 11:01

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 96.9 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 101 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 120 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3937700-1 06/15/23 09:57 • (LCSD) R3937700-2 06/15/23 10:18

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00466 | 0.00479 | 93.2 | 95.8 | 70.0-123 | | | 2.75 | 20 |
| Toluene | 0.00500 | 0.00438 | 0.00438 | 87.6 | 87.6 | 79.0-120 | | | 0.000 | 20 |
| Ethylbenzene | 0.00500 | 0.00456 | 0.00474 | 91.2 | 94.8 | 79.0-123 | | | 3.87 | 20 |
| Xylenes, Total | 0.0150 | 0.0138 | 0.0141 | 92.0 | 94.0 | 79.0-123 | | | 2.15 | 20 |
| Naphthalene | 0.00500 | 0.00330 | 0.00385 | 66.0 | 77.0 | 54.0-135 | | | 15.4 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00448 | 0.00475 | 89.6 | 95.0 | 76.0-121 | | | 5.85 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00457 | 0.00491 | 91.4 | 98.2 | 76.0-122 | | | 7.17 | 20 |
| (S) Toluene-d8 | | | | 94.1 | 96.8 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 98.4 | 102 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 118 | 121 | 70.0-130 | | | | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3937873-1 06/16/23 08:50

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|----------------------------|-------------------|--------------|----------------|----------------|
| TPH (GC/FID) High Fraction | U | | 0.0247 | 0.100 |
| (S) o-Terphenyl | 89.0 | | | 31.0-160 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3937873-2 06/16/23 09:13 • (LCSD) R3937873-3 06/16/23 09:36

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|----------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH (GC/FID) High Fraction | 1.50 | 1.71 | 1.52 | 114 | 101 | 50.0-150 | | | 11.8 | 20 |
| (S) o-Terphenyl | | | | 91.5 | 82.0 | 31.0-160 | | | | |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3936954-1 06/15/23 01:45

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-------------------------|--------------------|--------------|-----------------|-----------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 |
| C28-C36 Motor Oil Range | U | | 0.274 | 4.00 |
| (S) o-Terphenyl | 74.9 | | | 18.0-148 |

Laboratory Control Sample (LCS)

(LCS) R3936954-2 06/15/23 01:57

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| C10-C28 Diesel Range | 50.0 | 38.5 | 77.0 | 50.0-150 | |
| (S) o-Terphenyl | | | 76.4 | 18.0-148 | |

L1624700-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624700-02 06/15/23 01:45 • (MS) R3936954-3 06/15/23 01:57 • (MSD) R3936954-4 06/15/23 02:10

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| C10-C28 Diesel Range | 48.5 | U | 35.3 | 32.0 | 72.8 | 66.9 | 1 | 50.0-150 | | | 9.81 | 20 |
| (S) o-Terphenyl | | | | | 81.0 | 78.2 | | 18.0-148 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937037-2 06/14/23 01:22

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Acenaphthene | U | | 0.00209 | 0.00600 |
| Anthracene | U | | 0.00230 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 |
| Chrysene | U | | 0.00232 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 |
| Fluoranthene | U | | 0.00227 | 0.00600 |
| Fluorene | U | | 0.00205 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 |
| Naphthalene | U | | 0.00408 | 0.0200 |
| Pyrene | U | | 0.00200 | 0.00600 |
| (S) p-Terphenyl-d14 | 91.4 | | | 23.0-120 |
| (S) Nitrobenzene-d5 | 79.0 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 84.2 | | | 34.0-125 |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS)

(LCS) R3937037-1 06/14/23 01:02

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Acenaphthene | 0.0800 | 0.0649 | 81.1 | 50.0-120 | |
| Anthracene | 0.0800 | 0.0665 | 83.1 | 50.0-126 | |
| Benzo(a)anthracene | 0.0800 | 0.0650 | 81.3 | 45.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0598 | 74.8 | 42.0-121 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0567 | 70.9 | 49.0-125 | |
| Benzo(a)pyrene | 0.0800 | 0.0590 | 73.8 | 42.0-120 | |
| Chrysene | 0.0800 | 0.0668 | 83.5 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0594 | 74.3 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0699 | 87.4 | 49.0-129 | |
| Fluorene | 0.0800 | 0.0703 | 87.9 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0625 | 78.1 | 46.0-125 | |
| 1-Methylnaphthalene | 0.0800 | 0.0692 | 86.5 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0714 | 89.3 | 50.0-120 | |
| Naphthalene | 0.0800 | 0.0686 | 85.8 | 50.0-120 | |
| Pyrene | 0.0800 | 0.0704 | 88.0 | 43.0-123 | |

Laboratory Control Sample (LCS)

(LCS) R3937037-1 06/14/23 01:02

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | <u>LCS Qualifier</u> |
|----------------------|-----------------------|---------------------|---------------|------------------|----------------------|
| (S) p-Terphenyl-d14 | | | 92.6 | 23.0-120 | |
| (S) Nitrobenzene-d5 | | | 85.6 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 85.9 | 34.0-125 | |

L1624565-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624565-03 06/14/23 02:21 • (MS) R3937037-3 06/14/23 02:40 • (MSD) R3937037-4 06/14/23 03:00

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Acenaphthene | 0.0772 | 0.00260 | 0.0632 | 0.0566 | 78.5 | 70.7 | 1 | 14.0-127 | | | 11.0 | 27 |
| Anthracene | 0.0772 | 0.0131 | 0.0667 | 0.0579 | 69.4 | 58.6 | 1 | 10.0-145 | | | 14.1 | 30 |
| Benzo(a)anthracene | 0.0772 | 0.0415 | 0.0846 | 0.0758 | 55.8 | 44.9 | 1 | 10.0-139 | | | 11.0 | 30 |
| Benzo(b)fluoranthene | 0.0772 | 0.0582 | 0.0873 | 0.0813 | 37.7 | 30.2 | 1 | 10.0-140 | | | 7.12 | 36 |
| Benzo(k)fluoranthene | 0.0772 | 0.0202 | 0.0726 | 0.0671 | 67.9 | 61.4 | 1 | 10.0-137 | | | 7.87 | 31 |
| Benzo(a)pyrene | 0.0772 | 0.0383 | 0.0846 | 0.0767 | 60.0 | 50.3 | 1 | 10.0-141 | | | 9.80 | 31 |
| Chrysene | 0.0772 | 0.0605 | 0.0871 | 0.0819 | 34.5 | 28.0 | 1 | 10.0-145 | | | 6.15 | 30 |
| Dibenz(a,h)anthracene | 0.0772 | 0.00538 | 0.0592 | 0.0552 | 69.7 | 65.2 | 1 | 10.0-132 | | | 6.99 | 31 |
| Fluoranthene | 0.0772 | 0.0987 | 0.115 | 0.102 | 21.1 | 4.32 | 1 | 10.0-153 | | J6 | 12.0 | 33 |
| Fluorene | 0.0772 | 0.00388 | 0.0697 | 0.0603 | 85.3 | 73.8 | 1 | 11.0-130 | | | 14.5 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0772 | 0.0284 | 0.0757 | 0.0689 | 61.3 | 53.0 | 1 | 10.0-137 | | | 9.41 | 32 |
| 1-Methylnaphthalene | 0.0772 | 0.00506 | 0.0698 | 0.0632 | 83.9 | 76.1 | 1 | 10.0-142 | | | 9.92 | 28 |
| 2-Methylnaphthalene | 0.0772 | 0.00679 | 0.0717 | 0.0657 | 84.1 | 77.1 | 1 | 10.0-137 | | | 8.73 | 28 |
| Naphthalene | 0.0772 | 0.00468 | 0.0688 | 0.0617 | 83.1 | 74.6 | 1 | 10.0-135 | | | 10.9 | 27 |
| Pyrene | 0.0772 | 0.0780 | 0.101 | 0.0886 | 29.8 | 13.9 | 1 | 10.0-148 | | | 13.1 | 35 |
| (S) p-Terphenyl-d14 | | | | | 87.0 | 82.2 | | 23.0-120 | | | | |
| (S) Nitrobenzene-d5 | | | | | 83.4 | 81.8 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 86.5 | 82.5 | | 34.0-125 | | | | |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

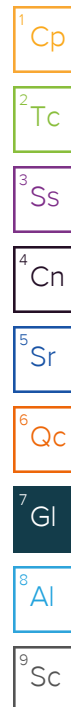
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J2 | Surrogate recovery limits have been exceeded; values are outside lower control limits. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| J7 | Surrogate recovery cannot be used for control limit evaluation due to dilution. |



ACCREDITATIONS & LOCATIONS

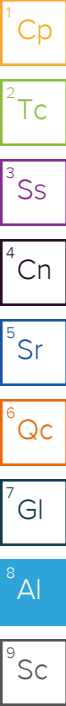
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



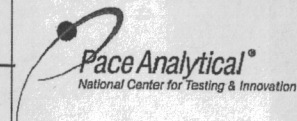
Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



Report to:
Blair Rollins

Email To:
brollins@caerusoilandgas.com

Project Description:

LOVE RANCH 8 Liquid Release Investigation

City/State
Collected: Piceance Crk, CO

Please Circle:
PT MT CT ET

Phone: (970) 640-6919

Client Project #

Lab Project #

Collected by (print):

Jordan Veith

Site/Facility ID #

LOVE RANCH 8

P.O. #

Collected by (signature):

Jordan Veith

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

Standard TAT

No.
of
Cntrs

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

COGCC Table 915-1 ORGANICS

EC, pH, SAR

Arsenic, Boron

COGCC Table 910-1

TPH

SDG #

1629642

J104

Acctnum:

Template:

Prelogin:

PM:

PB:

Shipped Via:

Remarks

Sample # (lab only)

2023-06-07-LOVE RANCH 8 - M0101

Grab

SS

0

6/7/2023

9:00

2

X

X

X

X

X

X

X

X

X

X

X

X

X

X

2023-06-07-LOVE RANCH 8 - (ST-PC-M0101) Gmb

OT

-

9:10

5

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

* Matrix:

SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other Surface Water

Remarks:

Samples returned via:

UPS FedEx Courier

Tracking #

pH Temp

Flow Other

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
If Applicable
VOA Zero Headspace: ☒ Y ☐ N
Preservation Correct/Checked: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

Relinquished by: (Signature)

Jordan Veith

Date:

6/7/2023

Time:

9:45

Received by: (Signature)

[Signature] 6/8/2023

Trip Blank Received: Yes (No)

☒ HCL / MeOH
TBR

Relinquished by: (Signature)

[Signature]

Date:

6/8/23

Time:

1500

Received by: (Signature)

[Signature]

Temp: 15.7°C

4.6

Bottles Received:

7

If preservation required by Login: Date/Time

Relinquished by: (Signature)

[Signature]

Date:

Time:

Received for lab by: (Signature)

[Signature]

Date:

6/8/2023

Time:

0900

Hold:

Condition:

NCF / OK

Caerus Oil and Gas

Sample Delivery Group: L1625442
Samples Received: 06/13/2023
Project Number:
Description: Love Ranch 8 Liquid Line Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



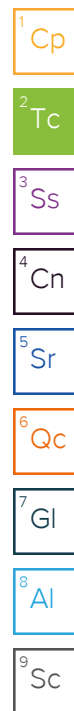
Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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| Sc: Sample Chain of Custody | 19 |



SAMPLE SUMMARY

20230612-LOVE RANCH 8-(ST-PC-UG02) L1625442-01 GW

Collected by
Jordan Veith

Collected date/time
06/12/23 07:09

Received date/time
06/13/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2077627 | 1 | 06/14/23 22:38 | 06/15/23 00:00 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 1 | 06/17/23 16:33 | 06/17/23 16:33 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 5 | 06/17/23 16:46 | 06/17/23 16:46 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2079488 | 1 | 06/17/23 04:48 | 06/17/23 04:48 | DYW | Mt. Juliet, TN |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20230612-LOVE RANCH 8-(ST-PC-POR) L1625442-02 GW

Collected by
Jordan Veith

Collected date/time
06/12/23 07:15

Received date/time
06/13/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2077627 | 1 | 06/14/23 22:38 | 06/15/23 00:00 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 1 | 06/17/23 17:00 | 06/17/23 17:00 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 5 | 06/17/23 17:13 | 06/17/23 17:13 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2081394 | 10 | 06/21/23 05:23 | 06/21/23 05:23 | JAH | Mt. Juliet, TN |

20230612-LOVE RANCH 8-(ST-PC-DG14) L1625442-03 GW

Collected by
Jordan Veith

Collected date/time
06/12/23 07:21

Received date/time
06/13/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2078231 | 1 | 06/15/23 10:40 | 06/15/23 15:48 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 1 | 06/17/23 17:27 | 06/17/23 17:27 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 5 | 06/17/23 17:40 | 06/17/23 17:40 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2081394 | 1 | 06/21/23 00:18 | 06/21/23 00:18 | JAH | Mt. Juliet, TN |

20230612-LOVE RANCH 8-(ST-PC-DG13) L1625442-04 GW

Collected by
Jordan Veith

Collected date/time
06/12/23 07:28

Received date/time
06/13/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2078231 | 1 | 06/15/23 10:40 | 06/15/23 15:48 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 1 | 06/17/23 17:53 | 06/17/23 17:53 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 5 | 06/17/23 18:34 | 06/17/23 18:34 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2081394 | 1 | 06/21/23 00:37 | 06/21/23 00:37 | JAH | Mt. Juliet, TN |

20230612-LOVE RANCH 8-(ST-PC-DG12) L1625442-05 GW

Collected by
Jordan Veith

Collected date/time
06/12/23 07:36

Received date/time
06/13/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2078231 | 1 | 06/15/23 10:40 | 06/15/23 15:48 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 1 | 06/17/23 18:47 | 06/17/23 18:47 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 5 | 06/17/23 19:00 | 06/17/23 19:00 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2081394 | 1 | 06/21/23 00:56 | 06/21/23 00:56 | JAH | Mt. Juliet, TN |

20230612-LOVE RANCH 8-(ST-PC-DG11) L1625442-06 GW

Collected by
Jordan Veith

Collected date/time
06/12/23 07:45

Received date/time
06/13/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2078231 | 1 | 06/15/23 10:40 | 06/15/23 15:48 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 1 | 06/17/23 19:14 | 06/17/23 19:14 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2079605 | 5 | 06/17/23 19:27 | 06/17/23 19:27 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2081394 | 1 | 06/21/23 01:15 | 06/21/23 01:15 | JAH | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

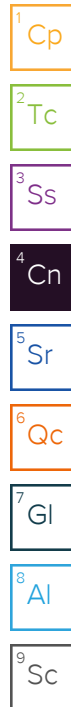


Chris Ward
Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

| <u>Lab Sample ID</u> | <u>Project Sample ID</u> | <u>Method</u> |
|------------------------------------|--|---------------|
| <u>L1625442-06</u> | <u>20230612-LOVE RANCH</u> <u>8-(ST-PC-DG1)</u> | 8260B |



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 902 | | 20.0 | 1 | 06/15/2023 00:00 | WG2077627 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 15.2 | | 0.379 | 1.00 | 1 | 06/17/2023 16:33 | WG2079605 |
| Sulfate | 327 | | 2.97 | 25.0 | 5 | 06/17/2023 16:46 | WG2079605 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 06/17/2023 04:48 | WG2079488 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 06/17/2023 04:48 | WG2079488 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/17/2023 04:48 | WG2079488 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 06/17/2023 04:48 | WG2079488 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/17/2023 04:48 | WG2079488 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/17/2023 04:48 | WG2079488 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/17/2023 04:48 | WG2079488 |
| (S) Toluene-d8 | 98.5 | | | 80.0-120 | | 06/17/2023 04:48 | WG2079488 |
| (S) 4-Bromofluorobenzene | 98.9 | | | 77.0-126 | | 06/17/2023 04:48 | WG2079488 |
| (S) 1,2-Dichloroethane-d4 | 114 | | | 70.0-130 | | 06/17/2023 04:48 | WG2079488 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 910 | | 20.0 | 1 | 06/15/2023 00:00 | WG2077627 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 15.5 | | 0.379 | 1.00 | 1 | 06/17/2023 17:00 | WG2079605 |
| Sulfate | 326 | | 2.97 | 25.0 | 5 | 06/17/2023 17:13 | WG2079605 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.00225 | J | 0.000941 | 0.0100 | 10 | 06/21/2023 05:23 | WG2081394 |
| Toluene | 0.0516 | | 0.00278 | 0.0100 | 10 | 06/21/2023 05:23 | WG2081394 |
| Ethylbenzene | 0.0227 | | 0.00137 | 0.0100 | 10 | 06/21/2023 05:23 | WG2081394 |
| Xylenes, Total | 0.504 | | 0.00174 | 0.0300 | 10 | 06/21/2023 05:23 | WG2081394 |
| Naphthalene | 0.0138 | J | 0.0100 | 0.0500 | 10 | 06/21/2023 05:23 | WG2081394 |
| 1,2,4-Trimethylbenzene | 0.225 | | 0.00322 | 0.0100 | 10 | 06/21/2023 05:23 | WG2081394 |
| 1,3,5-Trimethylbenzene | 0.211 | | 0.00104 | 0.0100 | 10 | 06/21/2023 05:23 | WG2081394 |
| (S) Toluene-d8 | 110 | | | 80.0-120 | | 06/21/2023 05:23 | WG2081394 |
| (S) 4-Bromofluorobenzene | 94.0 | | | 77.0-126 | | 06/21/2023 05:23 | WG2081394 |
| (S) 1,2-Dichloroethane-d4 | 123 | | | 70.0-130 | | 06/21/2023 05:23 | WG2081394 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 910 | | 20.0 | 1 | 06/15/2023 15:48 | WG2078231 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 15.5 | | 0.379 | 1.00 | 1 | 06/17/2023 17:27 | WG2079605 |
| Sulfate | 323 | | 2.97 | 25.0 | 5 | 06/17/2023 17:40 | WG2079605 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|--------------------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000760 | J | 0.0000941 | 0.00100 | 1 | 06/21/2023 00:18 | WG2081394 |
| Toluene | 0.00171 | | 0.000278 | 0.00100 | 1 | 06/21/2023 00:18 | WG2081394 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/21/2023 00:18 | WG2081394 |
| Xylenes, Total | 0.000668 | J | 0.000174 | 0.00300 | 1 | 06/21/2023 00:18 | WG2081394 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/21/2023 00:18 | WG2081394 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/21/2023 00:18 | WG2081394 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/21/2023 00:18 | WG2081394 |
| (S) Toluene-d8 | 110 | | | 80.0-120 | | 06/21/2023 00:18 | WG2081394 |
| (S) 4-Bromofluorobenzene | 94.4 | | | 77.0-126 | | 06/21/2023 00:18 | WG2081394 |
| (S) 1,2-Dichloroethane-d4 | 141 | J1 | | 70.0-130 | | 06/21/2023 00:18 | WG2081394 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 930 | | 20.0 | 1 | 06/15/2023 15:48 | WG2078231 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 15.9 | | 0.379 | 1.00 | 1 | 06/17/2023 17:53 | WG2079605 |
| Sulfate | 323 | | 2.97 | 25.0 | 5 | 06/17/2023 18:34 | WG2079605 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000404 | J | 0.0000941 | 0.00100 | 1 | 06/21/2023 00:37 | WG2081394 |
| Toluene | 0.00110 | | 0.000278 | 0.00100 | 1 | 06/21/2023 00:37 | WG2081394 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/21/2023 00:37 | WG2081394 |
| Xylenes, Total | 0.000418 | J | 0.000174 | 0.00300 | 1 | 06/21/2023 00:37 | WG2081394 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/21/2023 00:37 | WG2081394 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/21/2023 00:37 | WG2081394 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/21/2023 00:37 | WG2081394 |
| (S) Toluene-d8 | 108 | | | 80.0-120 | | 06/21/2023 00:37 | WG2081394 |
| (S) 4-Bromofluorobenzene | 92.9 | | | 77.0-126 | | 06/21/2023 00:37 | WG2081394 |
| (S) 1,2-Dichloroethane-d4 | 123 | | | 70.0-130 | | 06/21/2023 00:37 | WG2081394 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 916 | | 20.0 | 1 | 06/15/2023 15:48 | WG2078231 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 15.4 | | 0.379 | 1.00 | 1 | 06/17/2023 18:47 | WG2079605 |
| Sulfate | 325 | | 2.97 | 25.0 | 5 | 06/17/2023 19:00 | WG2079605 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000376 | J | 0.0000941 | 0.00100 | 1 | 06/21/2023 00:56 | WG2081394 |
| Toluene | 0.000946 | J | 0.000278 | 0.00100 | 1 | 06/21/2023 00:56 | WG2081394 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/21/2023 00:56 | WG2081394 |
| Xylenes, Total | 0.000323 | J | 0.000174 | 0.00300 | 1 | 06/21/2023 00:56 | WG2081394 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/21/2023 00:56 | WG2081394 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/21/2023 00:56 | WG2081394 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/21/2023 00:56 | WG2081394 |
| (S) Toluene-d8 | 109 | | | 80.0-120 | | 06/21/2023 00:56 | WG2081394 |
| (S) 4-Bromofluorobenzene | 92.6 | | | 77.0-126 | | 06/21/2023 00:56 | WG2081394 |
| (S) 1,2-Dichloroethane-d4 | 124 | | | 70.0-130 | | 06/21/2023 00:56 | WG2081394 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 910 | | 20.0 | 1 | 06/15/2023 15:48 | WG2078231 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 15.4 | | 0.379 | 1.00 | 1 | 06/17/2023 19:14 | WG2079605 |
| Sulfate | 323 | | 2.97 | 25.0 | 5 | 06/17/2023 19:27 | WG2079605 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000389 | J | 0.0000941 | 0.00100 | 1 | 06/21/2023 01:15 | WG2081394 |
| Toluene | 0.000948 | J | 0.000278 | 0.00100 | 1 | 06/21/2023 01:15 | WG2081394 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/21/2023 01:15 | WG2081394 |
| Xylenes, Total | 0.000373 | J | 0.000174 | 0.00300 | 1 | 06/21/2023 01:15 | WG2081394 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/21/2023 01:15 | WG2081394 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/21/2023 01:15 | WG2081394 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/21/2023 01:15 | WG2081394 |
| (S) Toluene-d8 | 110 | | | 80.0-120 | | 06/21/2023 01:15 | WG2081394 |
| (S) 4-Bromofluorobenzene | 96.6 | | | 77.0-126 | | 06/21/2023 01:15 | WG2081394 |
| (S) 1,2-Dichloroethane-d4 | 121 | | | 70.0-130 | | 06/21/2023 01:15 | WG2081394 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937903-1 06/15/23 00:00

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1625432-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1625432-14 06/15/23 00:00 • (DUP) R3937903-3 06/15/23 00:00

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 1500 | 1500 | 1 | 0.167 | | 5 |

L1625442-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1625442-02 06/15/23 00:00 • (DUP) R3937903-4 06/15/23 00:00

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 910 | 892 | 1 | 2.00 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3937903-2 06/15/23 00:00

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8370 | 95.1 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937904-1 06/15/23 15:48

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|------------------|-------------------|--------------|----------------|----------------|
| Dissolved Solids | U | ⬇ | 10.0 | 10.0 |

L1625442-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1625442-03 06/15/23 15:48 • (DUP) R3937904-3 06/15/23 15:48

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 910 | 914 | 1 | 0.439 | | 5 |

L1625486-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1625486-04 06/15/23 15:48 • (DUP) R3937904-4 06/15/23 15:48

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 326 | 320 | 1 | 1.86 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3937904-2 06/15/23 15:48

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------|----------------------|--------------------|---------------|------------------|---------------|
| Dissolved Solids | 8800 | 8630 | 98.1 | 77.3-123 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3938432-1 06/17/23 11:46

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | 0.484 | U | 0.379 | 1.00 |
| Sulfate | 0.653 | U | 0.594 | 5.00 |

L1625145-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1625145-01 06/17/23 13:52 • (DUP) R3938432-3 06/17/23 14:05

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 68.8 | 69.1 | 1 | 0.400 | | 15 |
| Sulfate | 95.5 | 95.7 | 1 | 0.158 | | 15 |

L1625742-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1625742-03 06/17/23 21:41 • (DUP) R3938432-6 06/17/23 21:55

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 2.74 | 2.76 | 1 | 0.811 | | 15 |
| Sulfate | 29.9 | 29.5 | 1 | 1.36 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3938432-2 06/17/23 11:59

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 38.8 | 97.1 | 80.0-120 | |
| Sulfate | 40.0 | 38.2 | 95.5 | 80.0-120 | |

L1625145-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1625145-01 06/17/23 13:52 • (MS) R3938432-4 06/17/23 14:19 • (MSD) R3938432-5 06/17/23 14:32

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|--------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 68.8 | 116 | 116 | 93.8 | 94.0 | 1 | 80.0-120 | | | 0.0771 | 15 |
| Sulfate | 50.0 | 95.5 | 91.0 | 91.0 | 0.000 | 0.000 | 1 | 80.0-120 | J6 | J6 | 0.0362 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1625742-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1625742-03 06/17/23 21:41 • (MS) R3938432-7 06/17/23 22:08

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 2.74 | 51.3 | 97.1 | 1 | 80.0-120 | |
| Sulfate | 50.0 | 29.9 | 27.9 | 0.000 | 1 | 80.0-120 | J6 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3939066-2 06/17/23 00:02

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 96.6 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 96.8 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 111 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R3939066-1 06/16/23 23:21

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|----------------------|--------------------|---------------|------------------|---------------|
| Benzene | 0.00500 | 0.00504 | 101 | 70.0-123 | |
| Toluene | 0.00500 | 0.00468 | 93.6 | 79.0-120 | |
| Ethylbenzene | 0.00500 | 0.00457 | 91.4 | 79.0-123 | |
| Xylenes, Total | 0.0150 | 0.0138 | 92.0 | 79.0-123 | |
| Naphthalene | 0.00500 | 0.00423 | 84.6 | 54.0-135 | |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00462 | 92.4 | 76.0-121 | |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00476 | 95.2 | 76.0-122 | |
| (S) Toluene-d8 | | | 100 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 99.6 | 77.0-126 | |
| (S) 1,2-Dichloroethane-d4 | | | 113 | 70.0-130 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3939406-2 06/20/23 21:46

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 109 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 97.2 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 125 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R3939406-1 06/20/23 20:32

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|----------------------|--------------------|---------------|------------------|---------------|
| Benzene | 0.00500 | 0.00476 | 95.2 | 70.0-123 | |
| Toluene | 0.00500 | 0.00462 | 92.4 | 79.0-120 | |
| Ethylbenzene | 0.00500 | 0.00440 | 88.0 | 79.0-123 | |
| Xylenes, Total | 0.0150 | 0.0125 | 83.3 | 79.0-123 | |
| Naphthalene | 0.00500 | 0.00434 | 86.8 | 54.0-135 | |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00455 | 91.0 | 76.0-121 | |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00486 | 97.2 | 76.0-122 | |
| (S) Toluene-d8 | | | 106 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 87.7 | 77.0-126 | |
| (S) 1,2-Dichloroethane-d4 | | | 119 | 70.0-130 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J1 | Surrogate recovery limits have been exceeded; values are outside upper control limits. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

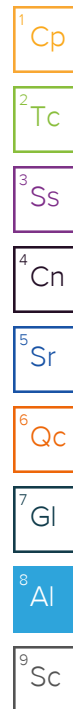
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



6/13-NCF-L1625442 CAERUSPCO

R5

Time estimate: 0h

Time spent: 0h

Members



Hailey Nelson (responsible)



Chris Ward

- ☐ Parameter(s) past holding time
- ☐ Temperature not in range
- ☐ Improper container type
- ☐ pH not in range
- ☐ Insufficient sample volume
- ☐ Sample is biphasic
- ☐ Vials received with headspace
- ☒ Broken container
- ☐ Sufficient sample remains
- ☐ If broken container: Insufficient packing material around container
- ☐ If broken container: Insufficient packing material inside cooler
- ☐ If broken container: Improper handling by carrier: _____
- ☐ If broken container: Sample was frozen
- ☐ If broken container: Container lid not intact
- ☐ Client informed by Call
- ☐ Client informed by Email
- ☐ Client informed by Voicemail
- ☐ Date/Time: _____
- ☐ PM initials: _____
- ☐ Client Contact: _____

Comments

Hailey Nelson

13 June 2023 4:32 PM

1 vial received broken for ID: 20230612-LOVE RANCH 8-(ST-PC-DG13). 2 vials remain.

July 12, 2023

Revised Report

Caerus Oil and Gas

Sample Delivery Group: L1627802
Samples Received: 06/20/2023
Project Number:
Description: Love Ranch 8 Liquid Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Entire Report Reviewed By:



Chris Ward
Project Manager

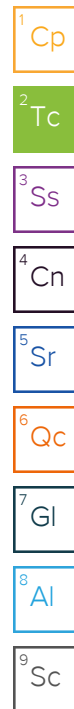
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230619-LOVE RANCH 8-(ST-PC-UG02) L1627802-01 GW

Collected by
Jordan Veith

Collected date/time
06/19/23 06:59

Received date/time
06/20/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2083136 | 1 | 06/23/23 05:48 | 06/23/23 11:34 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 1 | 06/26/23 12:25 | 06/26/23 12:25 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 5 | 06/26/23 12:39 | 06/26/23 12:39 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2084787 | 1 | 06/27/23 02:22 | 06/27/23 02:22 | JAH | Mt. Juliet, TN |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20230619-LOVE RANCH 8-(ST-PC-POR) L1627802-02 GW

Collected by
Jordan Veith

Collected date/time
06/19/23 07:08

Received date/time
06/20/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2083136 | 1 | 06/23/23 05:48 | 06/23/23 11:34 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 1 | 06/26/23 12:52 | 06/26/23 12:52 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 5 | 06/26/23 13:06 | 06/26/23 13:06 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2084787 | 1 | 06/27/23 02:41 | 06/27/23 02:41 | JAH | Mt. Juliet, TN |

20230619-LOVE RANCH 8-(ST-PC-DG14) L1627802-03 GW

Collected by
Jordan Veith

Collected date/time
06/19/23 07:16

Received date/time
06/20/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2083137 | 1 | 06/23/23 05:50 | 06/23/23 10:29 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 1 | 06/26/23 13:19 | 06/26/23 13:19 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 5 | 06/26/23 13:32 | 06/26/23 13:32 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2084787 | 1 | 06/27/23 03:00 | 06/27/23 03:00 | JAH | Mt. Juliet, TN |

20230619-LOVE RANCH 8-(ST-PC-DG13) L1627802-04 GW

Collected by
Jordan Veith

Collected date/time
06/19/23 07:24

Received date/time
06/20/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2083137 | 1 | 06/23/23 05:50 | 06/23/23 10:29 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 1 | 06/26/23 13:46 | 06/26/23 13:46 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 5 | 06/26/23 14:26 | 06/26/23 14:26 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2084787 | 1 | 06/27/23 03:19 | 06/27/23 03:19 | JAH | Mt. Juliet, TN |

20230619-LOVE RANCH 8-(ST-PC-DG12) L1627802-05 GW

Collected by
Jordan Veith

Collected date/time
06/19/23 07:32

Received date/time
06/20/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2083137 | 1 | 06/23/23 05:50 | 06/23/23 10:29 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 1 | 06/26/23 14:40 | 06/26/23 14:40 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 5 | 06/26/23 14:53 | 06/26/23 14:53 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2084787 | 1 | 06/27/23 03:38 | 06/27/23 03:38 | JAH | Mt. Juliet, TN |

20230619-LOVE RANCH 8-(ST-PC-DG11) L1627802-06 GW

Collected by
Jordan Veith

Collected date/time
06/19/23 07:41

Received date/time
06/20/23 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2083137 | 1 | 06/23/23 05:50 | 06/23/23 10:29 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 1 | 06/26/23 15:06 | 06/26/23 15:06 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2084385 | 5 | 06/26/23 15:20 | 06/26/23 15:20 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2085124 | 1 | 06/27/23 12:16 | 06/27/23 12:16 | JAH | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



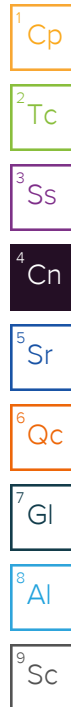
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 06/29/23 12:25

Project Narrative

Report reissued 7/12 to update sample ID



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 972 | | 20.0 | 1 | 06/23/2023 11:34 | WG2083136 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 17.3 | | 0.379 | 1.00 | 1 | 06/26/2023 12:25 | WG2084385 |
| Sulfate | 395 | | 2.97 | 25.0 | 5 | 06/26/2023 12:39 | WG2084385 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 06/27/2023 02:22 | WG2084787 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 06/27/2023 02:22 | WG2084787 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/27/2023 02:22 | WG2084787 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 06/27/2023 02:22 | WG2084787 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/27/2023 02:22 | WG2084787 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/27/2023 02:22 | WG2084787 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/27/2023 02:22 | WG2084787 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 06/27/2023 02:22 | WG2084787 |
| (S) 4-Bromofluorobenzene | 107 | | | 77.0-126 | | 06/27/2023 02:22 | WG2084787 |
| (S) 1,2-Dichloroethane-d4 | 125 | | | 70.0-130 | | 06/27/2023 02:22 | WG2084787 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 978 | | 20.0 | 1 | 06/23/2023 11:34 | WG2083136 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 18.0 | | 0.379 | 1.00 | 1 | 06/26/2023 12:52 | WG2084385 |
| Sulfate | 394 | | 2.97 | 25.0 | 5 | 06/26/2023 13:06 | WG2084385 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.0182 | | 0.0000941 | 0.00100 | 1 | 06/27/2023 02:41 | WG2084787 |
| Toluene | 0.0465 | | 0.000278 | 0.00100 | 1 | 06/27/2023 02:41 | WG2084787 |
| Ethylbenzene | 0.00167 | | 0.000137 | 0.00100 | 1 | 06/27/2023 02:41 | WG2084787 |
| Xylenes, Total | 0.0274 | | 0.000174 | 0.00300 | 1 | 06/27/2023 02:41 | WG2084787 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/27/2023 02:41 | WG2084787 |
| 1,2,4-Trimethylbenzene | 0.00126 | | 0.000322 | 0.00100 | 1 | 06/27/2023 02:41 | WG2084787 |
| 1,3,5-Trimethylbenzene | 0.00114 | | 0.000104 | 0.00100 | 1 | 06/27/2023 02:41 | WG2084787 |
| (S) Toluene-d8 | 104 | | | 80.0-120 | | 06/27/2023 02:41 | WG2084787 |
| (S) 4-Bromofluorobenzene | 108 | | | 77.0-126 | | 06/27/2023 02:41 | WG2084787 |
| (S) 1,2-Dichloroethane-d4 | 120 | | | 70.0-130 | | 06/27/2023 02:41 | WG2084787 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1000 | | 20.0 | 1 | 06/23/2023 10:29 | WG2083137 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 17.3 | | 0.379 | 1.00 | 1 | 06/26/2023 13:19 | WG2084385 |
| Sulfate | 394 | | 2.97 | 25.0 | 5 | 06/26/2023 13:32 | WG2084385 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000654 | J | 0.0000941 | 0.00100 | 1 | 06/27/2023 03:00 | WG2084787 |
| Toluene | 0.00157 | | 0.000278 | 0.00100 | 1 | 06/27/2023 03:00 | WG2084787 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/27/2023 03:00 | WG2084787 |
| Xylenes, Total | 0.000795 | J | 0.000174 | 0.00300 | 1 | 06/27/2023 03:00 | WG2084787 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/27/2023 03:00 | WG2084787 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/27/2023 03:00 | WG2084787 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/27/2023 03:00 | WG2084787 |
| (S) Toluene-d8 | 105 | | | 80.0-120 | | 06/27/2023 03:00 | WG2084787 |
| (S) 4-Bromofluorobenzene | 101 | | | 77.0-126 | | 06/27/2023 03:00 | WG2084787 |
| (S) 1,2-Dichloroethane-d4 | 122 | | | 70.0-130 | | 06/27/2023 03:00 | WG2084787 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1030 | | 20.0 | 1 | 06/23/2023 10:29 | WG2083137 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 18.1 | | 0.379 | 1.00 | 1 | 06/26/2023 13:46 | WG2084385 |
| Sulfate | 395 | | 2.97 | 25.0 | 5 | 06/26/2023 14:26 | WG2084385 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000466 | J | 0.0000941 | 0.00100 | 1 | 06/27/2023 03:19 | WG2084787 |
| Toluene | 0.00119 | | 0.000278 | 0.00100 | 1 | 06/27/2023 03:19 | WG2084787 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/27/2023 03:19 | WG2084787 |
| Xylenes, Total | 0.000562 | J | 0.000174 | 0.00300 | 1 | 06/27/2023 03:19 | WG2084787 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/27/2023 03:19 | WG2084787 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/27/2023 03:19 | WG2084787 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/27/2023 03:19 | WG2084787 |
| (S) Toluene-d8 | 101 | | | 80.0-120 | | 06/27/2023 03:19 | WG2084787 |
| (S) 4-Bromofluorobenzene | 103 | | | 77.0-126 | | 06/27/2023 03:19 | WG2084787 |
| (S) 1,2-Dichloroethane-d4 | 123 | | | 70.0-130 | | 06/27/2023 03:19 | WG2084787 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1020 | | 20.0 | 1 | 06/23/2023 10:29 | WG2083137 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 17.2 | | 0.379 | 1.00 | 1 | 06/26/2023 14:40 | WG2084385 |
| Sulfate | 396 | | 2.97 | 25.0 | 5 | 06/26/2023 14:53 | WG2084385 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000429 | J | 0.0000941 | 0.00100 | 1 | 06/27/2023 03:38 | WG2084787 |
| Toluene | 0.00102 | | 0.000278 | 0.00100 | 1 | 06/27/2023 03:38 | WG2084787 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/27/2023 03:38 | WG2084787 |
| Xylenes, Total | 0.000437 | J | 0.000174 | 0.00300 | 1 | 06/27/2023 03:38 | WG2084787 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/27/2023 03:38 | WG2084787 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/27/2023 03:38 | WG2084787 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/27/2023 03:38 | WG2084787 |
| (S) Toluene-d8 | 99.1 | | | 80.0-120 | | 06/27/2023 03:38 | WG2084787 |
| (S) 4-Bromofluorobenzene | 102 | | | 77.0-126 | | 06/27/2023 03:38 | WG2084787 |
| (S) 1,2-Dichloroethane-d4 | 125 | | | 70.0-130 | | 06/27/2023 03:38 | WG2084787 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1010 | | 20.0 | 1 | 06/23/2023 10:29 | WG2083137 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 17.4 | | 0.379 | 1.00 | 1 | 06/26/2023 15:06 | WG2084385 |
| Sulfate | 408 | | 2.97 | 25.0 | 5 | 06/26/2023 15:20 | WG2084385 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000380 | J | 0.0000941 | 0.00100 | 1 | 06/27/2023 12:16 | WG2085124 |
| Toluene | 0.00107 | | 0.000278 | 0.00100 | 1 | 06/27/2023 12:16 | WG2085124 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 06/27/2023 12:16 | WG2085124 |
| Xylenes, Total | 0.000404 | J | 0.000174 | 0.00300 | 1 | 06/27/2023 12:16 | WG2085124 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 06/27/2023 12:16 | WG2085124 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 06/27/2023 12:16 | WG2085124 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 06/27/2023 12:16 | WG2085124 |
| (S) Toluene-d8 | 107 | | | 80.0-120 | | 06/27/2023 12:16 | WG2085124 |
| (S) 4-Bromofluorobenzene | 108 | | | 77.0-126 | | 06/27/2023 12:16 | WG2085124 |
| (S) 1,2-Dichloroethane-d4 | 122 | | | 70.0-130 | | 06/27/2023 12:16 | WG2085124 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3941517-1 06/23/23 11:34

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | ⬇ | 10.0 | 10.0 |

L1627474-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1627474-01 06/23/23 11:34 • (DUP) R3941517-3 06/23/23 11:34

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| | mg/l | mg/l | | % | | % |
| Dissolved Solids | 234 | 227 | 1 | 3.04 | | 5 |

L1627502-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1627502-01 06/23/23 11:34 • (DUP) R3941517-4 06/23/23 11:34

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| | mg/l | mg/l | | % | | % |
| Dissolved Solids | 354 | 366 | 1 | 3.33 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3941517-2 06/23/23 11:34

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8680 | 98.6 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3941518-1 06/23/23 10:29

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|------------------|-------------------|--------------|----------------|----------------|
| Dissolved Solids | U | | 10.0 | 10.0 |

L1627802-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1627802-03 06/23/23 10:29 • (DUP) R3941518-3 06/23/23 10:29

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 1000 | 1020 | 1 | 2.17 | | 5 |

L1627805-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1627805-01 06/23/23 10:29 • (DUP) R3941518-4 06/23/23 10:29

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 276 | 270 | 1 | 2.20 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3941518-2 06/23/23 10:29

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------|----------------------|--------------------|---------------|------------------|---------------|
| Dissolved Solids | 8800 | 8390 | 95.3 | 77.3-123 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3942316-1 06/26/23 09:26

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | 0.466 | U | 0.379 | 1.00 |
| Sulfate | 0.636 | U | 0.594 | 5.00 |

L1627805-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1627805-02 06/26/23 15:47 • (DUP) R3942316-3 06/26/23 16:00

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 5.40 | 5.39 | 1 | 0.285 | | 15 |
| Sulfate | 12.8 | 12.7 | 1 | 0.172 | | 15 |

L1628259-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1628259-01 06/26/23 19:08 • (DUP) R3942316-6 06/26/23 19:48

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 5.24 | 5.12 | 1 | 2.23 | | 15 |
| Sulfate | 51.3 | 50.3 | 1 | 2.05 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3942316-2 06/26/23 09:40

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 40.4 | 101 | 80.0-120 | |
| Sulfate | 40.0 | 39.4 | 98.4 | 80.0-120 | |

L1627805-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1627805-02 06/26/23 15:47 • (MS) R3942316-4 06/26/23 16:14 • (MSD) R3942316-5 06/26/23 16:27

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 5.40 | 54.4 | 53.8 | 97.9 | 96.9 | 1 | 80.0-120 | | | 0.961 | 15 |
| Sulfate | 50.0 | 12.8 | 63.8 | 63.2 | 102 | 101 | 1 | 80.0-120 | | | 0.946 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1628259-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1628259-01 06/26/23 19:08 • (MS) R3942316-7 06/26/23 20:02

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 5.24 | 55.9 | 101 | 1 | 80.0-120 | |
| Sulfate | 50.0 | 51.3 | 104 | 105 | 1 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3941615-2 06/26/23 19:55

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 102 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 98.8 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 118 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R3941615-1 06/26/23 19:17

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|----------------------|--------------------|---------------|------------------|---------------|
| Benzene | 0.00500 | 0.00512 | 102 | 70.0-123 | |
| Toluene | 0.00500 | 0.00471 | 94.2 | 79.0-120 | |
| Ethylbenzene | 0.00500 | 0.00470 | 94.0 | 79.0-123 | |
| Xylenes, Total | 0.0150 | 0.0141 | 94.0 | 79.0-123 | |
| Naphthalene | 0.00500 | 0.00383 | 76.6 | 54.0-135 | |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00453 | 90.6 | 76.0-121 | |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00463 | 92.6 | 76.0-122 | |
| (S) Toluene-d8 | | | 104 | 80.0-120 | |
| (S) 4-Bromofluorobenzene | | | 101 | 77.0-126 | |
| (S) 1,2-Dichloroethane-d4 | | | 117 | 70.0-130 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3942602-3 06/27/23 09:48

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 105 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 106 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 128 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3942602-1 06/27/23 08:22 • (LCSD) R3942602-2 06/27/23 08:44

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00456 | 0.00476 | 91.2 | 95.2 | 70.0-123 | | | 4.29 | 20 |
| Toluene | 0.00500 | 0.00458 | 0.00477 | 91.6 | 95.4 | 79.0-120 | | | 4.06 | 20 |
| Ethylbenzene | 0.00500 | 0.00455 | 0.00476 | 91.0 | 95.2 | 79.0-123 | | | 4.51 | 20 |
| Xylenes, Total | 0.0150 | 0.0135 | 0.0132 | 90.0 | 88.0 | 79.0-123 | | | 2.25 | 20 |
| Naphthalene | 0.00500 | 0.00331 | 0.00356 | 66.2 | 71.2 | 54.0-135 | | | 7.28 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00471 | 0.00470 | 94.2 | 94.0 | 76.0-121 | | | 0.213 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00492 | 0.00444 | 98.4 | 88.8 | 76.0-122 | | | 10.3 | 20 |
| (S) Toluene-d8 | | | | 101 | 103 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 104 | 107 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 122 | 118 | 70.0-130 | | | | |

L1628018-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1628018-01 06/27/23 16:59 • (MS) R3942602-4 06/27/23 19:10 • (MSD) R3942602-5 06/27/23 19:31

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 0.00500 | U | 0.00540 | 0.00513 | 108 | 103 | 1 | 17.0-158 | | | 5.13 | 27 |
| Toluene | 0.00500 | U | 0.00521 | 0.00445 | 104 | 89.0 | 1 | 26.0-154 | | | 15.7 | 28 |
| Ethylbenzene | 0.00500 | U | 0.00499 | 0.00507 | 99.8 | 101 | 1 | 30.0-155 | | | 1.59 | 27 |
| Xylenes, Total | 0.0150 | U | 0.0157 | 0.0151 | 105 | 101 | 1 | 29.0-154 | | | 3.90 | 28 |
| Naphthalene | 0.00500 | U | 0.00418 | 0.00405 | 83.6 | 81.0 | 1 | 12.0-156 | | | 3.16 | 35 |
| 1,2,4-Trimethylbenzene | 0.00500 | U | 0.00514 | 0.00516 | 103 | 103 | 1 | 26.0-154 | | | 0.388 | 27 |
| 1,3,5-Trimethylbenzene | 0.00500 | U | 0.00513 | 0.00517 | 103 | 103 | 1 | 28.0-153 | | | 0.777 | 27 |



L1628018-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1628018-01 06/27/23 16:59 • (MS) R3942602-4 06/27/23 19:10 • (MSD) R3942602-5 06/27/23 19:31

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| (S) Toluene-d8 | | | | | 101 | 88.6 | | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 110 | 105 | | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 133 | 130 | | 70.0-130 | J1 | | | |

L1627903-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1627903-03 06/27/23 18:26 • (MS) R3942602-6 06/27/23 19:53 • (MSD) R3942602-7 06/27/23 20:15

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 0.0500 | 1.62 | 1.69 | 1.67 | 140 | 100 | 10 | 17.0-158 | | | 1.19 | 27 |
| Toluene | 0.0500 | 2.99 | 2.58 | 2.48 | 0.000 | 0.000 | 10 | 26.0-154 | E V | E V | 3.95 | 28 |
| Ethylbenzene | 0.0500 | 0.531 | 0.602 | 0.576 | 142 | 90.0 | 10 | 30.0-155 | | | 4.41 | 27 |
| Xylenes, Total | 0.150 | 1.75 | 1.95 | 1.91 | 133 | 107 | 10 | 29.0-154 | | | 2.07 | 28 |
| Naphthalene | 0.0500 | 0.0434 | 0.0985 | 0.0946 | 197 | 189 | 10 | 12.0-156 | J5 | J5 | 4.04 | 35 |
| 1,2,4-Trimethylbenzene | 0.0500 | 0.241 | 0.306 | 0.300 | 130 | 118 | 10 | 26.0-154 | | | 1.98 | 27 |
| 1,3,5-Trimethylbenzene | 0.0500 | 0.0600 | 0.118 | 0.113 | 116 | 106 | 10 | 28.0-153 | | | 4.33 | 27 |
| (S) Toluene-d8 | | | | | 86.4 | 81.5 | | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 107 | 104 | | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 128 | 128 | | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

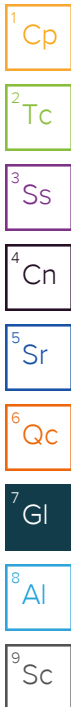
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J1 | Surrogate recovery limits have been exceeded; values are outside upper control limits. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



ACCREDITATIONS & LOCATIONS

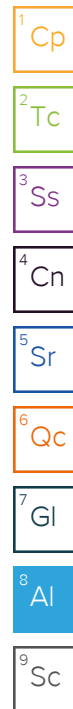
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



SDG #

1628802
I103

Acctnum:

Template:

Prelogin:

PM:

PB:

Shipped Via:

Remarks

Sample # (lab only)

Report to:

Blair Rollins

Email To:

brollins@caerusoilandgas.com

Project Description:

LOVE RANCH 8 Liquid Release Investigation

City/State
Collected:

Piceance Crk, CO

Please Circle:

PT MT CT ET

Phone: (970) 640-6919

Client Project #

Lab Project #

Collected by (print):

Jordan Veith

Site/Facility ID #

LOVE RANCH 8

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Standard TAT

No.
of
Cntrs

Immediately
Packed on Ice N ___ Y ___ X

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

| Sample ID | Comp/Grab | Matrix* | Depth | Date | Time | No. of Cntrs | COGCC Table 915-1 WATER | EC, pH, SAR | Arsenic, Boron | COGCC Table 910-1 |
|--|-----------|---------|-------|-----------|------|--------------|-------------------------|-------------|----------------|-------------------|
| 20230619-LOVE RANCH 8-(ST-PC-LGAC2) Grab | OT | — | — | 6/19/2023 | 6:59 | 5 | X | | | |
| 20230619-LOVE RANCH 8-(ST-PC-POR) | — | — | — | — | 7:08 | 5 | X | | | |
| 20230619-LOVE RANCH 8-(ST-PC-DG4H) | — | — | — | — | 7:16 | 5 | X | | | |
| 20230619-LOVE RANCH 8-(ST-PC-DG1B) | — | — | — | — | 7:24 | 5 | X | | | |
| 20230619-LOVE RANCH 8-(ST-PC-DG1Z) | — | — | — | — | 7:32 | 5 | X | | | |
| 20230619-LOVE RANCH 8-(ST-PC-DG1H) | — | — | — | — | 7:41 | 5 | X | | | |

6/19/2023

* Matrix:

SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other **SURFACE WATER**

Remarks:

Samples returned via:

___ UPS ___ FedEx ___ Courier

Tracking #

6126 6537 4200

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

| | | |
|-------------------------------|---|---|
| COC Seal Present/Intact: | Y | N |
| COC Signed/Accurate: | Y | N |
| Bottles arrive intact: | Y | N |
| Correct bottles used: | Y | N |
| Sufficient volume sent: | Y | N |
| If Applicable | | |
| VOA Zero Headspace: | Y | N |
| Preservation Correct/Checked: | Y | N |
| RAD Screen <0.5 mR/hr: | Y | N |

Relinquished by: (Signature)

Date:

6/19/2023

Time:

12:30

Received by: (Signature)

Trip Blank Received: Yes / No

HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

6/19/23

Time:

1:50

Received by: (Signature)

Temp: °C

4.3 + 0 = 4.3 30

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

6-20-23 915

Time:

Hold:

Condition:
NCF / OK

July 06, 2023

Caerus Oil and Gas

Sample Delivery Group: L1629774
Samples Received: 06/27/2023
Project Number:
Description: Love Ranch 8 Liquid Line Release
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

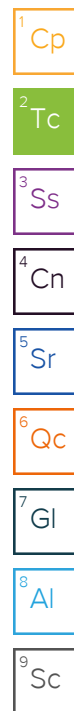
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230626-LOVERANCH8-(ST-PC-UG02) L1629774-01 GW

Collected by
Tristan Schmalz

Collected date/time
06/26/23 08:16

Received date/time
06/27/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2086270 | 1 | 06/29/23 08:14 | 06/29/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 1 | 07/03/23 13:55 | 07/03/23 13:55 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 5 | 07/03/23 14:09 | 07/03/23 14:09 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2088993 | 1 | 07/04/23 05:23 | 07/04/23 05:23 | JBE | Mt. Juliet, TN |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

20230626-LOVERANCH8-(ST-PC-POR) L1629774-02 GW

Collected by
Tristan Schmalz

Collected date/time
06/26/23 08:35

Received date/time
06/27/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2086270 | 1 | 06/29/23 08:14 | 06/29/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 1 | 07/03/23 14:24 | 07/03/23 14:24 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 5 | 07/03/23 14:39 | 07/03/23 14:39 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2088993 | 1 | 07/04/23 05:45 | 07/04/23 05:45 | JBE | Mt. Juliet, TN |

20230626-LOVERANCH8-(ST-PC-DG14) L1629774-03 GW

Collected by
Tristan Schmalz

Collected date/time
06/26/23 08:40

Received date/time
06/27/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2086270 | 1 | 06/29/23 08:14 | 06/29/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 1 | 07/03/23 14:54 | 07/03/23 14:54 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 5 | 07/03/23 15:09 | 07/03/23 15:09 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2088993 | 1 | 07/04/23 06:07 | 07/04/23 06:07 | JBE | Mt. Juliet, TN |

20230626-LOVERANCH8-(ST-PC-DG13) L1629774-04 GW

Collected by
Tristan Schmalz

Collected date/time
06/26/23 08:47

Received date/time
06/27/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2086270 | 1 | 06/29/23 08:14 | 06/29/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 1 | 07/03/23 15:24 | 07/03/23 15:24 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 5 | 07/03/23 16:08 | 07/03/23 16:08 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2088993 | 1 | 07/04/23 06:28 | 07/04/23 06:28 | JBE | Mt. Juliet, TN |

20230626-LOVERANCH8-(ST-PC-DG12) L1629774-05 GW

Collected by
Tristan Schmalz

Collected date/time
06/26/23 08:55

Received date/time
06/27/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2086270 | 1 | 06/29/23 08:14 | 06/29/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 1 | 07/03/23 16:23 | 07/03/23 16:23 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 5 | 07/03/23 17:21 | 07/03/23 17:21 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2088993 | 1 | 07/04/23 06:50 | 07/04/23 06:50 | JBE | Mt. Juliet, TN |

20230626-LOVERANCH8-(ST-PC-DG11) L1629774-06 GW

Collected by
Tristan Schmalz


Collected date/time
06/26/23 09:16

Received date/time
06/27/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2086270 | 1 | 06/29/23 08:14 | 06/29/23 09:52 | AS | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 1 | 07/03/23 17:35 | 07/03/23 17:35 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2088632 | 5 | 07/03/23 17:50 | 07/03/23 17:50 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2088993 | 1 | 07/04/23 07:12 | 07/04/23 07:12 | JBE | Mt. Juliet, TN |

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1080 | | 20.0 | 1 | 06/29/2023 09:52 | WG2086270 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 18.2 | | 0.379 | 1.00 | 1 | 07/03/2023 13:55 | WG2088632 |
| Sulfate | 340 | | 2.97 | 25.0 | 5 | 07/03/2023 14:09 | WG2088632 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 07/04/2023 05:23 | WG2088993 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 07/04/2023 05:23 | WG2088993 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/04/2023 05:23 | WG2088993 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 07/04/2023 05:23 | WG2088993 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/04/2023 05:23 | WG2088993 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/04/2023 05:23 | WG2088993 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/04/2023 05:23 | WG2088993 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 07/04/2023 05:23 | WG2088993 |
| (S) 4-Bromofluorobenzene | 87.4 | | | 77.0-126 | | 07/04/2023 05:23 | WG2088993 |
| (S) 1,2-Dichloroethane-d4 | 110 | | | 70.0-130 | | 07/04/2023 05:23 | WG2088993 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1110 | | 20.0 | 1 | 06/29/2023 09:52 | WG2086270 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 18.4 | | 0.379 | 1.00 | 1 | 07/03/2023 14:24 | WG2088632 |
| Sulfate | 339 | | 2.97 | 25.0 | 5 | 07/03/2023 14:39 | WG2088632 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.00870 | | 0.0000941 | 0.00100 | 1 | 07/04/2023 05:45 | WG2088993 |
| Toluene | 0.0238 | | 0.000278 | 0.00100 | 1 | 07/04/2023 05:45 | WG2088993 |
| Ethylbenzene | 0.000751 | J | 0.000137 | 0.00100 | 1 | 07/04/2023 05:45 | WG2088993 |
| Xylenes, Total | 0.0119 | | 0.000174 | 0.00300 | 1 | 07/04/2023 05:45 | WG2088993 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/04/2023 05:45 | WG2088993 |
| 1,2,4-Trimethylbenzene | 0.000612 | J | 0.000322 | 0.00100 | 1 | 07/04/2023 05:45 | WG2088993 |
| 1,3,5-Trimethylbenzene | 0.000640 | J | 0.000104 | 0.00100 | 1 | 07/04/2023 05:45 | WG2088993 |
| (S) Toluene-d8 | 104 | | | 80.0-120 | | 07/04/2023 05:45 | WG2088993 |
| (S) 4-Bromofluorobenzene | 91.4 | | | 77.0-126 | | 07/04/2023 05:45 | WG2088993 |
| (S) 1,2-Dichloroethane-d4 | 106 | | | 70.0-130 | | 07/04/2023 05:45 | WG2088993 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1070 | | 20.0 | 1 | 06/29/2023 09:52 | WG2086270 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 18.0 | | 0.379 | 1.00 | 1 | 07/03/2023 14:54 | WG2088632 |
| Sulfate | 340 | | 2.97 | 25.0 | 5 | 07/03/2023 15:09 | WG2088632 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000625 | J | 0.0000941 | 0.00100 | 1 | 07/04/2023 06:07 | WG2088993 |
| Toluene | 0.00185 | | 0.000278 | 0.00100 | 1 | 07/04/2023 06:07 | WG2088993 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/04/2023 06:07 | WG2088993 |
| Xylenes, Total | 0.000624 | J | 0.000174 | 0.00300 | 1 | 07/04/2023 06:07 | WG2088993 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/04/2023 06:07 | WG2088993 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/04/2023 06:07 | WG2088993 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/04/2023 06:07 | WG2088993 |
| (S) Toluene-d8 | 106 | | | 80.0-120 | | 07/04/2023 06:07 | WG2088993 |
| (S) 4-Bromofluorobenzene | 93.9 | | | 77.0-126 | | 07/04/2023 06:07 | WG2088993 |
| (S) 1,2-Dichloroethane-d4 | 112 | | | 70.0-130 | | 07/04/2023 06:07 | WG2088993 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1060 | | 20.0 | 1 | 06/29/2023 09:52 | WG2086270 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 18.1 | | 0.379 | 1.00 | 1 | 07/03/2023 15:24 | WG2088632 |
| Sulfate | 340 | | 2.97 | 25.0 | 5 | 07/03/2023 16:08 | WG2088632 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000516 | J | 0.0000941 | 0.00100 | 1 | 07/04/2023 06:28 | WG2088993 |
| Toluene | 0.00136 | | 0.000278 | 0.00100 | 1 | 07/04/2023 06:28 | WG2088993 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/04/2023 06:28 | WG2088993 |
| Xylenes, Total | 0.000387 | J | 0.000174 | 0.00300 | 1 | 07/04/2023 06:28 | WG2088993 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/04/2023 06:28 | WG2088993 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/04/2023 06:28 | WG2088993 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/04/2023 06:28 | WG2088993 |
| (S) Toluene-d8 | 109 | | | 80.0-120 | | 07/04/2023 06:28 | WG2088993 |
| (S) 4-Bromofluorobenzene | 97.9 | | | 77.0-126 | | 07/04/2023 06:28 | WG2088993 |
| (S) 1,2-Dichloroethane-d4 | 114 | | | 70.0-130 | | 07/04/2023 06:28 | WG2088993 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1080 | | 20.0 | 1 | 06/29/2023 09:52 | WG2086270 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 18.1 | | 0.379 | 1.00 | 1 | 07/03/2023 16:23 | WG2088632 |
| Sulfate | 343 | | 2.97 | 25.0 | 5 | 07/03/2023 17:21 | WG2088632 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000442 | J | 0.0000941 | 0.00100 | 1 | 07/04/2023 06:50 | WG2088993 |
| Toluene | 0.00113 | | 0.000278 | 0.00100 | 1 | 07/04/2023 06:50 | WG2088993 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/04/2023 06:50 | WG2088993 |
| Xylenes, Total | 0.000283 | J | 0.000174 | 0.00300 | 1 | 07/04/2023 06:50 | WG2088993 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/04/2023 06:50 | WG2088993 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/04/2023 06:50 | WG2088993 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/04/2023 06:50 | WG2088993 |
| (S) Toluene-d8 | 106 | | | 80.0-120 | | 07/04/2023 06:50 | WG2088993 |
| (S) 4-Bromofluorobenzene | 94.8 | | | 77.0-126 | | 07/04/2023 06:50 | WG2088993 |
| (S) 1,2-Dichloroethane-d4 | 115 | | | 70.0-130 | | 07/04/2023 06:50 | WG2088993 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1100 | | 20.0 | 1 | 06/29/2023 09:52 | WG2086270 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 18.1 | | 0.379 | 1.00 | 1 | 07/03/2023 17:35 | WG2088632 |
| Sulfate | 340 | | 2.97 | 25.0 | 5 | 07/03/2023 17:50 | WG2088632 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000448 | J | 0.0000941 | 0.00100 | 1 | 07/04/2023 07:12 | WG2088993 |
| Toluene | 0.00110 | | 0.000278 | 0.00100 | 1 | 07/04/2023 07:12 | WG2088993 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/04/2023 07:12 | WG2088993 |
| Xylenes, Total | 0.000191 | J | 0.000174 | 0.00300 | 1 | 07/04/2023 07:12 | WG2088993 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/04/2023 07:12 | WG2088993 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/04/2023 07:12 | WG2088993 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/04/2023 07:12 | WG2088993 |
| (S) Toluene-d8 | 104 | | | 80.0-120 | | 07/04/2023 07:12 | WG2088993 |
| (S) 4-Bromofluorobenzene | 89.7 | | | 77.0-126 | | 07/04/2023 07:12 | WG2088993 |
| (S) 1,2-Dichloroethane-d4 | 115 | | | 70.0-130 | | 07/04/2023 07:12 | WG2088993 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3943701-1 06/29/23 09:52

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|------------------|-------------------|--------------|----------------|----------------|
| Dissolved Solids | U | <u>U</u> | 10.0 | 10.0 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1629732-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1629732-01 06/29/23 09:52 • (DUP) R3943701-3 06/29/23 09:52

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 208 | 201 | 1 | 3.42 | | 5 |

L1629738-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1629738-01 06/29/23 09:52 • (DUP) R3943701-4 06/29/23 09:52

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 84.0 | 101 | 1 | 18.4 | <u>J3</u> | 5 |

Laboratory Control Sample (LCS)

(LCS) R3943701-2 06/29/23 09:52

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------|----------------------|--------------------|---------------|------------------|---------------|
| Dissolved Solids | 8800 | 8230 | 93.5 | 77.3-123 | |

Method Blank (MB)

(MB) R3944714-1 07/03/23 10:11

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1629775-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1629775-05 07/03/23 18:35 • (DUP) R3944714-3 07/03/23 18:50

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 7.17 | 7.13 | 1 | 0.559 | | 15 |
| Sulfate | 2.24 | 2.16 | 1 | 3.82 | J | 15 |

L1629775-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1629775-19 07/04/23 00:18 • (DUP) R3944714-6 07/04/23 00:33

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Sulfate | 97.0 | 97.1 | 1 | 0.0192 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3944714-2 07/03/23 10:26

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 39.3 | 98.3 | 80.0-120 | |
| Sulfate | 40.0 | 39.1 | 97.7 | 80.0-120 | |

L1629775-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1629775-05 07/03/23 18:35 • (MS) R3944714-4 07/03/23 19:05 • (MSD) R3944714-5 07/03/23 19:49

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 7.17 | 56.2 | 55.6 | 98.1 | 96.8 | 1 | 80.0-120 | | | 1.16 | 15 |
| Sulfate | 50.0 | 2.24 | 48.1 | 47.6 | 91.8 | 90.7 | 1 | 80.0-120 | | | 1.14 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3945320-3 07/03/23 22:56

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 103 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 88.6 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 109 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3945320-1 07/03/23 21:50 • (LCSD) R3945320-2 07/03/23 22:12

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00524 | 0.00552 | 105 | 110 | 70.0-123 | | | 5.20 | 20 |
| Toluene | 0.00500 | 0.00499 | 0.00519 | 99.8 | 104 | 79.0-120 | | | 3.93 | 20 |
| Ethylbenzene | 0.00500 | 0.00498 | 0.00527 | 99.6 | 105 | 79.0-123 | | | 5.66 | 20 |
| Xylenes, Total | 0.0150 | 0.0154 | 0.0152 | 103 | 101 | 79.0-123 | | | 1.31 | 20 |
| Naphthalene | 0.00500 | 0.00355 | 0.00327 | 71.0 | 65.4 | 54.0-135 | | | 8.21 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00510 | 0.00522 | 102 | 104 | 76.0-121 | | | 2.33 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00522 | 0.00537 | 104 | 107 | 76.0-122 | | | 2.83 | 20 |
| (S) Toluene-d8 | | | | 103 | 104 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 97.6 | 94.0 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 110 | 107 | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

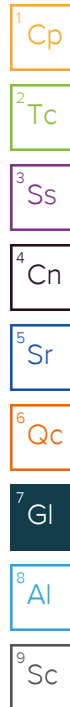
Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| MDL | Method Detection Limit. |
|------------------------------|--|
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |
| Qualifier | Description |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |



ACCREDITATIONS & LOCATIONS

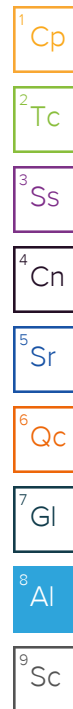
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



| | | | | | | | | | | | | | | | | | | | |
|--|--|---|-----------------------|--|--|--|--|--|--|--|--|--|--|--|---------------------------------------|--|---------|---------------------|------------|
| Caerus Oil and Gas 143 Diamond Avenue Parachute, CO 81635 | | Billing Information: SAME AS LEFT | | Pres Chk | Analysis / Container / Preservative | | | | | | | | | | Chain of Custody Page ____ of ____ | | | | |
| | | Report to: Blair Rollins | | | Email To: brollins@caerusoilandgas.com | | <div style="display: flex; justify-content: space-between;"> <div> 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> SDG # 41629774 Ta J158 Acctnum: Template: Prelogin: PM: PB: Shipped Via: </div> | | | | | | | | | | | | |
| Project Description: LOVE RANCH 8 Liquid Line Release | | City/State Collected: Piceance Crk, CO | | Please Circle: PT <input checked="" type="checkbox"/> MT <input type="checkbox"/> CT <input type="checkbox"/> ET <input type="checkbox"/> | | | | | | | | | | | | | | | |
| Phone: (970) 640-6919 | | Client Project # | | Lab Project # | | | | | | | | | | | | | | | |
| Collected by (print): Tristan Schmalz | | Site/Facility ID # LOVE RANCH 8 | | P.O. # | | | | | | | | | | | | | | | |
| Collected by (signature): | | Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day | | Quote # | | | | | | | | | | | | | | | |
| Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/> | | Date Results Needed Standard TAT | | No. of Cntrs | | | | | | | | | | | | | | | |
| Sample ID | | Comp/Grab | Matrix* | Depth | Date | Time | <div style="display: flex; justify-content: space-between;"> <div>COGCC Table 915-1</div> <div>Water</div> <div>EC, pH, SAR</div> <div>Arsenic, Boron</div> <div>COGCC Table 910-1</div> </div> | | | | | | | | | | Remarks | Sample # (lab only) | |
| 20230616-LOVERANCH8-ST-PC-UG02 | | Carab | DT | - | 6/26/2023 | 8:16 | 5 | X | | | | | | | | | | | -01 |
| 20230616-LOVERANCH8-ST-PC-PD02 | | ↓ | ↓ | - | ↓ | 8:25 | 5 | X | | | | | | | | | | | -02 |
| 20230616-LOVERANCH8-ST-PC-DQ04 | | ↓ | ↓ | - | ↓ | 8:40 | 5 | X | | | | | | | | | | | -03 |
| 20230616-LOVERANCH8-ST-PC-DQ05 | | ↓ | ↓ | - | ↓ | 8:47 | 5 | X | | | | | | | | | | | -04 |
| 20230616-LOVERANCH8-ST-PC-DQ06 | | ↓ | ↓ | - | ↓ | 8:55 | 5 | X | | | | | | | | | | | -05 |
| 20230616-LOVERANCH8-ST-PC-DQ07 | | ↓ | ↓ | - | ↓ | 9:16 | 5 | X | | | | | | | | | | | -06 |
| Relinquished by: (Signature) | | Date: 6/26/2023 | Time: 12:00 | Received by: (Signature) | | Trip Blank Received: Yes/No HCL/MeoH TBR | | Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> NP <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | | | | | | | | | | | |
| Relinquished by: (Signature) | | Date: 6/27/23 | Time: 1500 | Received by: (Signature) | | Temp: 6.8 °C Bottles Received: 30 | | If preservation required by Login: Date/Time | | | | | | | | | | | |
| Relinquished by: (Signature) | | Date: 6/27/23 | Time: 1500 | Received for lab by: (Signature) Enrique Martinez | | Date: 6/27/23 Time: 0900 | | Hold: Condition: NCF / OK | | | | | | | | | | | |

July 14, 2023

Caerus Oil and Gas

Sample Delivery Group: L1633320
Samples Received: 07/07/2023
Project Number:
Description: Love Ranch 8 Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

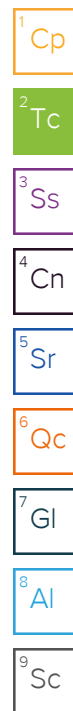
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230705-LOVERANCH8-(ST-PC-UG02) L1633320-01 GW

Collected by
Jordan Veith

Collected date/time
07/05/23 13:30

Received date/time
07/07/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2091908 | 1 | 07/10/23 11:15 | 07/10/23 15:39 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 1 | 07/14/23 03:31 | 07/14/23 03:31 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 10 | 07/14/23 03:46 | 07/14/23 03:46 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2092294 | 1 | 07/11/23 02:56 | 07/11/23 02:56 | BAM | Mt. Juliet, TN |

¹ Cp

² Tc

³ Ss

⁴ Cn

20230705-LOVERANCH8-(ST-PC-POR) L1633320-02 GW

Collected by
Jordan Veith

Collected date/time
07/05/23 13:40

Received date/time
07/07/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2091908 | 1 | 07/10/23 11:15 | 07/10/23 15:39 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 1 | 07/14/23 04:01 | 07/14/23 04:01 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 10 | 07/14/23 04:16 | 07/14/23 04:16 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2092294 | 1 | 07/11/23 03:15 | 07/11/23 03:15 | BAM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094438 | 10 | 07/14/23 06:36 | 07/14/23 06:36 | DWR | Mt. Juliet, TN |

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

20230705-LOVERANCH8-(ST-PC-DG14) L1633320-03 GW

Collected by
Jordan Veith

Collected date/time
07/05/23 13:50

Received date/time
07/07/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2091908 | 1 | 07/10/23 11:15 | 07/10/23 15:39 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 1 | 07/14/23 04:31 | 07/14/23 04:31 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 10 | 07/14/23 04:46 | 07/14/23 04:46 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2092294 | 1 | 07/11/23 03:34 | 07/11/23 03:34 | BAM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094438 | 1 | 07/14/23 00:22 | 07/14/23 00:22 | DWR | Mt. Juliet, TN |

⁹ Sc

20230705-LOVERANCH8-(ST-PC-DG13) L1633320-04 GW

Collected by
Jordan Veith

Collected date/time
07/05/23 14:00

Received date/time
07/07/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2091908 | 1 | 07/10/23 11:15 | 07/10/23 15:39 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 1 | 07/14/23 05:01 | 07/14/23 05:01 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 10 | 07/14/23 05:16 | 07/14/23 05:16 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2092294 | 1 | 07/11/23 03:53 | 07/11/23 03:53 | BAM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094438 | 1 | 07/14/23 00:42 | 07/14/23 00:42 | DWR | Mt. Juliet, TN |

20230705-LOVERANCH8-(ST-PC-DG12) L1633320-05 GW

Collected by
Jordan Veith

Collected date/time
07/05/23 14:10

Received date/time
07/07/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2091908 | 1 | 07/10/23 11:15 | 07/10/23 15:39 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 1 | 07/14/23 06:01 | 07/14/23 06:01 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 10 | 07/14/23 06:16 | 07/14/23 06:16 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2092294 | 1 | 07/11/23 04:12 | 07/11/23 04:12 | BAM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094438 | 1 | 07/14/23 01:02 | 07/14/23 01:02 | DWR | Mt. Juliet, TN |

SAMPLE SUMMARY

20230705-LOVERANCH8-(ST-PC-DG11) L1633320-06 GW

Collected by
Jordan Veith

Collected date/time
07/05/23 14:20

Received date/time
07/07/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2092031 | 1 | 07/10/23 13:34 | 07/10/23 16:20 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 1 | 07/14/23 06:30 | 07/14/23 06:30 | GEB | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2094609 | 10 | 07/14/23 06:45 | 07/14/23 06:45 | GEB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2092294 | 1 | 07/11/23 04:32 | 07/11/23 04:32 | BAM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094438 | 1 | 07/14/23 01:21 | 07/14/23 01:21 | DWR | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

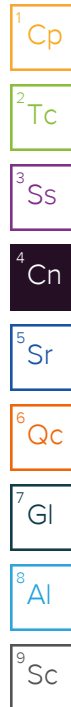


Chris Ward
Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

| Lab Sample ID | Project Sample ID | Method |
|-----------------------------|---|--------|
| L1633320-03 | 20230705-LOVERANCH8-(ST-P C-DG14) | 8260B |
| L1633320-04 | 20230705-LOVERANCH8-(ST-P C-DG13) | 8260B |



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1200 | | 20.0 | 1 | 07/10/2023 15:39 | WG2091908 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 19.5 | | 0.379 | 1.00 | 1 | 07/14/2023 03:31 | WG2094609 |
| Sulfate | 361 | | 5.94 | 50.0 | 10 | 07/14/2023 03:46 | WG2094609 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 07/11/2023 02:56 | WG2092294 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 07/11/2023 02:56 | WG2092294 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/11/2023 02:56 | WG2092294 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 07/11/2023 02:56 | WG2092294 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/11/2023 02:56 | WG2092294 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/11/2023 02:56 | WG2092294 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/11/2023 02:56 | WG2092294 |
| (S) Toluene-d8 | 106 | | | 80.0-120 | | 07/11/2023 02:56 | WG2092294 |
| (S) 4-Bromofluorobenzene | 91.4 | | | 77.0-126 | | 07/11/2023 02:56 | WG2092294 |
| (S) 1,2-Dichloroethane-d4 | 105 | | | 70.0-130 | | 07/11/2023 02:56 | WG2092294 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | | date / time | |
| Dissolved Solids | 970 | | 20.0 | 1 | 07/10/2023 15:39 | WG2091908 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|-------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Chloride | 20.4 | | 0.379 | 1.00 | 1 | 07/14/2023 04:01 | WG2094609 |
| Sulfate | 361 | | 5.94 | 50.0 | 10 | 07/14/2023 04:16 | WG2094609 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------------------------|---------|-----------|-----------|----------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Benzene | 0.0357 | | 0.0000941 | 0.00100 | 1 | 07/11/2023 03:15 | WG2092294 |
| Toluene | 0.0455 | | 0.00278 | 0.0100 | 10 | 07/14/2023 06:36 | WG2094438 |
| Ethylbenzene | 0.00334 | | 0.000137 | 0.00100 | 1 | 07/11/2023 03:15 | WG2092294 |
| Xylenes, Total | 0.0575 | | 0.000174 | 0.00300 | 1 | 07/11/2023 03:15 | WG2092294 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/11/2023 03:15 | WG2092294 |
| 1,2,4-Trimethylbenzene | 0.00305 | | 0.000322 | 0.00100 | 1 | 07/11/2023 03:15 | WG2092294 |
| 1,3,5-Trimethylbenzene | 0.00265 | | 0.000104 | 0.00100 | 1 | 07/11/2023 03:15 | WG2092294 |
| (S) Toluene-d8 | 106 | | | 80.0-120 | | 07/11/2023 03:15 | WG2092294 |
| (S) Toluene-d8 | 94.1 | | | 80.0-120 | | 07/14/2023 06:36 | WG2094438 |
| (S) 4-Bromofluorobenzene | 104 | | | 77.0-126 | | 07/11/2023 03:15 | WG2092294 |
| (S) 4-Bromofluorobenzene | 99.3 | | | 77.0-126 | | 07/14/2023 06:36 | WG2094438 |
| (S) 1,2-Dichloroethane-d4 | 99.9 | | | 70.0-130 | | 07/11/2023 03:15 | WG2092294 |
| (S) 1,2-Dichloroethane-d4 | 88.9 | | | 70.0-130 | | 07/14/2023 06:36 | WG2094438 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 996 | | 20.0 | 1 | 07/10/2023 15:39 | WG2091908 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 19.5 | | 0.379 | 1.00 | 1 | 07/14/2023 04:31 | WG2094609 |
| Sulfate | 358 | | 5.94 | 50.0 | 10 | 07/14/2023 04:46 | WG2094609 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000577 | J | 0.0000941 | 0.00100 | 1 | 07/11/2023 03:34 | WG2092294 |
| Toluene | 0.00193 | | 0.000278 | 0.00100 | 1 | 07/14/2023 00:22 | WG2094438 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/11/2023 03:34 | WG2092294 |
| Xylenes, Total | 0.00132 | J | 0.000174 | 0.00300 | 1 | 07/11/2023 03:34 | WG2092294 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/11/2023 03:34 | WG2092294 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/11/2023 03:34 | WG2092294 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/11/2023 03:34 | WG2092294 |
| (S) Toluene-d8 | 106 | | | 80.0-120 | | 07/11/2023 03:34 | WG2092294 |
| (S) Toluene-d8 | 95.7 | | | 80.0-120 | | 07/14/2023 00:22 | WG2094438 |
| (S) 4-Bromofluorobenzene | 95.2 | | | 77.0-126 | | 07/11/2023 03:34 | WG2092294 |
| (S) 4-Bromofluorobenzene | 97.8 | | | 77.0-126 | | 07/14/2023 00:22 | WG2094438 |
| (S) 1,2-Dichloroethane-d4 | 102 | | | 70.0-130 | | 07/11/2023 03:34 | WG2092294 |
| (S) 1,2-Dichloroethane-d4 | 89.9 | | | 70.0-130 | | 07/14/2023 00:22 | WG2094438 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | | date / time | |
| Dissolved Solids | 990 | | 20.0 | 1 | 07/10/2023 15:39 | WG2091908 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|-------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Chloride | 19.5 | | 0.379 | 1.00 | 1 | 07/14/2023 05:01 | WG2094609 |
| Sulfate | 359 | | 5.94 | 50.0 | 10 | 07/14/2023 05:16 | WG2094609 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------------------------|----------|-----------|-----------|----------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Benzene | 0.000443 | J | 0.0000941 | 0.00100 | 1 | 07/11/2023 03:53 | WG2092294 |
| Toluene | 0.00118 | | 0.000278 | 0.00100 | 1 | 07/14/2023 00:42 | WG2094438 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/11/2023 03:53 | WG2092294 |
| Xylenes, Total | 0.000744 | J | 0.000174 | 0.00300 | 1 | 07/11/2023 03:53 | WG2092294 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/11/2023 03:53 | WG2092294 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/11/2023 03:53 | WG2092294 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/11/2023 03:53 | WG2092294 |
| (S) Toluene-d8 | 108 | | | 80.0-120 | | 07/11/2023 03:53 | WG2092294 |
| (S) Toluene-d8 | 92.0 | | | 80.0-120 | | 07/14/2023 00:42 | WG2094438 |
| (S) 4-Bromofluorobenzene | 96.4 | | | 77.0-126 | | 07/11/2023 03:53 | WG2092294 |
| (S) 4-Bromofluorobenzene | 98.0 | | | 77.0-126 | | 07/14/2023 00:42 | WG2094438 |
| (S) 1,2-Dichloroethane-d4 | 103 | | | 70.0-130 | | 07/11/2023 03:53 | WG2092294 |
| (S) 1,2-Dichloroethane-d4 | 85.3 | | | 70.0-130 | | 07/14/2023 00:42 | WG2094438 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | | date / time | |
| Dissolved Solids | 1000 | | 20.0 | 1 | 07/10/2023 15:39 | WG2091908 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|-------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Chloride | 19.4 | | 0.379 | 1.00 | 1 | 07/14/2023 06:01 | WG2094609 |
| Sulfate | 356 | | 5.94 | 50.0 | 10 | 07/14/2023 06:16 | WG2094609 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------------------------|----------|-----------|-----------|----------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Benzene | 0.000435 | J | 0.0000941 | 0.00100 | 1 | 07/11/2023 04:12 | WG2092294 |
| Toluene | 0.00103 | | 0.000278 | 0.00100 | 1 | 07/14/2023 01:02 | WG2094438 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/11/2023 04:12 | WG2092294 |
| Xylenes, Total | 0.000667 | J | 0.000174 | 0.00300 | 1 | 07/11/2023 04:12 | WG2092294 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/11/2023 04:12 | WG2092294 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/11/2023 04:12 | WG2092294 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/11/2023 04:12 | WG2092294 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 07/11/2023 04:12 | WG2092294 |
| (S) Toluene-d8 | 94.4 | | | 80.0-120 | | 07/14/2023 01:02 | WG2094438 |
| (S) 4-Bromofluorobenzene | 91.6 | | | 77.0-126 | | 07/11/2023 04:12 | WG2092294 |
| (S) 4-Bromofluorobenzene | 99.6 | | | 77.0-126 | | 07/14/2023 01:02 | WG2094438 |
| (S) 1,2-Dichloroethane-d4 | 101 | | | 70.0-130 | | 07/11/2023 04:12 | WG2092294 |
| (S) 1,2-Dichloroethane-d4 | 87.4 | | | 70.0-130 | | 07/14/2023 01:02 | WG2094438 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 988 | | 20.0 | 1 | 07/10/2023 16:20 | WG2092031 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 19.6 | | 0.379 | 1.00 | 1 | 07/14/2023 06:30 | WG2094609 |
| Sulfate | 357 | | 5.94 | 50.0 | 10 | 07/14/2023 06:45 | WG2094609 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000394 | J | 0.0000941 | 0.00100 | 1 | 07/11/2023 04:32 | WG2092294 |
| Toluene | 0.000962 | J | 0.000278 | 0.00100 | 1 | 07/14/2023 01:21 | WG2094438 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/11/2023 04:32 | WG2092294 |
| Xylenes, Total | 0.000598 | J | 0.000174 | 0.00300 | 1 | 07/11/2023 04:32 | WG2092294 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/11/2023 04:32 | WG2092294 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/11/2023 04:32 | WG2092294 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/11/2023 04:32 | WG2092294 |
| (S) Toluene-d8 | 109 | | | 80.0-120 | | 07/11/2023 04:32 | WG2092294 |
| (S) Toluene-d8 | 94.9 | | | 80.0-120 | | 07/14/2023 01:21 | WG2094438 |
| (S) 4-Bromofluorobenzene | 95.4 | | | 77.0-126 | | 07/11/2023 04:32 | WG2092294 |
| (S) 4-Bromofluorobenzene | 102 | | | 77.0-126 | | 07/14/2023 01:21 | WG2094438 |
| (S) 1,2-Dichloroethane-d4 | 103 | | | 70.0-130 | | 07/11/2023 04:32 | WG2092294 |
| (S) 1,2-Dichloroethane-d4 | 97.5 | | | 70.0-130 | | 07/14/2023 01:21 | WG2094438 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3948184-1 07/10/23 15:39

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1632936-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-04 07/10/23 15:39 • (DUP) R3948184-3 07/10/23 15:39

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 455 | 458 | 1 | 0.657 | | 5 |

L1632936-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-05 07/10/23 15:39 • (DUP) R3948184-4 07/10/23 15:39

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 562 | 577 | 1 | 2.63 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3948184-2 07/10/23 15:39

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8540 | 97.0 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3948400-1 07/10/23 16:20

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1632964-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1632964-04 07/10/23 16:20 • (DUP) R3948400-3 07/10/23 16:20

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 294 | 300 | 1 | 2.02 | | 5 |

L1632964-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1632964-19 07/10/23 16:20 • (DUP) R3948400-4 07/10/23 16:20

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 286 | 286 | 1 | 0.000 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3948400-2 07/10/23 16:20

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8530 | 96.9 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3948716-1 07/14/23 00:03

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1633206-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1633206-01 07/14/23 02:02 • (DUP) R3948716-3 07/14/23 02:17

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 5.68 | 5.68 | 1 | 0.0493 | | 15 |
| Sulfate | 42.0 | 42.0 | 1 | 0.0210 | | 15 |

L1633665-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1633665-02 07/14/23 07:15 • (DUP) R3948716-6 07/14/23 07:30

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 47.7 | 47.8 | 1 | 0.0226 | | 15 |
| Sulfate | 70.5 | 70.5 | 1 | 0.00383 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3948716-2 07/14/23 00:18

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 39.9 | 99.7 | 80.0-120 | |
| Sulfate | 40.0 | 40.3 | 101 | 80.0-120 | |

L1633206-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633206-01 07/14/23 02:02 • (MS) R3948716-4 07/14/23 03:02 • (MSD) R3948716-5 07/14/23 03:17

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 5.68 | 54.6 | 54.4 | 97.8 | 97.5 | 1 | 80.0-120 | | | 0.338 | 15 |
| Sulfate | 50.0 | 42.0 | 89.5 | 89.2 | 95.1 | 94.5 | 1 | 80.0-120 | | | 0.329 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1633665-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1633665-02 07/14/23 07:15 • (MS) R3948716-7 07/14/23 07:45

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 47.7 | 94.5 | 93.6 | 1 | 80.0-120 | |
| Sulfate | 50.0 | 70.5 | 118 | 94.2 | 1 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3948289-3 07/10/23 21:36

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 116 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 89.4 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 80.9 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3948289-1 07/10/23 19:46 • (LCSD) R3948289-2 07/10/23 20:05

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00514 | 0.00520 | 103 | 104 | 70.0-123 | | | 1.16 | 20 |
| Toluene | 0.00500 | 0.00581 | 0.00579 | 116 | 116 | 79.0-120 | | | 0.345 | 20 |
| Ethylbenzene | 0.00500 | 0.00509 | 0.00533 | 102 | 107 | 79.0-123 | | | 4.61 | 20 |
| Xylenes, Total | 0.0150 | 0.0155 | 0.0164 | 103 | 109 | 79.0-123 | | | 5.64 | 20 |
| Naphthalene | 0.00500 | 0.00302 | 0.00290 | 60.4 | 58.0 | 54.0-135 | | | 4.05 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00428 | 0.00460 | 85.6 | 92.0 | 76.0-121 | | | 7.21 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00461 | 0.00484 | 92.2 | 96.8 | 76.0-122 | | | 4.87 | 20 |
| (S) Toluene-d8 | | | | 106 | 107 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 98.6 | 97.6 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 92.2 | 93.9 | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3948635-3 07/13/23 22:34

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Toluene | U | | 0.000278 | 0.00100 |
| (S) Toluene-d8 | 93.1 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 102 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 85.8 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3948635-1 07/13/23 20:51 • (LCSD) R3948635-2 07/13/23 21:11

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Toluene | 0.00500 | 0.00493 | 0.00531 | 98.6 | 106 | 79.0-120 | | | 7.42 | 20 |
| (S) Toluene-d8 | | | | 97.5 | 96.1 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 102 | 98.8 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 88.7 | 89.6 | 70.0-130 | | | | |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

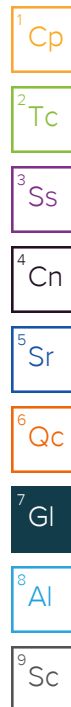
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|---|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
|---|---|



ACCREDITATIONS & LOCATIONS

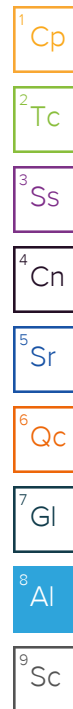
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



July 25, 2023

Revised Report

Caerus Oil and Gas

Sample Delivery Group: L1634094
Samples Received: 07/11/2023
Project Number:
Description: Love Ranch 8 Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Entire Report Reviewed By:



Chris Ward
Project Manager

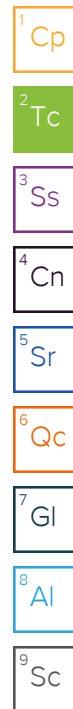
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Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230710-LOVE RANCH 8-(ST-PC-UG02) L1634094-01 GW

Collected by
Jordan Veith

Collected date/time
07/10/23 09:20

Received date/time
07/11/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2093592 | 1 | 07/13/23 09:06 | 07/13/23 10:05 | ARD | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 1 | 07/17/23 22:33 | 07/17/23 22:33 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 5 | 07/17/23 22:45 | 07/17/23 22:45 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094122 | 1 | 07/13/23 17:08 | 07/13/23 17:08 | BAM | Mt. Juliet, TN |

20230710-LOVE RANCH 8-(ST-PC-POR) L1634094-02 GW

Collected by
Jordan Veith

Collected date/time
07/10/23 09:30

Received date/time
07/11/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2093592 | 1 | 07/13/23 09:06 | 07/13/23 10:05 | ARD | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 1 | 07/17/23 23:23 | 07/17/23 23:23 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 5 | 07/17/23 23:36 | 07/17/23 23:36 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094122 | 1 | 07/13/23 17:38 | 07/13/23 17:38 | BAM | Mt. Juliet, TN |

20230710-LOVE RANCH 8-(ST-PC-DG14) L1634094-03 GW

Collected by
Jordan Veith

Collected date/time
07/10/23 09:40

Received date/time
07/11/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2093592 | 1 | 07/13/23 09:06 | 07/13/23 10:05 | ARD | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 1 | 07/17/23 23:48 | 07/17/23 23:48 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 5 | 07/18/23 00:01 | 07/18/23 00:01 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094122 | 1 | 07/13/23 17:59 | 07/13/23 17:59 | BAM | Mt. Juliet, TN |

20230710-LOVE RANCH 8-(ST-PC-DG13) L1634094-04 GW

Collected by
Jordan Veith

Collected date/time
07/10/23 09:50

Received date/time
07/11/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2094232 | 1 | 07/13/23 12:18 | 07/13/23 13:00 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 1 | 07/18/23 00:14 | 07/18/23 00:14 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 5 | 07/18/23 00:26 | 07/18/23 00:26 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094122 | 1 | 07/13/23 18:19 | 07/13/23 18:19 | BAM | Mt. Juliet, TN |

20230710-LOVE RANCH 8-(ST-PC-DG12) L1634094-05 GW

Collected by
Jordan Veith

Collected date/time
07/10/23 10:00

Received date/time
07/11/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2094232 | 1 | 07/13/23 12:18 | 07/13/23 13:00 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 1 | 07/18/23 00:39 | 07/18/23 00:39 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 5 | 07/18/23 00:51 | 07/18/23 00:51 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094122 | 1 | 07/13/23 18:39 | 07/13/23 18:39 | BAM | Mt. Juliet, TN |

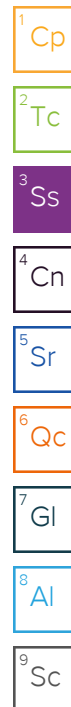
20230710-LOVE RANCH 8-(ST-PC-DG11) L1634094-06 GW

Collected by
Jordan Veith

Collected date/time
07/10/23 10:10

Received date/time
07/11/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Gravimetric Analysis by Method 2540 C-2011 | WG2094232 | 1 | 07/13/23 12:18 | 07/13/23 13:00 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 1 | 07/18/23 01:04 | 07/18/23 01:04 | KMC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG2096274 | 5 | 07/18/23 01:17 | 07/18/23 01:17 | KMC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2094122 | 1 | 07/13/23 19:00 | 07/13/23 19:00 | BAM | Mt. Juliet, TN |



CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



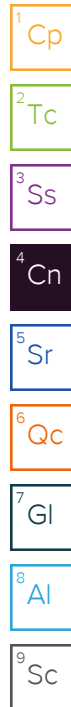
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 07/18/23 16:31

Project Narrative

Report reissued 7/25 for updated sample ID



Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1090 | | 20.0 | 1 | 07/13/2023 10:05 | WG2093592 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 19.0 | | 0.379 | 1.00 | 1 | 07/17/2023 22:33 | WG2096274 |
| Sulfate | 366 | | 2.97 | 25.0 | 5 | 07/17/2023 22:45 | WG2096274 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.0000941 | 0.00100 | 1 | 07/13/2023 17:08 | WG2094122 |
| Toluene | U | | 0.000278 | 0.00100 | 1 | 07/13/2023 17:08 | WG2094122 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/13/2023 17:08 | WG2094122 |
| Xylenes, Total | U | | 0.000174 | 0.00300 | 1 | 07/13/2023 17:08 | WG2094122 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/13/2023 17:08 | WG2094122 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/13/2023 17:08 | WG2094122 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/13/2023 17:08 | WG2094122 |
| (S) Toluene-d8 | 96.0 | | | 80.0-120 | | 07/13/2023 17:08 | WG2094122 |
| (S) 4-Bromofluorobenzene | 95.4 | | | 77.0-126 | | 07/13/2023 17:08 | WG2094122 |
| (S) 1,2-Dichloroethane-d4 | 98.8 | | | 70.0-130 | | 07/13/2023 17:08 | WG2094122 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|------------------|--------|-----------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | | date / time | |
| Dissolved Solids | 1100 | | 20.0 | 1 | 07/13/2023 10:05 | WG2093592 |

Wet Chemistry by Method 9056A

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|----------|--------|-----------|-------|------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Chloride | 19.4 | | 0.379 | 1.00 | 1 | 07/17/2023 23:23 | WG2096274 |
| Sulfate | 364 | | 2.97 | 25.0 | 5 | 07/17/2023 23:36 | WG2096274 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---------------------------|----------|-----------|-----------|----------|----------|------------------|---------------------------|
| | mg/l | | mg/l | mg/l | | date / time | |
| Benzene | 0.0133 | | 0.0000941 | 0.00100 | 1 | 07/13/2023 17:38 | WG2094122 |
| Toluene | 0.0364 | | 0.000278 | 0.00100 | 1 | 07/13/2023 17:38 | WG2094122 |
| Ethylbenzene | 0.00141 | | 0.000137 | 0.00100 | 1 | 07/13/2023 17:38 | WG2094122 |
| Xylenes, Total | 0.0195 | | 0.000174 | 0.00300 | 1 | 07/13/2023 17:38 | WG2094122 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/13/2023 17:38 | WG2094122 |
| 1,2,4-Trimethylbenzene | 0.00102 | | 0.000322 | 0.00100 | 1 | 07/13/2023 17:38 | WG2094122 |
| 1,3,5-Trimethylbenzene | 0.000852 | J | 0.000104 | 0.00100 | 1 | 07/13/2023 17:38 | WG2094122 |
| (S) Toluene-d8 | 102 | | | 80.0-120 | | 07/13/2023 17:38 | WG2094122 |
| (S) 4-Bromofluorobenzene | 98.3 | | | 77.0-126 | | 07/13/2023 17:38 | WG2094122 |
| (S) 1,2-Dichloroethane-d4 | 98.4 | | | 70.0-130 | | 07/13/2023 17:38 | WG2094122 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1090 | | 20.0 | 1 | 07/13/2023 10:05 | WG2093592 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 19.1 | | 0.379 | 1.00 | 1 | 07/17/2023 23:48 | WG2096274 |
| Sulfate | 367 | | 2.97 | 25.0 | 5 | 07/18/2023 00:01 | WG2096274 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000400 | J | 0.0000941 | 0.00100 | 1 | 07/13/2023 17:59 | WG2094122 |
| Toluene | 0.00126 | | 0.000278 | 0.00100 | 1 | 07/13/2023 17:59 | WG2094122 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/13/2023 17:59 | WG2094122 |
| Xylenes, Total | 0.000890 | J | 0.000174 | 0.00300 | 1 | 07/13/2023 17:59 | WG2094122 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/13/2023 17:59 | WG2094122 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/13/2023 17:59 | WG2094122 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/13/2023 17:59 | WG2094122 |
| (S) Toluene-d8 | 100 | | | 80.0-120 | | 07/13/2023 17:59 | WG2094122 |
| (S) 4-Bromofluorobenzene | 95.6 | | | 77.0-126 | | 07/13/2023 17:59 | WG2094122 |
| (S) 1,2-Dichloroethane-d4 | 98.6 | | | 70.0-130 | | 07/13/2023 17:59 | WG2094122 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1100 | | 20.0 | 1 | 07/13/2023 13:00 | WG2094232 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 19.6 | | 0.379 | 1.00 | 1 | 07/18/2023 00:14 | WG2096274 |
| Sulfate | 367 | | 2.97 | 25.0 | 5 | 07/18/2023 00:26 | WG2096274 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000388 | J | 0.0000941 | 0.00100 | 1 | 07/13/2023 18:19 | WG2094122 |
| Toluene | 0.00117 | | 0.000278 | 0.00100 | 1 | 07/13/2023 18:19 | WG2094122 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/13/2023 18:19 | WG2094122 |
| Xylenes, Total | 0.000791 | J | 0.000174 | 0.00300 | 1 | 07/13/2023 18:19 | WG2094122 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/13/2023 18:19 | WG2094122 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/13/2023 18:19 | WG2094122 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/13/2023 18:19 | WG2094122 |
| (S) Toluene-d8 | 99.6 | | | 80.0-120 | | 07/13/2023 18:19 | WG2094122 |
| (S) 4-Bromofluorobenzene | 95.6 | | | 77.0-126 | | 07/13/2023 18:19 | WG2094122 |
| (S) 1,2-Dichloroethane-d4 | 99.7 | | | 70.0-130 | | 07/13/2023 18:19 | WG2094122 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1100 | | 20.0 | 1 | 07/13/2023 13:00 | WG2094232 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 19.2 | | 0.379 | 1.00 | 1 | 07/18/2023 00:39 | WG2096274 |
| Sulfate | 363 | | 2.97 | 25.0 | 5 | 07/18/2023 00:51 | WG2096274 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000352 | J | 0.0000941 | 0.00100 | 1 | 07/13/2023 18:39 | WG2094122 |
| Toluene | 0.000842 | J | 0.000278 | 0.00100 | 1 | 07/13/2023 18:39 | WG2094122 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/13/2023 18:39 | WG2094122 |
| Xylenes, Total | 0.000577 | J | 0.000174 | 0.00300 | 1 | 07/13/2023 18:39 | WG2094122 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/13/2023 18:39 | WG2094122 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/13/2023 18:39 | WG2094122 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/13/2023 18:39 | WG2094122 |
| (S) Toluene-d8 | 98.4 | | | 80.0-120 | | 07/13/2023 18:39 | WG2094122 |
| (S) 4-Bromofluorobenzene | 96.6 | | | 77.0-126 | | 07/13/2023 18:39 | WG2094122 |
| (S) 1,2-Dichloroethane-d4 | 101 | | | 70.0-130 | | 07/13/2023 18:39 | WG2094122 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|------------------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Dissolved Solids | 1080 | | 20.0 | 1 | 07/13/2023 13:00 | WG2094232 |

Wet Chemistry by Method 9056A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Chloride | 19.1 | | 0.379 | 1.00 | 1 | 07/18/2023 01:04 | WG2096274 |
| Sulfate | 364 | | 2.97 | 25.0 | 5 | 07/18/2023 01:17 | WG2096274 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 0.000333 | J | 0.0000941 | 0.00100 | 1 | 07/13/2023 19:00 | WG2094122 |
| Toluene | 0.000858 | J | 0.000278 | 0.00100 | 1 | 07/13/2023 19:00 | WG2094122 |
| Ethylbenzene | U | | 0.000137 | 0.00100 | 1 | 07/13/2023 19:00 | WG2094122 |
| Xylenes, Total | 0.000617 | J | 0.000174 | 0.00300 | 1 | 07/13/2023 19:00 | WG2094122 |
| Naphthalene | U | | 0.00100 | 0.00500 | 1 | 07/13/2023 19:00 | WG2094122 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 | 1 | 07/13/2023 19:00 | WG2094122 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 | 1 | 07/13/2023 19:00 | WG2094122 |
| (S) Toluene-d8 | 99.4 | | | 80.0-120 | | 07/13/2023 19:00 | WG2094122 |
| (S) 4-Bromofluorobenzene | 95.4 | | | 77.0-126 | | 07/13/2023 19:00 | WG2094122 |
| (S) 1,2-Dichloroethane-d4 | 102 | | | 70.0-130 | | 07/13/2023 19:00 | WG2094122 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3948766-1 07/13/23 10:05

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|------------------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Dissolved Solids | U | | 10.0 | 10.0 |

L1633581-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1633581-01 07/13/23 10:05 • (DUP) R3948766-3 07/13/23 10:05

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 369 | 377 | 1 | 2.14 | | 5 |

L1633864-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1633864-07 07/13/23 10:05 • (DUP) R3948766-4 07/13/23 10:05

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Dissolved Solids | 393 | 398 | 1 | 1.26 | | 5 |

Laboratory Control Sample (LCS)

(LCS) R3948766-2 07/13/23 10:05

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Dissolved Solids | 8800 | 8480 | 96.4 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3949810-1 07/13/23 13:00

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|------------------|-------------------|--------------|----------------|----------------|
| Dissolved Solids | U | | 10.0 | 10.0 |

L1633460-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1633460-05 07/13/23 13:00 • (DUP) R3949810-3 07/13/23 13:00

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 271 | 270 | 1 | 0.370 | | 5 |

L1633650-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1633650-01 07/13/23 13:00 • (DUP) R3949810-4 07/13/23 13:00

| Analyte | Original Result mg/l | DUP Result mg/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|------------------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Dissolved Solids | 332 | 364 | 1 | 9.20 | J3 | 5 |

Laboratory Control Sample (LCS)

(LCS) R3949810-2 07/13/23 13:00

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------|----------------------|--------------------|---------------|------------------|---------------|
| Dissolved Solids | 8800 | 8590 | 97.6 | 77.3-123 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3949870-1 07/17/23 18:21

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|----------|-----------|--------------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l |
| Chloride | U | | 0.379 | 1.00 |
| Sulfate | U | | 0.594 | 5.00 |

L1632856-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632856-01 07/17/23 19:11 • (DUP) R3949870-3 07/17/23 19:24

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 10.1 | 10.0 | 1 | 1.02 | | 15 |
| Sulfate | 6.16 | 6.08 | 1 | 1.28 | | 15 |

L1634097-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1634097-02 07/18/23 02:07 • (DUP) R3949870-6 07/18/23 02:20

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|----------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Chloride | 4.57 | 4.56 | 1 | 0.256 | | 15 |
| Sulfate | 12.4 | 12.3 | 1 | 0.628 | | 15 |

Laboratory Control Sample (LCS)

(LCS) R3949870-2 07/17/23 18:34

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|----------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Chloride | 40.0 | 39.7 | 99.3 | 80.0-120 | |
| Sulfate | 40.0 | 39.4 | 98.5 | 80.0-120 | |

L1632856-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1632856-01 07/17/23 19:11 • (MS) R3949870-4 07/17/23 19:37 • (MSD) R3949870-5 07/17/23 19:49

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|----------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Chloride | 50.0 | 10.1 | 59.9 | 60.2 | 99.5 | 100 | 1 | 80.0-120 | | | 0.427 | 15 |
| Sulfate | 50.0 | 6.16 | 55.0 | 55.5 | 97.7 | 98.7 | 1 | 80.0-120 | | | 0.859 | 15 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1634097-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1634097-02 07/18/23 02:07 • (MS) R3949870-7 07/18/23 02:32

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> |
|----------|----------------------|-------------------------|-------------------|--------------|----------|------------------|---------------------|
| Chloride | 50.0 | 4.57 | 54.0 | 98.9 | 1 | 80.0-120 | |
| Sulfate | 50.0 | 12.4 | 61.3 | 97.9 | 1 | 80.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3948720-3 07/13/23 10:11

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 96.5 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 96.6 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 96.6 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3948720-1 07/13/23 08:59 • (LCSD) R3948720-2 07/13/23 09:19

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00493 | 0.00435 | 98.6 | 87.0 | 70.0-123 | | | 12.5 | 20 |
| Toluene | 0.00500 | 0.00472 | 0.00438 | 94.4 | 87.6 | 79.0-120 | | | 7.47 | 20 |
| Ethylbenzene | 0.00500 | 0.00481 | 0.00429 | 96.2 | 85.8 | 79.0-123 | | | 11.4 | 20 |
| Xylenes, Total | 0.0150 | 0.0140 | 0.0130 | 93.3 | 86.7 | 79.0-123 | | | 7.41 | 20 |
| Naphthalene | 0.00500 | 0.00510 | 0.00427 | 102 | 85.4 | 54.0-135 | | | 17.7 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00489 | 0.00428 | 97.8 | 85.6 | 76.0-121 | | | 13.3 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00479 | 0.00433 | 95.8 | 86.6 | 76.0-122 | | | 10.1 | 20 |
| (S) Toluene-d8 | | | | 96.5 | 101 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 97.7 | 97.0 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 101 | 102 | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

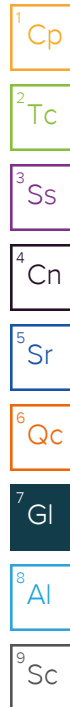
Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| MDL | Method Detection Limit. |
|------------------------------|--|
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |
| Qualifier | Description |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |



ACCREDITATIONS & LOCATIONS

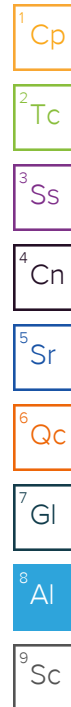
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

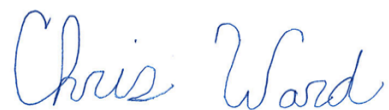
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas

Sample Delivery Group: L1622049
Samples Received: 06/02/2023
Project Number: 20234315.001A
Description: Love Ranch 8 Liquid Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

20230601-LOVE RANCH 8-(SB01) @ 20 L1622049-01 Solid

Collected by
Jordan Veith

Collected date/time
06/01/23 09:45

Received date/time
06/02/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2072232 | 25 | 06/02/23 12:46 | 06/06/23 12:48 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2071216 | 1 | 06/02/23 12:46 | 06/04/23 10:44 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2070999 | 1 | 06/03/23 11:24 | 06/03/23 14:47 | JAS | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2071006 | 1 | 06/03/23 08:40 | 06/03/23 17:04 | DSH | Mt. Juliet, TN |

20230601-LOVE RANCH 8-(SB01) @ 25 L1622049-02 Solid

Collected by
Jordan Veith

Collected date/time
06/01/23 10:00

Received date/time
06/02/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2072232 | 25 | 06/02/23 12:46 | 06/06/23 13:06 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2071216 | 1 | 06/02/23 12:46 | 06/04/23 11:04 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2070999 | 1 | 06/03/23 11:24 | 06/03/23 14:43 | JAS | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2071006 | 1 | 06/03/23 08:40 | 06/03/23 17:22 | DSH | Mt. Juliet, TN |

20230601-LOVE RANCH 8-(SB01) @ 30 L1622049-03 Solid

Collected by
Jordan Veith

Collected date/time
06/01/23 10:10

Received date/time
06/02/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2072233 | 1 | 06/02/23 12:46 | 06/06/23 12:53 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2071216 | 1 | 06/02/23 12:46 | 06/04/23 11:23 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2070999 | 1 | 06/03/23 11:24 | 06/03/23 14:35 | JAS | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2071006 | 1 | 06/03/23 08:40 | 06/03/23 17:39 | DSH | Mt. Juliet, TN |

20230601-LOVE RANCH 8-(SB03) @ 6 L1622049-04 Solid

Collected by
Jordan Veith

Collected date/time
06/01/23 10:30

Received date/time
06/02/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2072590 | 25 | 06/02/23 12:46 | 06/06/23 17:03 | NCC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2071216 | 1 | 06/02/23 12:46 | 06/04/23 11:42 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2070999 | 1 | 06/03/23 11:24 | 06/03/23 14:10 | JAS | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2071006 | 1 | 06/03/23 08:40 | 06/03/23 17:57 | DSH | Mt. Juliet, TN |

20230601-LOVE RANCH 8-(SB03) @ 20 L1622049-05 Solid

Collected by
Jordan Veith

Collected date/time
06/01/23 10:43

Received date/time
06/02/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2072233 | 1 | 06/02/23 12:46 | 06/06/23 13:39 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2071216 | 1 | 06/02/23 12:46 | 06/04/23 12:01 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2070999 | 1 | 06/03/23 11:24 | 06/03/23 14:57 | JAS | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2071006 | 1 | 06/03/23 08:40 | 06/03/23 20:20 | DSH | Mt. Juliet, TN |

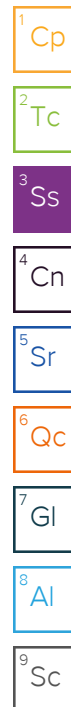
20230601-LOVE RANCH 8-(SB03) @ 30 L1622049-06 Solid

Collected by
Jordan Veith

Collected date/time
06/01/23 11:00

Received date/time
06/02/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2072590 | 25 | 06/02/23 12:46 | 06/06/23 17:21 | NCC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2071216 | 1 | 06/02/23 12:46 | 06/04/23 12:20 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2070999 | 1 | 06/03/23 11:24 | 06/03/23 14:35 | JAS | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2071006 | 1 | 06/03/23 08:40 | 06/03/23 18:15 | DSH | Mt. Juliet, TN |



CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



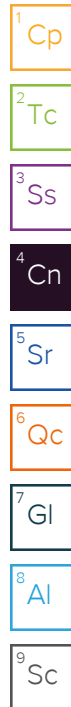
Chris Ward
Project Manager

Report Revision History

Level II Report - Version 1: 06/07/23 11:05

Project Narrative

Report reissued 7/26 for MDL/RDL reporting



Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 10.6 | | 0.543 | 2.50 | 25 | 06/06/2023 12:48 | WG2072232 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 101 | | | 77.0-120 | | 06/06/2023 12:48 | WG2072232 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | 0.000975 | J | 0.000467 | 0.00100 | 1 | 06/04/2023 10:44 | WG2071216 |
| Toluene | 0.0101 | | 0.00130 | 0.00500 | 1 | 06/04/2023 10:44 | WG2071216 |
| Ethylbenzene | 0.00103 | J | 0.000737 | 0.00250 | 1 | 06/04/2023 10:44 | WG2071216 |
| Xylenes, Total | 0.0189 | | 0.000880 | 0.00650 | 1 | 06/04/2023 10:44 | WG2071216 |
| 1,2,4-Trimethylbenzene | 0.00423 | J | 0.00158 | 0.00500 | 1 | 06/04/2023 10:44 | WG2071216 |
| 1,3,5-Trimethylbenzene | 0.00525 | | 0.00200 | 0.00500 | 1 | 06/04/2023 10:44 | WG2071216 |
| (S) Toluene-d8 | 106 | | | 75.0-131 | | 06/04/2023 10:44 | WG2071216 |
| (S) 4-Bromofluorobenzene | 96.2 | | | 67.0-138 | | 06/04/2023 10:44 | WG2071216 |
| (S) 1,2-Dichloroethane-d4 | 109 | | | 70.0-130 | | 06/04/2023 10:44 | WG2071216 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 1.63 | J | 1.61 | 4.00 | 1 | 06/03/2023 14:47 | WG2070999 |
| C28-C36 Motor Oil Range | 4.83 | | 0.274 | 4.00 | 1 | 06/03/2023 14:47 | WG2070999 |
| (S) <i>o</i> -Terphenyl | 44.1 | | | 18.0-148 | | 06/03/2023 14:47 | WG2070999 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/03/2023 17:04 | WG2071006 |
| 2-Methylnaphthalene | 0.00869 | J | 0.00427 | 0.0200 | 1 | 06/03/2023 17:04 | WG2071006 |
| Naphthalene | 0.00485 | J | 0.00408 | 0.0200 | 1 | 06/03/2023 17:04 | WG2071006 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/03/2023 17:04 | WG2071006 |
| (S) <i>p</i> -Terphenyl-d14 | 74.2 | | | 23.0-120 | | 06/03/2023 17:04 | WG2071006 |
| (S) Nitrobenzene-d5 | 81.2 | | | 14.0-149 | | 06/03/2023 17:04 | WG2071006 |
| (S) 2-Fluorobiphenyl | 68.7 | | | 34.0-125 | | 06/03/2023 17:04 | WG2071006 |

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 6.11 | | 0.543 | 2.50 | 25 | 06/06/2023 13:06 | WG2072232 |
| (S) a,a,a-Trifluorotoluene(FID) | 99.4 | | | 77.0-120 | | 06/06/2023 13:06 | WG2072232 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | 0.00123 | | 0.000467 | 0.00100 | 1 | 06/04/2023 11:04 | WG2071216 |
| Toluene | 0.0142 | | 0.00130 | 0.00500 | 1 | 06/04/2023 11:04 | WG2071216 |
| Ethylbenzene | 0.00218 | J | 0.000737 | 0.00250 | 1 | 06/04/2023 11:04 | WG2071216 |
| Xylenes, Total | 0.0252 | | 0.000880 | 0.00650 | 1 | 06/04/2023 11:04 | WG2071216 |
| 1,2,4-Trimethylbenzene | 0.00550 | | 0.00158 | 0.00500 | 1 | 06/04/2023 11:04 | WG2071216 |
| 1,3,5-Trimethylbenzene | 0.00630 | | 0.00200 | 0.00500 | 1 | 06/04/2023 11:04 | WG2071216 |
| (S) Toluene-d8 | 107 | | | 75.0-131 | | 06/04/2023 11:04 | WG2071216 |
| (S) 4-Bromofluorobenzene | 97.6 | | | 67.0-138 | | 06/04/2023 11:04 | WG2071216 |
| (S) 1,2-Dichloroethane-d4 | 110 | | | 70.0-130 | | 06/04/2023 11:04 | WG2071216 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/03/2023 14:43 | WG2070999 |
| C28-C36 Motor Oil Range | 0.490 | J | 0.274 | 4.00 | 1 | 06/03/2023 14:43 | WG2070999 |
| (S) o-Terphenyl | 47.9 | | | 18.0-148 | | 06/03/2023 14:43 | WG2070999 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/03/2023 17:22 | WG2071006 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/03/2023 17:22 | WG2071006 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/03/2023 17:22 | WG2071006 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/03/2023 17:22 | WG2071006 |
| (S) p-Terphenyl-d14 | 76.1 | | | 23.0-120 | | 06/03/2023 17:22 | WG2071006 |
| (S) Nitrobenzene-d5 | 70.9 | | | 14.0-149 | | 06/03/2023 17:22 | WG2071006 |
| (S) 2-Fluorobiphenyl | 69.3 | | | 34.0-125 | | 06/03/2023 17:22 | WG2071006 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.126 | | 0.0217 | 0.100 | 1 | 06/06/2023 12:53 | WG2072233 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.9 | | | 77.0-120 | | 06/06/2023 12:53 | WG2072233 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/04/2023 11:23 | WG2071216 |
| Toluene | 0.00218 | J | 0.00130 | 0.00500 | 1 | 06/04/2023 11:23 | WG2071216 |
| Ethylbenzene | U | | 0.000737 | 0.00250 | 1 | 06/04/2023 11:23 | WG2071216 |
| Xylenes, Total | 0.00305 | J | 0.000880 | 0.00650 | 1 | 06/04/2023 11:23 | WG2071216 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/04/2023 11:23 | WG2071216 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/04/2023 11:23 | WG2071216 |
| (S) Toluene-d8 | 105 | | | 75.0-131 | | 06/04/2023 11:23 | WG2071216 |
| (S) 4-Bromofluorobenzene | 101 | | | 67.0-138 | | 06/04/2023 11:23 | WG2071216 |
| (S) 1,2-Dichloroethane-d4 | 110 | | | 70.0-130 | | 06/04/2023 11:23 | WG2071216 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 1.81 | J | 1.61 | 4.00 | 1 | 06/03/2023 14:35 | WG2070999 |
| C28-C36 Motor Oil Range | 6.12 | | 0.274 | 4.00 | 1 | 06/03/2023 14:35 | WG2070999 |
| (S) o-Terphenyl | 43.3 | | | 18.0-148 | | 06/03/2023 14:35 | WG2070999 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/03/2023 17:39 | WG2071006 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/03/2023 17:39 | WG2071006 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/03/2023 17:39 | WG2071006 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/03/2023 17:39 | WG2071006 |
| (S) p-Terphenyl-d14 | 71.5 | | | 23.0-120 | | 06/03/2023 17:39 | WG2071006 |
| (S) Nitrobenzene-d5 | 62.9 | | | 14.0-149 | | 06/03/2023 17:39 | WG2071006 |
| (S) 2-Fluorobiphenyl | 60.2 | | | 34.0-125 | | 06/03/2023 17:39 | WG2071006 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.598 | J | 0.543 | 2.50 | 25 | 06/06/2023 17:03 | WG2072590 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 98.8 | | | 77.0-120 | | 06/06/2023 17:03 | WG2072590 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/04/2023 11:42 | WG2071216 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/04/2023 11:42 | WG2071216 |
| Ethylbenzene | U | | 0.000737 | 0.00250 | 1 | 06/04/2023 11:42 | WG2071216 |
| Xylenes, Total | 0.00120 | J | 0.000880 | 0.00650 | 1 | 06/04/2023 11:42 | WG2071216 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/04/2023 11:42 | WG2071216 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/04/2023 11:42 | WG2071216 |
| (S) Toluene-d8 | 106 | | | 75.0-131 | | 06/04/2023 11:42 | WG2071216 |
| (S) 4-Bromofluorobenzene | 100 | | | 67.0-138 | | 06/04/2023 11:42 | WG2071216 |
| (S) 1,2-Dichloroethane-d4 | 102 | | | 70.0-130 | | 06/04/2023 11:42 | WG2071216 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/03/2023 14:10 | WG2070999 |
| C28-C36 Motor Oil Range | 1.68 | J | 0.274 | 4.00 | 1 | 06/03/2023 14:10 | WG2070999 |
| (S) <i>o</i> -Terphenyl | 38.1 | | | 18.0-148 | | 06/03/2023 14:10 | WG2070999 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/03/2023 17:57 | WG2071006 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/03/2023 17:57 | WG2071006 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/03/2023 17:57 | WG2071006 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/03/2023 17:57 | WG2071006 |
| (S) <i>p</i> -Terphenyl-d14 | 54.3 | | | 23.0-120 | | 06/03/2023 17:57 | WG2071006 |
| (S) Nitrobenzene-d5 | 64.4 | | | 14.0-149 | | 06/03/2023 17:57 | WG2071006 |
| (S) 2-Fluorobiphenyl | 48.9 | | | 34.0-125 | | 06/03/2023 17:57 | WG2071006 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.0664 | J | 0.0217 | 0.100 | 1 | 06/06/2023 13:39 | WG2072233 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 99.9 | | | 77.0-120 | | 06/06/2023 13:39 | WG2072233 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/04/2023 12:01 | WG2071216 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/04/2023 12:01 | WG2071216 |
| Ethylbenzene | U | | 0.000737 | 0.00250 | 1 | 06/04/2023 12:01 | WG2071216 |
| Xylenes, Total | 0.00107 | J | 0.000880 | 0.00650 | 1 | 06/04/2023 12:01 | WG2071216 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/04/2023 12:01 | WG2071216 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/04/2023 12:01 | WG2071216 |
| (S) <i>Toluene-d8</i> | 105 | | | 75.0-131 | | 06/04/2023 12:01 | WG2071216 |
| (S) <i>4</i> -Bromofluorobenzene | 95.7 | | | 67.0-138 | | 06/04/2023 12:01 | WG2071216 |
| (S) <i>1,2</i> -Dichloroethane- <i>d4</i> | 114 | | | 70.0-130 | | 06/04/2023 12:01 | WG2071216 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/03/2023 14:57 | WG2070999 |
| C28-C36 Motor Oil Range | 3.73 | J | 0.274 | 4.00 | 1 | 06/03/2023 14:57 | WG2070999 |
| (S) <i>o</i> -Terphenyl | 39.0 | | | 18.0-148 | | 06/03/2023 14:57 | WG2070999 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/03/2023 20:20 | WG2071006 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/03/2023 20:20 | WG2071006 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/03/2023 20:20 | WG2071006 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/03/2023 20:20 | WG2071006 |
| (S) <i>p</i> -Terphenyl- <i>d14</i> | 62.4 | | | 23.0-120 | | 06/03/2023 20:20 | WG2071006 |
| (S) Nitrobenzene- <i>d5</i> | 74.7 | | | 14.0-149 | | 06/03/2023 20:20 | WG2071006 |
| (S) <i>2</i> -Fluorobiphenyl | 56.2 | | | 34.0-125 | | 06/03/2023 20:20 | WG2071006 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | U | | 0.543 | 2.50 | 25 | 06/06/2023 17:21 | WG2072590 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 102 | | | 77.0-120 | | 06/06/2023 17:21 | WG2072590 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/04/2023 12:20 | WG2071216 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/04/2023 12:20 | WG2071216 |
| Ethylbenzene | U | | 0.000737 | 0.00250 | 1 | 06/04/2023 12:20 | WG2071216 |
| Xylenes, Total | 0.000900 | J | 0.000880 | 0.00650 | 1 | 06/04/2023 12:20 | WG2071216 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/04/2023 12:20 | WG2071216 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/04/2023 12:20 | WG2071216 |
| (S) Toluene-d8 | 105 | | | 75.0-131 | | 06/04/2023 12:20 | WG2071216 |
| (S) 4-Bromofluorobenzene | 90.6 | | | 67.0-138 | | 06/04/2023 12:20 | WG2071216 |
| (S) 1,2-Dichloroethane-d4 | 108 | | | 70.0-130 | | 06/04/2023 12:20 | WG2071216 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/03/2023 14:35 | WG2070999 |
| C28-C36 Motor Oil Range | 3.37 | J | 0.274 | 4.00 | 1 | 06/03/2023 14:35 | WG2070999 |
| (S) <i>o</i> -Terphenyl | 41.8 | | | 18.0-148 | | 06/03/2023 14:35 | WG2070999 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/03/2023 18:15 | WG2071006 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/03/2023 18:15 | WG2071006 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/03/2023 18:15 | WG2071006 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/03/2023 18:15 | WG2071006 |
| (S) <i>p</i> -Terphenyl-d14 | 64.0 | | | 23.0-120 | | 06/03/2023 18:15 | WG2071006 |
| (S) Nitrobenzene-d5 | 69.9 | | | 14.0-149 | | 06/03/2023 18:15 | WG2071006 |
| (S) 2-Fluorobiphenyl | 61.1 | | | 34.0-125 | | 06/03/2023 18:15 | WG2071006 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3933358-2 06/06/23 08:50

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | U | | 0.543 | 2.50 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.2 | | | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3933358-1 06/06/23 08:14

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction | 5.50 | 5.50 | 100 | 72.0-127 | |
| (S) a,a,a-Trifluorotoluene(FID) | | | 108 | 77.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3933395-2 06/06/23 12:31

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | U | | 0.0217 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) | 99.0 | | | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3933395-1 06/06/23 11:45

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction | 5.50 | 5.14 | 93.5 | 72.0-127 | |
| (S) a,a,a-Trifluorotoluene(FID) | | | 108 | 77.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3933524-2 06/06/23 08:50

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | U | | 0.543 | 2.50 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.2 | | | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3933524-1 06/06/23 08:14

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction | 5.50 | 5.50 | 100 | 72.0-127 | |
| (S) a,a,a-Trifluorotoluene(FID) | | | 108 | 77.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3933227-3 06/04/23 06:38

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene | U | | 0.000467 | 0.00100 |
| Toluene | U | | 0.00130 | 0.00500 |
| Ethylbenzene | U | | 0.000737 | 0.00250 |
| Xylenes, Total | U | | 0.000880 | 0.00650 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 |
| (S) Toluene-d8 | 104 | | | 75.0-131 |
| (S) 4-Bromofluorobenzene | 95.1 | | | 67.0-138 |
| (S) 1,2-Dichloroethane-d4 | 112 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3933227-1 06/04/23 05:22 • (LCSD) R3933227-2 06/04/23 05:41

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.125 | 0.132 | 0.129 | 106 | 103 | 70.0-123 | | | 2.30 | 20 |
| Toluene | 0.125 | 0.119 | 0.120 | 95.2 | 96.0 | 75.0-121 | | | 0.837 | 20 |
| Ethylbenzene | 0.125 | 0.108 | 0.113 | 86.4 | 90.4 | 74.0-126 | | | 4.52 | 20 |
| Xylenes, Total | 0.375 | 0.314 | 0.318 | 83.7 | 84.8 | 72.0-127 | | | 1.27 | 20 |
| 1,2,4-Trimethylbenzene | 0.125 | 0.101 | 0.105 | 80.8 | 84.0 | 70.0-126 | | | 3.88 | 20 |
| 1,3,5-Trimethylbenzene | 0.125 | 0.104 | 0.113 | 83.2 | 90.4 | 73.0-127 | | | 8.29 | 20 |
| (S) Toluene-d8 | | | | 102 | 102 | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | 89.3 | 92.9 | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 119 | 115 | 70.0-130 | | | | |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3932528-1 06/03/23 14:02

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-------------------------|--------------------|--------------|-----------------|-----------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 |
| C28-C36 Motor Oil Range | U | | 0.274 | 4.00 |
| (S) o-Terphenyl | 69.8 | | | 18.0-148 |

Laboratory Control Sample (LCS)

(LCS) R3932528-2 06/03/23 14:16

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| C10-C28 Diesel Range | 50.0 | 38.6 | 77.2 | 50.0-150 | |
| (S) o-Terphenyl | | | 73.7 | 18.0-148 | |

L1622049-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1622049-05 06/03/23 14:57 • (MS) R3932528-3 06/03/23 15:11 • (MSD) R3932528-4 06/03/23 15:25

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| C10-C28 Diesel Range | 48.6 | U | 28.8 | 33.6 | 59.3 | 69.1 | 1 | 50.0-150 | | | 15.4 | 20 |
| (S) o-Terphenyl | | | | | 46.0 | 55.9 | | 18.0-148 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3932805-2 06/03/23 16:10

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Acenaphthene | U | | 0.00209 | 0.00600 |
| Anthracene | U | | 0.00230 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 |
| Chrysene | U | | 0.00232 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 |
| Fluoranthene | U | | 0.00227 | 0.00600 |
| Fluorene | U | | 0.00205 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 |
| Naphthalene | U | | 0.00408 | 0.0200 |
| Pyrene | U | | 0.00200 | 0.00600 |
| (S) p-Terphenyl-d14 | 72.9 | | | 23.0-120 |
| (S) Nitrobenzene-d5 | 71.8 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 72.3 | | | 34.0-125 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3932805-1 06/03/23 15:53

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Acenaphthene | 0.0800 | 0.0595 | 74.4 | 50.0-120 | |
| Anthracene | 0.0800 | 0.0584 | 73.0 | 50.0-126 | |
| Benzo(a)anthracene | 0.0800 | 0.0601 | 75.1 | 45.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0595 | 74.4 | 42.0-121 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0563 | 70.4 | 49.0-125 | |
| Benzo(a)pyrene | 0.0800 | 0.0561 | 70.1 | 42.0-120 | |
| Chrysene | 0.0800 | 0.0612 | 76.5 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0586 | 73.3 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0619 | 77.4 | 49.0-129 | |
| Fluorene | 0.0800 | 0.0587 | 73.4 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0621 | 77.6 | 46.0-125 | |
| 1-Methylnaphthalene | 0.0800 | 0.0606 | 75.8 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0638 | 79.8 | 50.0-120 | |
| Naphthalene | 0.0800 | 0.0627 | 78.4 | 50.0-120 | |
| Pyrene | 0.0800 | 0.0587 | 73.4 | 43.0-123 | |

Laboratory Control Sample (LCS)

(LCS) R3932805-1 06/03/23 15:53

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| (S) p-Terphenyl-d14 | | | 78.7 | 23.0-120 | |
| (S) Nitrobenzene-d5 | | | 79.6 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 77.6 | 34.0-125 | |

L1622052-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1622052-04 06/03/23 20:38 • (MS) R3932805-3 06/03/23 20:56 • (MSD) R3932805-4 06/03/23 21:14

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Acenaphthene | 0.0768 | U | 0.0565 | 0.0552 | 73.6 | 71.9 | 1 | 14.0-127 | | | 2.33 | 27 |
| Anthracene | 0.0768 | U | 0.0521 | 0.0505 | 67.8 | 65.8 | 1 | 10.0-145 | | | 3.12 | 30 |
| Benzo(a)anthracene | 0.0768 | 0.00542 | 0.0607 | 0.0511 | 72.0 | 59.5 | 1 | 10.0-139 | | | 17.2 | 30 |
| Benzo(b)fluoranthene | 0.0768 | 0.00757 | 0.0655 | 0.0547 | 75.4 | 61.4 | 1 | 10.0-140 | | | 18.0 | 36 |
| Benzo(k)fluoranthene | 0.0768 | 0.00299 | 0.0571 | 0.0542 | 70.5 | 66.7 | 1 | 10.0-137 | | | 5.21 | 31 |
| Benzo(a)pyrene | 0.0768 | 0.00507 | 0.0618 | 0.0546 | 73.9 | 64.5 | 1 | 10.0-141 | | | 12.4 | 31 |
| Chrysene | 0.0768 | 0.00573 | 0.0724 | 0.0597 | 86.8 | 70.3 | 1 | 10.0-145 | | | 19.2 | 30 |
| Dibenz(a,h)anthracene | 0.0768 | U | 0.0545 | 0.0520 | 71.0 | 67.7 | 1 | 10.0-132 | | | 4.69 | 31 |
| Fluoranthene | 0.0768 | 0.0114 | 0.0763 | 0.0587 | 84.5 | 61.6 | 1 | 10.0-153 | | | 26.1 | 33 |
| Fluorene | 0.0768 | U | 0.0542 | 0.0525 | 70.6 | 68.4 | 1 | 11.0-130 | | | 3.19 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0768 | 0.00361 | 0.0581 | 0.0526 | 71.0 | 63.8 | 1 | 10.0-137 | | | 9.94 | 32 |
| 1-Methylnaphthalene | 0.0768 | U | 0.0567 | 0.0552 | 73.3 | 71.4 | 1 | 10.0-142 | | | 2.68 | 28 |
| 2-Methylnaphthalene | 0.0768 | U | 0.0583 | 0.0570 | 75.3 | 73.6 | 1 | 10.0-137 | | | 2.25 | 28 |
| Naphthalene | 0.0768 | U | 0.0585 | 0.0571 | 76.2 | 74.3 | 1 | 10.0-135 | | | 2.42 | 27 |
| Pyrene | 0.0768 | 0.00968 | 0.0706 | 0.0571 | 79.3 | 61.7 | 1 | 10.0-148 | | | 21.1 | 35 |
| (S) p-Terphenyl-d14 | | | | | 80.1 | 80.0 | | 23.0-120 | | | | |
| (S) Nitrobenzene-d5 | | | | | 78.8 | 78.4 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 80.9 | 80.8 | | 34.0-125 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|---|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
|---|---|

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

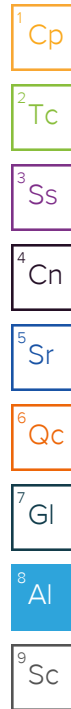
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



Report to:
Blair Rollins

Email To:
brollins@caerusoilandgas.com

Project Description:

LOVE RANCH 8 Liquid Release Investigation

City/State
Collected: Piceance Crk, CO

Please Circle:
PT MI CT ET

Phone: (970) 640-6919

Client Project #
20234315.001A

Lab Project #

Collected by (print):

Jordan Veith

Site/Facility ID #

LOVE RANCH 8

P.O. #

Collected by (signature):

[Signature]

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
☒ Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

Standard TAT

Immediately
Packed on Ice N ☐ Y ☒

No.
of
Cntrs

| Sample ID | Comp/Grab | Matrix* | Depth | Date | Time | No. of Cntrs |
|------------------------------------|-----------|---------|-------|----------|-------|--------------|
| 00301001-LOVE RANCH 8 -(SBO1) @ 20 | Grab | SS | 20 | 6/1/2023 | 9:45 | 2 |
| 00301001-LOVE RANCH 8 -(SBO1) @ 25 | | | 25 | | 10:00 | 2 |
| 00301001-LOVE RANCH 8 -(SBO1) @ 30 | | | 30 | | 10:10 | 2 |
| 00301001-LOVE RANCH 8 -(SBO3) @ 6 | | | 6 | | 10:30 | 2 |
| 00301001-LOVE RANCH 8 -(SBO3) @ 20 | | | 20 | | 10:43 | 2 |
| 00301001-LOVE RANCH 8 -(SBO3) @ 30 | | | 30 | | 11:00 | 2 |

COGCC Table 915-1 ORGANIC COMPOUNDS

EC, pH, SAR

Arsenic, Boron

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

COGCC Table 910-1

SDG # *U603049*

J156

Acctnum:

Template:

Prelogin:

PM:

PB:

Shipped Via:

Remarks

Sample # (lab only)

-01
-02
-03
-04
-05
-06

* Matrix:

SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:

☐ UPS ☐ FedEx ☐ Courier

Tracking # 6126 6537 3498

pH Temp

Flow Other

Sample Receipt Checklist

COC Seal Present/Intact: ☐ NP ☒ Y ☐ N
COC Signed/Accurate: ☐ Y ☒ N
Bottles arrive intact: ☐ Y ☒ N
Correct bottles used: ☐ Y ☒ N
Sufficient volume sent: ☐ Y ☒ N
If Applicable
VOA Zero Headspace: ☐ Y ☒ N
Preservation Correct/Checked: ☐ Y ☒ N
RAD Screen <0.5 mR/hr: ☐ Y ☒ N

Relinquished by: (Signature)

[Signature]

Date:

6/1/2023

Time:

17:45

Received by: (Signature)

[Signature]

Trip Blank Received: Yes/No

HCL / MeOH
TBR

Relinquished by: (Signature)

[Signature]

Date:

6/1/2023

Time:

16:40

Received by: (Signature)

[Signature]

Temp: °C Bottles Received:

NSA70.8+0=0.8 12

Relinquished by: (Signature)

[Signature]

Date:

6/1/25

Time:

17:15

Received for lab by: (Signature)

[Signature]

Date:

6/2/23

Time:

0900

Hold:

Condition:

NCF / OK

Caerus Oil and Gas

Sample Delivery Group: L1624260
Samples Received: 06/08/2023
Project Number:
Description:
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



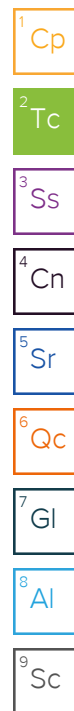
Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230606-LOVE RANCH8-(SB23)@1 L1624260-01 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 12:20

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075533 | 1 | 06/11/23 15:47 | 06/12/23 09:21 | JHH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075583 | 1 | 06/11/23 15:47 | 06/12/23 02:54 | JBE | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 10:28 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075347 | 1 | 06/11/23 16:16 | 06/12/23 00:28 | DSH | Mt. Juliet, TN |

20230606-LOVE RANCH8-(SB23)@20 L1624260-02 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 12:30

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075983 | 1 | 06/11/23 15:47 | 06/12/23 15:10 | JAH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075583 | 1 | 06/11/23 15:47 | 06/12/23 03:13 | JBE | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 09:32 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075347 | 1 | 06/11/23 16:16 | 06/12/23 00:48 | DSH | Mt. Juliet, TN |

20230606-LOVE RANCH8-(SB23)@30 L1624260-03 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 14:20

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075983 | 1 | 06/11/23 15:47 | 06/12/23 15:31 | JAH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075583 | 1 | 06/11/23 15:47 | 06/12/23 03:32 | JBE | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 10:00 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075347 | 1 | 06/11/23 16:16 | 06/12/23 01:08 | DSH | Mt. Juliet, TN |

20230606-LOVE RANCH8-(SB18)@1 L1624260-04 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 13:50

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075983 | 1 | 06/11/23 15:47 | 06/12/23 15:51 | JAH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075583 | 1 | 06/11/23 15:47 | 06/12/23 03:51 | JBE | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 10:42 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075347 | 1 | 06/11/23 16:16 | 06/12/23 01:27 | DSH | Mt. Juliet, TN |

20230606-LOVE RANCH8-(SB18)@20 L1624260-05 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 14:45

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075983 | 1 | 06/11/23 15:47 | 06/12/23 16:12 | JAH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075583 | 1 | 06/11/23 15:47 | 06/12/23 04:10 | JBE | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 09:46 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075744 | 1 | 06/13/23 06:57 | 06/13/23 18:48 | DSH | Mt. Juliet, TN |

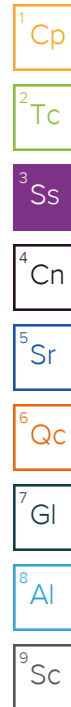
20230606-LOVE RANCH8-(SB18)@30 L1624260-06 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 14:55

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075983 | 1 | 06/11/23 15:47 | 06/12/23 16:32 | JAH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075843 | 1 | 06/11/23 15:47 | 06/12/23 11:59 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 10:56 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075744 | 1 | 06/13/23 06:57 | 06/13/23 19:05 | DSH | Mt. Juliet, TN |



SAMPLE SUMMARY

20230606-LOVE RANCH8-(SB21)@1 L1624260-07 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 14:10

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075983 | 1 | 06/11/23 15:47 | 06/12/23 16:52 | JAH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075843 | 1 | 06/11/23 15:47 | 06/12/23 12:18 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 09:18 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075744 | 1 | 06/13/23 06:57 | 06/13/23 19:23 | DSH | Mt. Juliet, TN |

20230606-LOVE RANCH8-(SB21)@20 L1624260-08 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 15:15

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075983 | 1 | 06/11/23 15:47 | 06/12/23 17:13 | JAH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075843 | 1 | 06/11/23 15:47 | 06/12/23 12:37 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 09:04 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075744 | 1 | 06/13/23 06:57 | 06/13/23 20:49 | DSH | Mt. Juliet, TN |

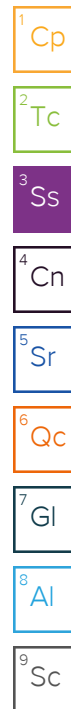
20230606-LOVE RANCH8-(SB21)@30 L1624260-09 Solid

Collected by
Jordan Veith

Collected date/time
06/05/23 15:45

Received date/time
06/08/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2075983 | 1 | 06/11/23 15:47 | 06/12/23 17:33 | JAH | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2075843 | 1 | 06/11/23 15:47 | 06/12/23 12:56 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2075726 | 1 | 06/13/23 00:48 | 06/13/23 10:14 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2075744 | 1 | 06/13/23 06:57 | 06/13/23 19:40 | DSH | Mt. Juliet, TN |



CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.123 | B | 0.0217 | 0.100 | 1 | 06/12/2023 09:21 | WG2075533 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.1 | | | 77.0-120 | | 06/12/2023 09:21 | WG2075533 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/12/2023 02:54 | WG2075583 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/12/2023 02:54 | WG2075583 |
| Ethylbenzene | 0.000850 | J | 0.000737 | 0.00250 | 1 | 06/12/2023 02:54 | WG2075583 |
| Xylenes, Total | U | | 0.000880 | 0.00650 | 1 | 06/12/2023 02:54 | WG2075583 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 02:54 | WG2075583 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 02:54 | WG2075583 |
| (S) <i>Toluene-d8</i> | 98.4 | | | 75.0-131 | | 06/12/2023 02:54 | WG2075583 |
| (S) <i>4</i> -Bromofluorobenzene | 99.2 | | | 67.0-138 | | 06/12/2023 02:54 | WG2075583 |
| (S) <i>1,2</i> -Dichloroethane- <i>d4</i> | 92.1 | | | 70.0-130 | | 06/12/2023 02:54 | WG2075583 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 3.86 | J | 1.61 | 4.00 | 1 | 06/13/2023 10:28 | WG2075726 |
| C28-C36 Motor Oil Range | 21.3 | | 0.274 | 4.00 | 1 | 06/13/2023 10:28 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 62.2 | | | 18.0-148 | | 06/13/2023 10:28 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------------------|-----------------|--------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/12/2023 00:28 | WG2075347 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/12/2023 00:28 | WG2075347 |
| Naphthalene | U | J4 | 0.00408 | 0.0200 | 1 | 06/12/2023 00:28 | WG2075347 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/12/2023 00:28 | WG2075347 |
| (S) <i>p</i> -Terphenyl- <i>d14</i> | 76.3 | | | 23.0-120 | | 06/12/2023 00:28 | WG2075347 |
| (S) Nitrobenzene- <i>d5</i> | 45.4 | | | 14.0-149 | | 06/12/2023 00:28 | WG2075347 |
| (S) <i>2</i> -Fluorobiphenyl | 49.6 | | | 34.0-125 | | 06/12/2023 00:28 | WG2075347 |

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|---------------------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.0883 | B J | 0.0217 | 0.100 | 1 | 06/12/2023 15:10 | WG2075983 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.0 | | | 77.0-120 | | 06/12/2023 15:10 | WG2075983 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/12/2023 03:13 | WG2075583 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/12/2023 03:13 | WG2075583 |
| Ethylbenzene | U | | 0.000737 | 0.00250 | 1 | 06/12/2023 03:13 | WG2075583 |
| Xylenes, Total | 0.00100 | J | 0.000880 | 0.00650 | 1 | 06/12/2023 03:13 | WG2075583 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 03:13 | WG2075583 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 03:13 | WG2075583 |
| (S) <i>Toluene-d8</i> | 85.4 | | | 75.0-131 | | 06/12/2023 03:13 | WG2075583 |
| (S) <i>4</i> -Bromofluorobenzene | 98.2 | | | 67.0-138 | | 06/12/2023 03:13 | WG2075583 |
| (S) <i>1,2</i> -Dichloroethane-d4 | 94.4 | | | 70.0-130 | | 06/12/2023 03:13 | WG2075583 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/13/2023 09:32 | WG2075726 |
| C28-C36 Motor Oil Range | 1.08 | J | 0.274 | 4.00 | 1 | 06/13/2023 09:32 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 48.8 | | | 18.0-148 | | 06/13/2023 09:32 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------------|-----------------|--------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/12/2023 00:48 | WG2075347 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/12/2023 00:48 | WG2075347 |
| Naphthalene | U | J4 | 0.00408 | 0.0200 | 1 | 06/12/2023 00:48 | WG2075347 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/12/2023 00:48 | WG2075347 |
| (S) <i>p</i> -Terphenyl-d14 | 69.1 | | | 23.0-120 | | 06/12/2023 00:48 | WG2075347 |
| (S) Nitrobenzene-d5 | 40.0 | | | 14.0-149 | | 06/12/2023 00:48 | WG2075347 |
| (S) <i>2</i> -Fluorobiphenyl | 38.1 | | | 34.0-125 | | 06/12/2023 00:48 | WG2075347 |

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|---------------------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.0572 | B J | 0.0217 | 0.100 | 1 | 06/12/2023 15:31 | WG2075983 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 94.9 | | | 77.0-120 | | 06/12/2023 15:31 | WG2075983 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/12/2023 03:32 | WG2075583 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/12/2023 03:32 | WG2075583 |
| Ethylbenzene | 0.00105 | J | 0.000737 | 0.00250 | 1 | 06/12/2023 03:32 | WG2075583 |
| Xylenes, Total | 0.00107 | J | 0.000880 | 0.00650 | 1 | 06/12/2023 03:32 | WG2075583 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 03:32 | WG2075583 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 03:32 | WG2075583 |
| (S) <i>Toluene-d8</i> | 100 | | | 75.0-131 | | 06/12/2023 03:32 | WG2075583 |
| (S) <i>4</i> -Bromofluorobenzene | 84.7 | | | 67.0-138 | | 06/12/2023 03:32 | WG2075583 |
| (S) <i>1,2</i> -Dichloroethane- <i>d4</i> | 93.3 | | | 70.0-130 | | 06/12/2023 03:32 | WG2075583 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/13/2023 10:00 | WG2075726 |
| C28-C36 Motor Oil Range | 2.19 | J | 0.274 | 4.00 | 1 | 06/13/2023 10:00 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 36.6 | | | 18.0-148 | | 06/13/2023 10:00 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------------------|-----------------|--------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/12/2023 01:08 | WG2075347 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/12/2023 01:08 | WG2075347 |
| Naphthalene | U | J4 | 0.00408 | 0.0200 | 1 | 06/12/2023 01:08 | WG2075347 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/12/2023 01:08 | WG2075347 |
| (S) <i>p</i> -Terphenyl- <i>d14</i> | 86.8 | | | 23.0-120 | | 06/12/2023 01:08 | WG2075347 |
| (S) Nitrobenzene- <i>d5</i> | 40.8 | | | 14.0-149 | | 06/12/2023 01:08 | WG2075347 |
| (S) <i>2</i> -Fluorobiphenyl | 45.0 | | | 34.0-125 | | 06/12/2023 01:08 | WG2075347 |

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.129 | B | 0.0217 | 0.100 | 1 | 06/12/2023 15:51 | WG2075983 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.9 | | | 77.0-120 | | 06/12/2023 15:51 | WG2075983 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/12/2023 03:51 | WG2075583 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/12/2023 03:51 | WG2075583 |
| Ethylbenzene | U | | 0.000737 | 0.00250 | 1 | 06/12/2023 03:51 | WG2075583 |
| Xylenes, Total | 0.000925 | J | 0.000880 | 0.00650 | 1 | 06/12/2023 03:51 | WG2075583 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 03:51 | WG2075583 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 03:51 | WG2075583 |
| (S) <i>Toluene-d8</i> | 109 | | | 75.0-131 | | 06/12/2023 03:51 | WG2075583 |
| (S) <i>4</i> -Bromofluorobenzene | 109 | | | 67.0-138 | | 06/12/2023 03:51 | WG2075583 |
| (S) <i>1,2</i> -Dichloroethane-d4 | 92.3 | | | 70.0-130 | | 06/12/2023 03:51 | WG2075583 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 7.86 | | 1.61 | 4.00 | 1 | 06/13/2023 10:42 | WG2075726 |
| C28-C36 Motor Oil Range | 56.4 | | 0.274 | 4.00 | 1 | 06/13/2023 10:42 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 72.9 | | | 18.0-148 | | 06/13/2023 10:42 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------------|-----------------|--------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/12/2023 01:27 | WG2075347 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/12/2023 01:27 | WG2075347 |
| Naphthalene | U | J4 | 0.00408 | 0.0200 | 1 | 06/12/2023 01:27 | WG2075347 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/12/2023 01:27 | WG2075347 |
| (S) <i>p</i> -Terphenyl-d14 | 63.3 | | | 23.0-120 | | 06/12/2023 01:27 | WG2075347 |
| (S) Nitrobenzene-d5 | 29.0 | | | 14.0-149 | | 06/12/2023 01:27 | WG2075347 |
| (S) <i>2</i> -Fluorobiphenyl | 33.3 | J2 | | 34.0-125 | | 06/12/2023 01:27 | WG2075347 |

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.0707 | <u>B</u> <u>J</u> | 0.0217 | 0.100 | 1 | 06/12/2023 16:12 | WG2075983 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.1 | | | 77.0-120 | | 06/12/2023 16:12 | WG2075983 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/12/2023 04:10 | WG2075583 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/12/2023 04:10 | WG2075583 |
| Ethylbenzene | 0.000975 | <u>J</u> | 0.000737 | 0.00250 | 1 | 06/12/2023 04:10 | WG2075583 |
| Xylenes, Total | 0.00103 | <u>J</u> | 0.000880 | 0.00650 | 1 | 06/12/2023 04:10 | WG2075583 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 04:10 | WG2075583 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 04:10 | WG2075583 |
| (S) <i>Toluene-d8</i> | 97.1 | | | 75.0-131 | | 06/12/2023 04:10 | WG2075583 |
| (S) <i>4</i> -Bromofluorobenzene | 98.6 | | | 67.0-138 | | 06/12/2023 04:10 | WG2075583 |
| (S) <i>1,2</i> -Dichloroethane-d4 | 95.1 | | | 70.0-130 | | 06/12/2023 04:10 | WG2075583 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/13/2023 09:46 | WG2075726 |
| C28-C36 Motor Oil Range | 0.869 | <u>J</u> | 0.274 | 4.00 | 1 | 06/13/2023 09:46 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 62.9 | | | 18.0-148 | | 06/13/2023 09:46 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/13/2023 18:48 | WG2075744 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/13/2023 18:48 | WG2075744 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/13/2023 18:48 | WG2075744 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/13/2023 18:48 | WG2075744 |
| (S) <i>p</i> -Terphenyl-d14 | 69.9 | | | 23.0-120 | | 06/13/2023 18:48 | WG2075744 |
| (S) Nitrobenzene-d5 | 77.3 | | | 14.0-149 | | 06/13/2023 18:48 | WG2075744 |
| (S) <i>2</i> -Fluorobiphenyl | 50.5 | | | 34.0-125 | | 06/13/2023 18:48 | WG2075744 |

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|---------------------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.0719 | B J | 0.0217 | 0.100 | 1 | 06/12/2023 16:32 | WG2075983 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.4 | | | 77.0-120 | | 06/12/2023 16:32 | WG2075983 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/12/2023 11:59 | WG2075843 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/12/2023 11:59 | WG2075843 |
| Ethylbenzene | U | | 0.000737 | 0.00250 | 1 | 06/12/2023 11:59 | WG2075843 |
| Xylenes, Total | 0.00105 | J | 0.000880 | 0.00650 | 1 | 06/12/2023 11:59 | WG2075843 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 11:59 | WG2075843 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 11:59 | WG2075843 |
| (S) <i>Toluene-d8</i> | 116 | | | 75.0-131 | | 06/12/2023 11:59 | WG2075843 |
| (S) <i>4</i> -Bromofluorobenzene | 85.9 | | | 67.0-138 | | 06/12/2023 11:59 | WG2075843 |
| (S) <i>1,2</i> -Dichloroethane-d4 | 104 | | | 70.0-130 | | 06/12/2023 11:59 | WG2075843 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 3.22 | J | 1.61 | 4.00 | 1 | 06/13/2023 10:56 | WG2075726 |
| C28-C36 Motor Oil Range | 8.99 | | 0.274 | 4.00 | 1 | 06/13/2023 10:56 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 87.5 | | | 18.0-148 | | 06/13/2023 10:56 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/13/2023 19:05 | WG2075744 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/13/2023 19:05 | WG2075744 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/13/2023 19:05 | WG2075744 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/13/2023 19:05 | WG2075744 |
| (S) <i>p</i> -Terphenyl-d14 | 62.0 | | | 23.0-120 | | 06/13/2023 19:05 | WG2075744 |
| (S) Nitrobenzene-d5 | 72.4 | | | 14.0-149 | | 06/13/2023 19:05 | WG2075744 |
| (S) <i>2</i> -Fluorobiphenyl | 57.8 | | | 34.0-125 | | 06/13/2023 19:05 | WG2075744 |

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|---------------------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.0985 | B J | 0.0217 | 0.100 | 1 | 06/12/2023 16:52 | WG2075983 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 96.1 | | | 77.0-120 | | 06/12/2023 16:52 | WG2075983 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/12/2023 12:18 | WG2075843 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 06/12/2023 12:18 | WG2075843 |
| Ethylbenzene | U | | 0.000737 | 0.00250 | 1 | 06/12/2023 12:18 | WG2075843 |
| Xylenes, Total | U | | 0.000880 | 0.00650 | 1 | 06/12/2023 12:18 | WG2075843 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 12:18 | WG2075843 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 12:18 | WG2075843 |
| (S) <i>Toluene-d8</i> | 114 | | | 75.0-131 | | 06/12/2023 12:18 | WG2075843 |
| (S) <i>4</i> -Bromofluorobenzene | 88.7 | | | 67.0-138 | | 06/12/2023 12:18 | WG2075843 |
| (S) <i>1,2</i> -Dichloroethane-d4 | 109 | | | 70.0-130 | | 06/12/2023 12:18 | WG2075843 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 2.24 | J | 1.61 | 4.00 | 1 | 06/13/2023 09:18 | WG2075726 |
| C28-C36 Motor Oil Range | 5.26 | | 0.274 | 4.00 | 1 | 06/13/2023 09:18 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 67.3 | | | 18.0-148 | | 06/13/2023 09:18 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/13/2023 19:23 | WG2075744 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/13/2023 19:23 | WG2075744 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/13/2023 19:23 | WG2075744 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/13/2023 19:23 | WG2075744 |
| (S) <i>p</i> -Terphenyl-d14 | 72.7 | | | 23.0-120 | | 06/13/2023 19:23 | WG2075744 |
| (S) Nitrobenzene-d5 | 83.5 | | | 14.0-149 | | 06/13/2023 19:23 | WG2075744 |
| (S) <i>2</i> -Fluorobiphenyl | 56.4 | | | 34.0-125 | | 06/13/2023 19:23 | WG2075744 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.586 | | 0.0217 | 0.100 | 1 | 06/12/2023 17:13 | WG2075983 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 94.7 | | | 77.0-120 | | 06/12/2023 17:13 | WG2075983 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | 0.0329 | | 0.000467 | 0.00100 | 1 | 06/12/2023 12:37 | WG2075843 |
| Toluene | 0.0489 | | 0.00130 | 0.00500 | 1 | 06/12/2023 12:37 | WG2075843 |
| Ethylbenzene | 0.00230 | J | 0.000737 | 0.00250 | 1 | 06/12/2023 12:37 | WG2075843 |
| Xylenes, Total | 0.0124 | | 0.000880 | 0.00650 | 1 | 06/12/2023 12:37 | WG2075843 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 12:37 | WG2075843 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 12:37 | WG2075843 |
| (S) Toluene-d8 | 114 | | | 75.0-131 | | 06/12/2023 12:37 | WG2075843 |
| (S) 4-Bromofluorobenzene | 88.9 | | | 67.0-138 | | 06/12/2023 12:37 | WG2075843 |
| (S) 1,2-Dichloroethane-d4 | 105 | | | 70.0-130 | | 06/12/2023 12:37 | WG2075843 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/13/2023 09:04 | WG2075726 |
| C28-C36 Motor Oil Range | 0.907 | J | 0.274 | 4.00 | 1 | 06/13/2023 09:04 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 35.6 | | | 18.0-148 | | 06/13/2023 09:04 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/13/2023 20:49 | WG2075744 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/13/2023 20:49 | WG2075744 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/13/2023 20:49 | WG2075744 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/13/2023 20:49 | WG2075744 |
| (S) <i>p</i> -Terphenyl-d14 | 63.8 | | | 23.0-120 | | 06/13/2023 20:49 | WG2075744 |
| (S) Nitrobenzene-d5 | 74.9 | | | 14.0-149 | | 06/13/2023 20:49 | WG2075744 |
| (S) 2-Fluorobiphenyl | 49.3 | | | 34.0-125 | | 06/13/2023 20:49 | WG2075744 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|-----------------|---------------------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 0.0628 | B J | 0.0217 | 0.100 | 1 | 06/12/2023 17:33 | WG2075983 |
| (S) <i>a,a,a</i> -Trifluorotoluene(FID) | 95.1 | | | 77.0-120 | | 06/12/2023 17:33 | WG2075983 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------------|-----------------|---------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 06/12/2023 12:56 | WG2075843 |
| Toluene | 0.00138 | B J | 0.00130 | 0.00500 | 1 | 06/12/2023 12:56 | WG2075843 |
| Ethylbenzene | 0.000850 | J | 0.000737 | 0.00250 | 1 | 06/12/2023 12:56 | WG2075843 |
| Xylenes, Total | 0.00113 | J | 0.000880 | 0.00650 | 1 | 06/12/2023 12:56 | WG2075843 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 06/12/2023 12:56 | WG2075843 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 | 1 | 06/12/2023 12:56 | WG2075843 |
| (S) <i>Toluene-d8</i> | 115 | | | 75.0-131 | | 06/12/2023 12:56 | WG2075843 |
| (S) <i>4</i> -Bromofluorobenzene | 88.8 | | | 67.0-138 | | 06/12/2023 12:56 | WG2075843 |
| (S) <i>1,2</i> -Dichloroethane-d4 | 107 | | | 70.0-130 | | 06/12/2023 12:56 | WG2075843 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 06/13/2023 10:14 | WG2075726 |
| C28-C36 Motor Oil Range | 3.14 | J | 0.274 | 4.00 | 1 | 06/13/2023 10:14 | WG2075726 |
| (S) <i>o</i> -Terphenyl | 56.4 | | | 18.0-148 | | 06/13/2023 10:14 | WG2075726 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Fluorene | U | | 0.00205 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 | 1 | 06/13/2023 19:40 | WG2075744 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 | 1 | 06/13/2023 19:40 | WG2075744 |
| Naphthalene | U | | 0.00408 | 0.0200 | 1 | 06/13/2023 19:40 | WG2075744 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/13/2023 19:40 | WG2075744 |
| (S) <i>p</i> -Terphenyl-d14 | 69.3 | | | 23.0-120 | | 06/13/2023 19:40 | WG2075744 |
| (S) Nitrobenzene-d5 | 78.3 | | | 14.0-149 | | 06/13/2023 19:40 | WG2075744 |
| (S) <i>2</i> -Fluorobiphenyl | 61.3 | | | 34.0-125 | | 06/13/2023 19:40 | WG2075744 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3936797-2 06/11/23 22:40

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | 0.0268 | ⬇ | 0.0217 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) | 99.8 | | | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3936797-1 06/11/23 21:48

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction | 5.50 | 4.45 | 80.9 | 72.0-127 | |
| (S) a,a,a-Trifluorotoluene(FID) | | | 100 | 77.0-120 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937105-1 06/12/23 13:07

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | 0.0238 | ⬇ | 0.0217 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.4 | | | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3937105-2 06/12/23 20:20

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction | 5.50 | 5.54 | 101 | 72.0-127 | |
| (S) a,a,a-Trifluorotoluene(FID) | | | 115 | 77.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3936619-3 06/11/23 20:58

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene | U | | 0.000467 | 0.00100 |
| Toluene | U | | 0.00130 | 0.00500 |
| Ethylbenzene | U | | 0.000737 | 0.00250 |
| Xylenes, Total | U | | 0.000880 | 0.00650 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 |
| (S) Toluene-d8 | 111 | | | 75.0-131 |
| (S) 4-Bromofluorobenzene | 98.6 | | | 67.0-138 |
| (S) 1,2-Dichloroethane-d4 | 93.9 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3936619-1 06/11/23 19:23 • (LCSD) R3936619-2 06/11/23 19:41

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.125 | 0.130 | 0.123 | 104 | 98.4 | 70.0-123 | | | 5.53 | 20 |
| Toluene | 0.125 | 0.125 | 0.117 | 100 | 93.6 | 75.0-121 | | | 6.61 | 20 |
| Ethylbenzene | 0.125 | 0.132 | 0.120 | 106 | 96.0 | 74.0-126 | | | 9.52 | 20 |
| Xylenes, Total | 0.375 | 0.372 | 0.361 | 99.2 | 96.3 | 72.0-127 | | | 3.00 | 20 |
| 1,2,4-Trimethylbenzene | 0.125 | 0.129 | 0.122 | 103 | 97.6 | 70.0-126 | | | 5.58 | 20 |
| 1,3,5-Trimethylbenzene | 0.125 | 0.144 | 0.121 | 115 | 96.8 | 73.0-127 | | | 17.4 | 20 |
| (S) Toluene-d8 | | | | 104 | 104 | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | 123 | 98.1 | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 97.5 | 97.6 | 70.0-130 | | | | |

L1624260-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624260-01 06/12/23 02:54 • (MS) R3936619-4 06/12/23 04:48 • (MSD) R3936619-5 06/12/23 05:07

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 0.125 | U | 0.139 | 0.146 | 111 | 117 | 1 | 10.0-149 | | | 4.91 | 37 |
| Toluene | 0.125 | U | 0.144 | 0.147 | 115 | 118 | 1 | 10.0-156 | | | 2.06 | 38 |
| Ethylbenzene | 0.125 | 0.000850 | 0.145 | 0.152 | 115 | 121 | 1 | 10.0-160 | | | 4.71 | 38 |
| Xylenes, Total | 0.375 | U | 0.429 | 0.418 | 114 | 111 | 1 | 10.0-160 | | | 2.60 | 38 |
| 1,2,4-Trimethylbenzene | 0.125 | U | 0.157 | 0.151 | 126 | 121 | 1 | 10.0-160 | | | 3.90 | 36 |
| 1,3,5-Trimethylbenzene | 0.125 | U | 0.126 | 0.147 | 101 | 118 | 1 | 10.0-160 | | | 15.4 | 38 |
| (S) Toluene-d8 | | | | | 107 | 106 | | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 99.6 | 86.9 | | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 94.0 | 95.1 | | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3936129-3 06/12/23 10:05

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene | U | | 0.000467 | 0.00100 |
| Toluene | 0.00218 | U | 0.00130 | 0.00500 |
| Ethylbenzene | U | | 0.000737 | 0.00250 |
| Xylenes, Total | U | | 0.000880 | 0.00650 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 |
| (S) Toluene-d8 | 115 | | | 75.0-131 |
| (S) 4-Bromofluorobenzene | 90.3 | | | 67.0-138 |
| (S) 1,2-Dichloroethane-d4 | 108 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3936129-1 06/12/23 05:34 • (LCSD) R3936129-2 06/12/23 05:53

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.125 | 0.108 | 0.111 | 86.4 | 88.8 | 70.0-123 | | | 2.74 | 20 |
| Toluene | 0.125 | 0.119 | 0.127 | 95.2 | 102 | 75.0-121 | | | 6.50 | 20 |
| Ethylbenzene | 0.125 | 0.117 | 0.124 | 93.6 | 99.2 | 74.0-126 | | | 5.81 | 20 |
| Xylenes, Total | 0.375 | 0.327 | 0.339 | 87.2 | 90.4 | 72.0-127 | | | 3.60 | 20 |
| 1,2,4-Trimethylbenzene | 0.125 | 0.103 | 0.111 | 82.4 | 88.8 | 70.0-126 | | | 7.48 | 20 |
| 1,3,5-Trimethylbenzene | 0.125 | 0.108 | 0.117 | 86.4 | 93.6 | 73.0-127 | | | 8.00 | 20 |
| (S) Toluene-d8 | | | | 110 | 115 | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | 90.5 | 91.1 | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 111 | 109 | 70.0-130 | | | | |

L1624321-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624321-01 06/12/23 13:15 • (MS) R3936129-4 06/12/23 16:25 • (MSD) R3936129-5 06/12/23 16:45

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 0.139 | U | 0.0844 | 0.0855 | 68.1 | 69.0 | 1 | 10.0-149 | | | 1.29 | 37 |
| Toluene | 0.139 | U | 0.0947 | 0.0964 | 76.4 | 77.7 | 1 | 10.0-156 | | | 1.78 | 38 |
| Ethylbenzene | 0.139 | U | 0.0890 | 0.0962 | 71.8 | 77.6 | 1 | 10.0-160 | | | 7.78 | 38 |
| Xylenes, Total | 0.417 | U | 0.252 | 0.261 | 67.7 | 70.2 | 1 | 10.0-160 | | | 3.51 | 38 |
| 1,2,4-Trimethylbenzene | 0.139 | U | 0.0852 | 0.0874 | 68.7 | 70.5 | 1 | 10.0-160 | | | 2.55 | 36 |
| 1,3,5-Trimethylbenzene | 0.139 | U | 0.0879 | 0.0870 | 70.9 | 70.2 | 1 | 10.0-160 | | | 1.03 | 38 |
| (S) Toluene-d8 | | | | | 115 | 113 | | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 89.5 | 91.1 | | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 106 | 104 | | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3936147-1 06/13/23 07:40

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-------------------------|--------------------|--------------|-----------------|-----------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 |
| C28-C36 Motor Oil Range | U | | 0.274 | 4.00 |
| (S) o-Terphenyl | 59.9 | | | 18.0-148 |

Laboratory Control Sample (LCS)

(LCS) R3936147-2 06/13/23 07:54

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| C10-C28 Diesel Range | 50.0 | 54.7 | 109 | 50.0-150 | |
| (S) o-Terphenyl | | | 105 | 18.0-148 | |

L1624181-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624181-01 06/13/23 08:08 • (MS) R3936147-3 06/13/23 08:22 • (MSD) R3936147-4 06/13/23 08:36

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| C10-C28 Diesel Range | 50.0 | U | 40.5 | 49.7 | 81.0 | 99.4 | 1 | 50.0-150 | | J3 | 20.4 | 20 |
| (S) o-Terphenyl | | | | | 67.6 | 81.5 | | 18.0-148 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937067-2 06/12/23 00:09

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Acenaphthene | U | | 0.00209 | 0.00600 |
| Anthracene | U | | 0.00230 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 |
| Chrysene | U | | 0.00232 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 |
| Fluoranthene | U | | 0.00227 | 0.00600 |
| Fluorene | U | | 0.00205 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 |
| Naphthalene | U | | 0.00408 | 0.0200 |
| Pyrene | U | | 0.00200 | 0.00600 |
| (S) p-Terphenyl-d14 | 99.0 | | | 23.0-120 |
| (S) Nitrobenzene-d5 | 39.7 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 53.6 | | | 34.0-125 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3937067-1 06/11/23 23:49

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Acenaphthene | 0.0800 | 0.0444 | 55.5 | 50.0-120 | |
| Anthracene | 0.0800 | 0.0569 | 71.1 | 50.0-126 | |
| Benzo(a)anthracene | 0.0800 | 0.0618 | 77.3 | 45.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0597 | 74.6 | 42.0-121 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0551 | 68.9 | 49.0-125 | |
| Benzo(a)pyrene | 0.0800 | 0.0577 | 72.1 | 42.0-120 | |
| Chrysene | 0.0800 | 0.0629 | 78.6 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0562 | 70.3 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0671 | 83.9 | 49.0-129 | |
| Fluorene | 0.0800 | 0.0519 | 64.9 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0601 | 75.1 | 46.0-125 | |
| 1-Methylnaphthalene | 0.0800 | 0.0422 | 52.7 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0432 | 54.0 | 50.0-120 | |
| Naphthalene | 0.0800 | 0.0393 | 49.1 | 50.0-120 | J4 |
| Pyrene | 0.0800 | 0.0636 | 79.5 | 43.0-123 | |

Laboratory Control Sample (LCS)

(LCS) R3937067-1 06/11/23 23:49

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | <u>LCS Qualifier</u> |
|----------------------|-----------------------|---------------------|---------------|------------------|----------------------|
| (S) p-Terphenyl-d14 | | | 86.6 | 23.0-120 | |
| (S) Nitrobenzene-d5 | | | 43.4 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 51.9 | 34.0-125 | |

L1624496-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624496-19 06/12/23 06:03 • (MS) R3937067-3 06/12/23 06:23 • (MSD) R3937067-4 06/12/23 06:42

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Acenaphthene | 0.0800 | U | 0.0519 | 0.0463 | 64.9 | 57.9 | 1 | 14.0-127 | | | 11.4 | 27 |
| Anthracene | 0.0800 | U | 0.0563 | 0.0552 | 70.4 | 69.0 | 1 | 10.0-145 | | | 1.97 | 30 |
| Benzo(a)anthracene | 0.0800 | U | 0.0553 | 0.0577 | 69.1 | 72.1 | 1 | 10.0-139 | | | 4.25 | 30 |
| Benzo(b)fluoranthene | 0.0800 | U | 0.0586 | 0.0589 | 73.3 | 73.6 | 1 | 10.0-140 | | | 0.511 | 36 |
| Benzo(k)fluoranthene | 0.0800 | U | 0.0721 | 0.0768 | 90.1 | 96.0 | 1 | 10.0-137 | | | 6.31 | 31 |
| Benzo(a)pyrene | 0.0800 | U | 0.0702 | 0.0713 | 87.8 | 89.1 | 1 | 10.0-141 | | | 1.55 | 31 |
| Chrysene | 0.0800 | U | 0.0662 | 0.0830 | 82.8 | 104 | 1 | 10.0-145 | | | 22.5 | 30 |
| Dibenz(a,h)anthracene | 0.0800 | U | 0.0637 | 0.0636 | 79.6 | 79.5 | 1 | 10.0-132 | | | 0.157 | 31 |
| Fluoranthene | 0.0800 | U | 0.0675 | 0.0677 | 84.4 | 84.6 | 1 | 10.0-153 | | | 0.296 | 33 |
| Fluorene | 0.0800 | U | 0.0600 | 0.0530 | 75.0 | 66.3 | 1 | 11.0-130 | | | 12.4 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0800 | U | 0.0590 | 0.0591 | 73.8 | 73.9 | 1 | 10.0-137 | | | 0.169 | 32 |
| 1-Methylnaphthalene | 0.0800 | U | 0.0499 | 0.0436 | 62.4 | 54.5 | 1 | 10.0-142 | | | 13.5 | 28 |
| 2-Methylnaphthalene | 0.0800 | U | 0.0507 | 0.0438 | 63.4 | 54.8 | 1 | 10.0-137 | | | 14.6 | 28 |
| Naphthalene | 0.0800 | U | 0.0468 | 0.0396 | 58.5 | 49.5 | 1 | 10.0-135 | | | 16.7 | 27 |
| Pyrene | 0.0800 | U | 0.0709 | 0.0723 | 88.6 | 90.4 | 1 | 10.0-148 | | | 1.96 | 35 |
| (S) p-Terphenyl-d14 | | | | | 99.6 | 87.6 | | 23.0-120 | | | | |
| (S) Nitrobenzene-d5 | | | | | 55.3 | 44.0 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 66.1 | 56.4 | | 34.0-125 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3936933-2 06/13/23 17:22

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Acenaphthene | U | | 0.00209 | 0.00600 |
| Anthracene | U | | 0.00230 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 |
| Chrysene | U | | 0.00232 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 |
| Fluoranthene | U | | 0.00227 | 0.00600 |
| Fluorene | U | | 0.00205 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 |
| Naphthalene | U | | 0.00408 | 0.0200 |
| Pyrene | U | | 0.00200 | 0.00600 |
| (S) p-Terphenyl-d14 | 88.7 | | | 23.0-120 |
| (S) Nitrobenzene-d5 | 91.7 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 77.1 | | | 34.0-125 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3936933-1 06/13/23 17:04

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Acenaphthene | 0.0800 | 0.0674 | 84.3 | 50.0-120 | |
| Anthracene | 0.0800 | 0.0644 | 80.5 | 50.0-126 | |
| Benzo(a)anthracene | 0.0800 | 0.0676 | 84.5 | 45.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0692 | 86.5 | 42.0-121 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0673 | 84.1 | 49.0-125 | |
| Benzo(a)pyrene | 0.0800 | 0.0669 | 83.6 | 42.0-120 | |
| Chrysene | 0.0800 | 0.0718 | 89.8 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0652 | 81.5 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0706 | 88.3 | 49.0-129 | |
| Fluorene | 0.0800 | 0.0678 | 84.8 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0673 | 84.1 | 46.0-125 | |
| 1-Methylnaphthalene | 0.0800 | 0.0706 | 88.3 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0697 | 87.1 | 50.0-120 | |
| Naphthalene | 0.0800 | 0.0693 | 86.6 | 50.0-120 | |
| Pyrene | 0.0800 | 0.0758 | 94.8 | 43.0-123 | |

Laboratory Control Sample (LCS)

(LCS) R3936933-1 06/13/23 17:04

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| (S) p-Terphenyl-d14 | | | 90.9 | 23.0-120 | |
| (S) Nitrobenzene-d5 | | | 100 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 85.6 | 34.0-125 | |

L1624260-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624260-08 06/13/23 20:49 • (MS) R3936933-3 06/13/23 21:07 • (MSD) R3936933-4 06/13/23 21:24

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Acenaphthene | 0.0776 | U | 0.0484 | 0.0460 | 62.4 | 59.3 | 1 | 14.0-127 | | | 5.08 | 27 |
| Anthracene | 0.0776 | U | 0.0461 | 0.0428 | 59.4 | 55.2 | 1 | 10.0-145 | | | 7.42 | 30 |
| Benzo(a)anthracene | 0.0776 | U | 0.0457 | 0.0439 | 58.9 | 56.6 | 1 | 10.0-139 | | | 4.02 | 30 |
| Benzo(b)fluoranthene | 0.0776 | U | 0.0445 | 0.0424 | 57.3 | 54.6 | 1 | 10.0-140 | | | 4.83 | 36 |
| Benzo(k)fluoranthene | 0.0776 | U | 0.0491 | 0.0476 | 63.3 | 61.3 | 1 | 10.0-137 | | | 3.10 | 31 |
| Benzo(a)pyrene | 0.0776 | U | 0.0497 | 0.0483 | 64.0 | 62.2 | 1 | 10.0-141 | | | 2.86 | 31 |
| Chrysene | 0.0776 | U | 0.0533 | 0.0520 | 68.7 | 67.0 | 1 | 10.0-145 | | | 2.47 | 30 |
| Dibenz(a,h)anthracene | 0.0776 | U | 0.0472 | 0.0466 | 60.8 | 60.1 | 1 | 10.0-132 | | | 1.28 | 31 |
| Fluoranthene | 0.0776 | U | 0.0480 | 0.0446 | 61.9 | 57.5 | 1 | 10.0-153 | | | 7.34 | 33 |
| Fluorene | 0.0776 | U | 0.0492 | 0.0458 | 63.4 | 59.0 | 1 | 11.0-130 | | | 7.16 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0776 | U | 0.0457 | 0.0431 | 58.9 | 55.5 | 1 | 10.0-137 | | | 5.86 | 32 |
| 1-Methylnaphthalene | 0.0776 | U | 0.0508 | 0.0488 | 65.5 | 62.9 | 1 | 10.0-142 | | | 4.02 | 28 |
| 2-Methylnaphthalene | 0.0776 | U | 0.0491 | 0.0477 | 63.3 | 61.5 | 1 | 10.0-137 | | | 2.89 | 28 |
| Naphthalene | 0.0776 | U | 0.0523 | 0.0532 | 67.4 | 68.6 | 1 | 10.0-135 | | | 1.71 | 27 |
| Pyrene | 0.0776 | U | 0.0532 | 0.0494 | 68.6 | 63.7 | 1 | 10.0-148 | | | 7.41 | 35 |
| (S) p-Terphenyl-d14 | | | | | 70.7 | 66.0 | | 23.0-120 | | | | |
| (S) Nitrobenzene-d5 | | | | | 81.7 | 84.9 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 64.5 | 60.1 | | 34.0-125 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|--|
| B | The same analyte is found in the associated blank. |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J2 | Surrogate recovery limits have been exceeded; values are outside lower control limits. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J4 | The associated batch QC was outside the established quality control range for accuracy. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

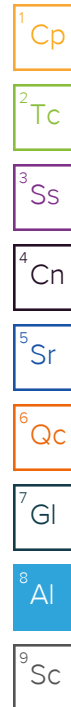
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Blair Rollins

Email To:
brollins@caerusoilandgas.com

Project Description:
LOVE RANCH 8 Liquid Release Investigation

City/State
Collected: **Piceance Crk, CO**

Please Circle:
PT MT CT ET

Phone: (970) 640-6919

Client Project #

Lab Project #

Collected by (print):
Jordan Veith

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

☐ Same Day ☐ Five Day
☐ Next Day ☐ 5 Day (Rad Only)
☐ Two Day ☐ 10 Day (Rad Only)
☐ Three Day

Date Results Needed

Standard TAT

No.
of
Cntrs

| Sample ID | Comp/Grab | Matrix* | Depth | Date | Time | Cntrs | COGCC Table 915-1 ORGANICS | EC, pH, SAR | Arsenic, Boron | COGCC Table 910-1 | TPH | Remarks | Sample # (lab only) |
|---------------------------------|-----------|---------|-------|----------|-------|-------|----------------------------|-------------|----------------|-------------------|-----|---------|---------------------|
| 20730106-LOVE RANCH 8-(SB23)@1 | Gmb | SS | 1 | 6/5/2023 | 12:20 | 2 | X | | | | X | | 01 |
| 20730106-LOVE RANCH 8-(SB23)@20 | | | 20 | | 12:30 | 2 | X | | | | X | | 02 |
| 20730106-LOVE RANCH 8-(SB23)@30 | | | 30 | | 14:20 | 2 | X | | | | X | | 03 |
| 20730106-LOVE RANCH 8-(SB18)@1 | | | 1 | | 13:50 | 2 | X | | | | X | | 04 |
| 20730106-LOVE RANCH 8-(SB18)@20 | | | 20 | | 14:45 | 2 | X | | | | X | | 05 |
| 20730106-LOVE RANCH 8-(SB18)@30 | | | 30 | | 14:55 | 2 | X | | | | X | | 06 |
| 20730106-LOVE RANCH 8-(SB21)@1 | | | 1 | | 14:10 | 2 | X | | | | X | | 07 |
| 20730106-LOVE RANCH 8-(SB21)@20 | | | 20 | | 15:15 | 2 | X | | | | X | | 08 |
| 20730106-LOVE RANCH 8-(SB21)@30 | ✓ | ✓ | 30 | ✓ | 15:45 | 2 | X | | | | X | | 09 |

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:

☐ UPS ☐ FedEx ☐ Courier

Tracking #

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact: ☒ NP ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
If Applicable
VOA Zero Headspace: ☒ Y ☐ N
Preservation Correct/Checked: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

Relinquished by: (Signature)

Date:
6/6/2023

Time:
19:45

Received by: (Signature)

6/7/23 10:00

Blank Received: Yes ☐ No ☒
HCL / MeOH
TBR

Relinquished by: (Signature)

Date:
6/7/23

Time:
1200

Received by: (Signature)

Temp: °C Bottles Received:
3.6 to 3.6 18

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: Time:

Hold:

Condition:
NCF / OK

Caerus Oil and Gas

Sample Delivery Group: L1624642
Samples Received: 06/09/2023
Project Number:
Description: Love Ranch 8 Liquid Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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| |
|-----------------|
| ¹ Cp |
| ² Tc |
| ³ Ss |
| ⁴ Cn |
| ⁵ Sr |
| ⁶ Qc |
| ⁷ Gl |
| ⁸ Al |
| ⁹ Sc |

SAMPLE SUMMARY

20230607-LOVE RANCH 8-MOI01 L1624642-01 Solid

Collected by
Jordan Veith

Collected date/time
06/07/23 09:00

Received date/time
06/09/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2077042 | 1000 | 06/13/23 09:09 | 06/14/23 09:42 | NCC | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2076978 | 80 | 06/13/23 09:09 | 06/14/23 05:44 | JBE | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2076331 | 5 | 06/14/23 21:17 | 06/15/23 03:50 | KAP | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2076336 | 1 | 06/13/23 20:07 | 06/14/23 07:36 | DSH | Mt. Juliet, TN |

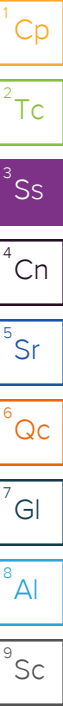
20230607-LOVE RANCH 8-(ST-PC-MOI01) L1624642-02 GW

Collected by
Jordan Veith

Collected date/time
06/07/23 09:10

Received date/time
06/09/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2078819 | 500 | 06/16/23 13:24 | 06/16/23 13:24 | ACG | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2078122 | 500 | 06/15/23 19:12 | 06/15/23 19:12 | DWR | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 3511/8015 | WG2076360 | 20 | 06/13/23 22:11 | 06/17/23 00:19 | HLJ | Mt. Juliet, TN |



CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

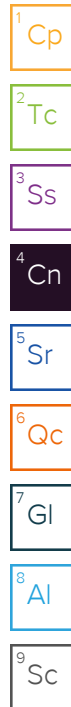


Chris Ward
Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

| <u>Lab Sample ID</u> | <u>Project Sample ID</u> | <u>Method</u> |
|-----------------------------|---|------------------|
| L1624642-02 | 20230607-LOVE RANCH 8-(ST-PC-MOI01) | 8260B, 8015D/GRO |



Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 1610 | | 21.7 | 100 | 1000 | 06/14/2023 09:42 | WG2077042 |
| (S) a,a,a-Trifluorotoluene(FID) | 101 | | | 77.0-120 | | 06/14/2023 09:42 | WG2077042 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | 4.47 | | 0.0374 | 0.0800 | 80 | 06/14/2023 05:44 | WG2076978 |
| Toluene | 34.2 | | 0.104 | 0.400 | 80 | 06/14/2023 05:44 | WG2076978 |
| Ethylbenzene | 4.60 | | 0.0590 | 0.200 | 80 | 06/14/2023 05:44 | WG2076978 |
| Xylenes, Total | 74.0 | | 0.0704 | 0.520 | 80 | 06/14/2023 05:44 | WG2076978 |
| 1,2,4-Trimethylbenzene | 12.1 | | 0.126 | 0.400 | 80 | 06/14/2023 05:44 | WG2076978 |
| 1,3,5-Trimethylbenzene | 12.3 | | 0.160 | 0.400 | 80 | 06/14/2023 05:44 | WG2076978 |
| (S) Toluene-d8 | 109 | | | 75.0-131 | | 06/14/2023 05:44 | WG2076978 |
| (S) 4-Bromofluorobenzene | 103 | | | 67.0-138 | | 06/14/2023 05:44 | WG2076978 |
| (S) 1,2-Dichloroethane-d4 | 95.1 | | | 70.0-130 | | 06/14/2023 05:44 | WG2076978 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 491 | | 8.05 | 20.0 | 5 | 06/15/2023 03:50 | WG2076331 |
| C28-C36 Motor Oil Range | U | | 1.37 | 20.0 | 5 | 06/15/2023 03:50 | WG2076331 |
| (S) o-Terphenyl | 59.7 | | | 18.0-148 | | 06/15/2023 03:50 | WG2076331 |

Sample Narrative:

L1624642-01 WG2076331: Dilution due to matrix.

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|--------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | 0.0195 | | 0.00209 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Fluorene | 0.0456 | | 0.00205 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| 1-Methylnaphthalene | 0.629 | | 0.00449 | 0.0200 | 1 | 06/14/2023 07:36 | WG2076336 |
| 2-Methylnaphthalene | 1.99 | | 0.00427 | 0.0200 | 1 | 06/14/2023 07:36 | WG2076336 |
| Naphthalene | 0.898 | | 0.00408 | 0.0200 | 1 | 06/14/2023 07:36 | WG2076336 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 06/14/2023 07:36 | WG2076336 |
| (S) p-Terphenyl-d14 | 111 | | | 23.0-120 | | 06/14/2023 07:36 | WG2076336 |
| (S) Nitrobenzene-d5 | 0.000 | J2 | | 14.0-149 | | 06/14/2023 07:36 | WG2076336 |
| (S) 2-Fluorobiphenyl | 84.9 | | | 34.0-125 | | 06/14/2023 07:36 | WG2076336 |

Sample Narrative:

L1624642-01 WG2076336: Surrogate failure due to matrix interference

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 99.0 | | 15.7 | 50.0 | 500 | 06/16/2023 13:24 | WG2078819 |
| (S) a,a,a-Trifluorotoluene(FID) | 112 | | | 78.0-120 | | 06/16/2023 13:24 | WG2078819 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Benzene | 10.0 | | 0.0471 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| Toluene | 18.8 | | 0.139 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| Ethylbenzene | 0.397 | J | 0.0685 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| Xylenes, Total | 8.33 | | 0.0870 | 1.50 | 500 | 06/15/2023 19:12 | WG2078122 |
| Naphthalene | U | | 0.500 | 2.50 | 500 | 06/15/2023 19:12 | WG2078122 |
| 1,2,4-Trimethylbenzene | 0.446 | J | 0.161 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| 1,3,5-Trimethylbenzene | 0.349 | J | 0.0520 | 0.500 | 500 | 06/15/2023 19:12 | WG2078122 |
| (S) Toluene-d8 | 96.3 | | | 80.0-120 | | 06/15/2023 19:12 | WG2078122 |
| (S) 4-Bromofluorobenzene | 103 | | | 77.0-126 | | 06/15/2023 19:12 | WG2078122 |
| (S) 1,2-Dichloroethane-d4 | 123 | | | 70.0-130 | | 06/15/2023 19:12 | WG2078122 |

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------------------------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) High Fraction | 59.3 | | 0.494 | 2.00 | 20 | 06/17/2023 00:19 | WG2076360 |
| (S) o-Terphenyl | 0.000 | J7 | | 31.0-160 | | 06/17/2023 00:19 | WG2076360 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937440-2 06/14/23 01:04

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | 1.16 | ⬇ | 0.543 | 2.50 |
| (S) a,a,a-Trifluorotoluene(FID) | 95.0 | | | 77.0-120 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3937440-1 06/13/23 23:22 • (LCSD) R3937440-3 06/14/23 11:44

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|------------------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH (GC/FID) Low Fraction | 5.50 | 6.76 | 6.77 | 123 | 123 | 72.0-127 | | | 0.148 | 20 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | 103 | 106 | 77.0-120 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937773-3 06/16/23 05:41

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|------------------------------------|-------------------|--------------|----------------|----------------|
| TPH (GC/FID) Low Fraction | U | | 0.0314 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) | 111 | | | 78.0-120 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3937773-1 06/16/23 04:35 • (LCSD) R3937773-2 06/16/23 04:57

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|------------------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH (GC/FID) Low Fraction | 5.50 | 5.80 | 5.82 | 105 | 106 | 72.0-127 | | | 0.344 | 20 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | 109 | 109 | 78.0-120 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3936744-3 06/13/23 22:41

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene | U | | 0.000467 | 0.00100 |
| Toluene | U | | 0.00130 | 0.00500 |
| Ethylbenzene | U | | 0.000737 | 0.00250 |
| Xylenes, Total | U | | 0.000880 | 0.00650 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 |
| (S) Toluene-d8 | 108 | | | 75.0-131 |
| (S) 4-Bromofluorobenzene | 99.6 | | | 67.0-138 |
| (S) 1,2-Dichloroethane-d4 | 85.5 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3936744-1 06/13/23 20:54 • (LCSD) R3936744-2 06/13/23 21:16

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.125 | 0.117 | 0.113 | 93.6 | 90.4 | 70.0-123 | | | 3.48 | 20 |
| Toluene | 0.125 | 0.125 | 0.121 | 100 | 96.8 | 75.0-121 | | | 3.25 | 20 |
| Ethylbenzene | 0.125 | 0.139 | 0.134 | 111 | 107 | 74.0-126 | | | 3.66 | 20 |
| Xylenes, Total | 0.375 | 0.392 | 0.377 | 105 | 101 | 72.0-127 | | | 3.90 | 20 |
| 1,2,4-Trimethylbenzene | 0.125 | 0.113 | 0.106 | 90.4 | 84.8 | 70.0-126 | | | 6.39 | 20 |
| 1,3,5-Trimethylbenzene | 0.125 | 0.111 | 0.108 | 88.8 | 86.4 | 73.0-127 | | | 2.74 | 20 |
| (S) Toluene-d8 | | | | 105 | 107 | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | 104 | 101 | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 97.3 | 99.1 | 70.0-130 | | | | |

L1624612-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624612-01 06/14/23 03:55 • (MS) R3936744-4 06/14/23 06:27 • (MSD) R3936744-5 06/14/23 06:49

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 10.0 | U | 9.83 | 9.93 | 98.3 | 99.3 | 80 | 10.0-149 | | | 1.01 | 37 |
| Toluene | 10.0 | 0.300 | 10.9 | 10.7 | 109 | 107 | 80 | 10.0-156 | | | 1.85 | 38 |
| Ethylbenzene | 10.0 | 0.626 | 12.3 | 11.5 | 123 | 115 | 80 | 10.0-160 | | | 6.72 | 38 |
| Xylenes, Total | 30.0 | 3.67 | 38.1 | 36.0 | 115 | 108 | 80 | 10.0-160 | | | 5.67 | 38 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.9 | 24.2 | 23.6 | 123 | 117 | 80 | 10.0-160 | | | 2.51 | 36 |
| 1,3,5-Trimethylbenzene | 10.0 | 2.71 | 11.1 | 12.9 | 111 | 129 | 80 | 10.0-160 | | | 15.0 | 38 |
| (S) Toluene-d8 | | | | | 107 | 105 | | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 107 | 103 | | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 98.3 | 99.6 | | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937700-3 06/15/23 11:01

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---------------------------|-------------------|--------------|----------------|----------------|
| Benzene | U | | 0.0000941 | 0.00100 |
| Toluene | U | | 0.000278 | 0.00100 |
| Ethylbenzene | U | | 0.000137 | 0.00100 |
| Xylenes, Total | U | | 0.000174 | 0.00300 |
| Naphthalene | U | | 0.00100 | 0.00500 |
| 1,2,4-Trimethylbenzene | U | | 0.000322 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000104 | 0.00100 |
| (S) Toluene-d8 | 96.9 | | | 80.0-120 |
| (S) 4-Bromofluorobenzene | 101 | | | 77.0-126 |
| (S) 1,2-Dichloroethane-d4 | 120 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3937700-1 06/15/23 09:57 • (LCSD) R3937700-2 06/15/23 10:18

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.00500 | 0.00466 | 0.00479 | 93.2 | 95.8 | 70.0-123 | | | 2.75 | 20 |
| Toluene | 0.00500 | 0.00438 | 0.00438 | 87.6 | 87.6 | 79.0-120 | | | 0.000 | 20 |
| Ethylbenzene | 0.00500 | 0.00456 | 0.00474 | 91.2 | 94.8 | 79.0-123 | | | 3.87 | 20 |
| Xylenes, Total | 0.0150 | 0.0138 | 0.0141 | 92.0 | 94.0 | 79.0-123 | | | 2.15 | 20 |
| Naphthalene | 0.00500 | 0.00330 | 0.00385 | 66.0 | 77.0 | 54.0-135 | | | 15.4 | 20 |
| 1,2,4-Trimethylbenzene | 0.00500 | 0.00448 | 0.00475 | 89.6 | 95.0 | 76.0-121 | | | 5.85 | 20 |
| 1,3,5-Trimethylbenzene | 0.00500 | 0.00457 | 0.00491 | 91.4 | 98.2 | 76.0-122 | | | 7.17 | 20 |
| (S) Toluene-d8 | | | | 94.1 | 96.8 | 80.0-120 | | | | |
| (S) 4-Bromofluorobenzene | | | | 98.4 | 102 | 77.0-126 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 118 | 121 | 70.0-130 | | | | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3937873-1 06/16/23 08:50

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|----------------------------|-------------------|--------------|----------------|----------------|
| TPH (GC/FID) High Fraction | U | | 0.0247 | 0.100 |
| (S) o-Terphenyl | 89.0 | | | 31.0-160 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3937873-2 06/16/23 09:13 • (LCSD) R3937873-3 06/16/23 09:36

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|----------------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH (GC/FID) High Fraction | 1.50 | 1.71 | 1.52 | 114 | 101 | 50.0-150 | | | 11.8 | 20 |
| (S) o-Terphenyl | | | | 91.5 | 82.0 | 31.0-160 | | | | |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3936954-1 06/15/23 01:45

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-------------------------|--------------------|--------------|-----------------|-----------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 |
| C28-C36 Motor Oil Range | U | | 0.274 | 4.00 |
| (S) o-Terphenyl | 74.9 | | | 18.0-148 |

Laboratory Control Sample (LCS)

(LCS) R3936954-2 06/15/23 01:57

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| C10-C28 Diesel Range | 50.0 | 38.5 | 77.0 | 50.0-150 | |
| (S) o-Terphenyl | | | 76.4 | 18.0-148 | |

L1624700-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624700-02 06/15/23 01:45 • (MS) R3936954-3 06/15/23 01:57 • (MSD) R3936954-4 06/15/23 02:10

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| C10-C28 Diesel Range | 48.5 | U | 35.3 | 32.0 | 72.8 | 66.9 | 1 | 50.0-150 | | | 9.81 | 20 |
| (S) o-Terphenyl | | | | | 81.0 | 78.2 | | 18.0-148 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3937037-2 06/14/23 01:22

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Acenaphthene | U | | 0.00209 | 0.00600 |
| Anthracene | U | | 0.00230 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 |
| Chrysene | U | | 0.00232 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 |
| Fluoranthene | U | | 0.00227 | 0.00600 |
| Fluorene | U | | 0.00205 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 |
| Naphthalene | U | | 0.00408 | 0.0200 |
| Pyrene | U | | 0.00200 | 0.00600 |
| (S) p-Terphenyl-d14 | 91.4 | | | 23.0-120 |
| (S) Nitrobenzene-d5 | 79.0 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 84.2 | | | 34.0-125 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3937037-1 06/14/23 01:02

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Acenaphthene | 0.0800 | 0.0649 | 81.1 | 50.0-120 | |
| Anthracene | 0.0800 | 0.0665 | 83.1 | 50.0-126 | |
| Benzo(a)anthracene | 0.0800 | 0.0650 | 81.3 | 45.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0598 | 74.8 | 42.0-121 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0567 | 70.9 | 49.0-125 | |
| Benzo(a)pyrene | 0.0800 | 0.0590 | 73.8 | 42.0-120 | |
| Chrysene | 0.0800 | 0.0668 | 83.5 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0594 | 74.3 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0699 | 87.4 | 49.0-129 | |
| Fluorene | 0.0800 | 0.0703 | 87.9 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0625 | 78.1 | 46.0-125 | |
| 1-Methylnaphthalene | 0.0800 | 0.0692 | 86.5 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0714 | 89.3 | 50.0-120 | |
| Naphthalene | 0.0800 | 0.0686 | 85.8 | 50.0-120 | |
| Pyrene | 0.0800 | 0.0704 | 88.0 | 43.0-123 | |

Laboratory Control Sample (LCS)

(LCS) R3937037-1 06/14/23 01:02

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | <u>LCS Qualifier</u> |
|----------------------|-----------------------|---------------------|---------------|------------------|----------------------|
| (S) p-Terphenyl-d14 | | | 92.6 | 23.0-120 | |
| (S) Nitrobenzene-d5 | | | 85.6 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 85.9 | 34.0-125 | |

L1624565-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624565-03 06/14/23 02:21 • (MS) R3937037-3 06/14/23 02:40 • (MSD) R3937037-4 06/14/23 03:00

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Acenaphthene | 0.0772 | 0.00260 | 0.0632 | 0.0566 | 78.5 | 70.7 | 1 | 14.0-127 | | | 11.0 | 27 |
| Anthracene | 0.0772 | 0.0131 | 0.0667 | 0.0579 | 69.4 | 58.6 | 1 | 10.0-145 | | | 14.1 | 30 |
| Benzo(a)anthracene | 0.0772 | 0.0415 | 0.0846 | 0.0758 | 55.8 | 44.9 | 1 | 10.0-139 | | | 11.0 | 30 |
| Benzo(b)fluoranthene | 0.0772 | 0.0582 | 0.0873 | 0.0813 | 37.7 | 30.2 | 1 | 10.0-140 | | | 7.12 | 36 |
| Benzo(k)fluoranthene | 0.0772 | 0.0202 | 0.0726 | 0.0671 | 67.9 | 61.4 | 1 | 10.0-137 | | | 7.87 | 31 |
| Benzo(a)pyrene | 0.0772 | 0.0383 | 0.0846 | 0.0767 | 60.0 | 50.3 | 1 | 10.0-141 | | | 9.80 | 31 |
| Chrysene | 0.0772 | 0.0605 | 0.0871 | 0.0819 | 34.5 | 28.0 | 1 | 10.0-145 | | | 6.15 | 30 |
| Dibenz(a,h)anthracene | 0.0772 | 0.00538 | 0.0592 | 0.0552 | 69.7 | 65.2 | 1 | 10.0-132 | | | 6.99 | 31 |
| Fluoranthene | 0.0772 | 0.0987 | 0.115 | 0.102 | 21.1 | 4.32 | 1 | 10.0-153 | | J6 | 12.0 | 33 |
| Fluorene | 0.0772 | 0.00388 | 0.0697 | 0.0603 | 85.3 | 73.8 | 1 | 11.0-130 | | | 14.5 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0772 | 0.0284 | 0.0757 | 0.0689 | 61.3 | 53.0 | 1 | 10.0-137 | | | 9.41 | 32 |
| 1-Methylnaphthalene | 0.0772 | 0.00506 | 0.0698 | 0.0632 | 83.9 | 76.1 | 1 | 10.0-142 | | | 9.92 | 28 |
| 2-Methylnaphthalene | 0.0772 | 0.00679 | 0.0717 | 0.0657 | 84.1 | 77.1 | 1 | 10.0-137 | | | 8.73 | 28 |
| Naphthalene | 0.0772 | 0.00468 | 0.0688 | 0.0617 | 83.1 | 74.6 | 1 | 10.0-135 | | | 10.9 | 27 |
| Pyrene | 0.0772 | 0.0780 | 0.101 | 0.0886 | 29.8 | 13.9 | 1 | 10.0-148 | | | 13.1 | 35 |
| (S) p-Terphenyl-d14 | | | | | 87.0 | 82.2 | | 23.0-120 | | | | |
| (S) Nitrobenzene-d5 | | | | | 83.4 | 81.8 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 86.5 | 82.5 | | 34.0-125 | | | | |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J2 | Surrogate recovery limits have been exceeded; values are outside lower control limits. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| J7 | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

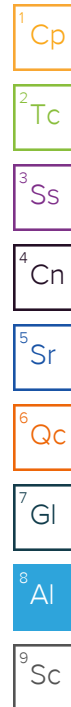
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



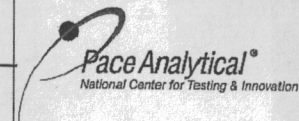
Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Blair Rollins

Email To:
brollins@caerusoilandgas.com

Project Description:

LOVE RANCH 8 Liquid Release Investigation

City/State
Collected: Piceance Crk, CO

Please Circle:
PT MT CT ET

Phone: (970) 640-6919

Client Project #

Lab Project #

Collected by (print):

Jordan Veith

Site/Facility ID #

LOVE RANCH 8

P.O. #

Collected by (signature):

Jordan Veith

Rush? (Lab MUST Be Notified)

____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Date Results Needed

Standard TAT

No.
of
Cntrs

Immediately
Packed on Ice N ____ Y ____ X

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

COGCC Table 915-1 ORGANICS

EC, pH, SAR

Arsenic, Boron

COGCC Table 910-1

TPH

SDG #

1629642

J104

Acctnum:

Template:

Prelogin:

PM:

PB:

Shipped Via:

Remarks

Sample # (lab only)

2023-06-07-LOVE RANCH 8 - M0101

Grab

SS

0

6/7/2023

9:00

2

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

2023-06-07-LOVE RANCH 8 - (ST-PC-M0101) Gmb

OT

-

9:10

5

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

* Matrix:

SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other Surface Water

Remarks:

Samples returned via:

____ UPS ____ FedEx ____ Courier ____

Tracking #

pH ____ Temp ____

Flow ____ Other ____

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
If Applicable
VOA Zero Headspace: ☒ Y ☐ N
Preservation Correct/Checked: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

Relinquished by: (Signature)

Jordan Veith

Date:

6/7/2023

Time:

9:45

Received by: (Signature)

[Signature] 6/8/23

Trip Blank Received: Yes ☒ No ☐

HCL / MeOH
TBR

Relinquished by: (Signature)

[Signature]

Date:

6/8/23

Time:

1:50

Received by: (Signature)

[Signature]

Temp: 15.7°C

Bottles Received:

4.6

7

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

[Signature]

Date:

6/8/23

Time:

0900

Hold:

Condition:

NCF / OK

July 10, 2023

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Caerus Oil and Gas

Sample Delivery Group: L1630936
Samples Received: 06/29/2023
Project Number:
Description: Love Ranch 8 Release Investigation
Site: LOVE RANCH 8
Report To: Jake J. , Brett M. , Blair R.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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| |
|-----------------|
| ¹ Cp |
| ² Tc |
| ³ Ss |
| ⁴ Cn |
| ⁵ Sr |
| ⁶ Qc |
| ⁷ Gl |
| ⁸ Al |
| ⁹ Sc |

SAMPLE SUMMARY

20230627-LOVE RANCH 8-(SB01)@9 L1630936-01 Solid

Collected by
Jordan Veith

Collected date/time
06/27/23 15:30

Received date/time
06/29/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2088951 | 1 | 07/02/23 14:17 | 07/04/23 01:23 | DWR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2089553 | 1 | 07/02/23 14:17 | 07/05/23 13:45 | ACG | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2089205 | 1 | 07/05/23 09:29 | 07/06/23 02:02 | JSS | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2089203 | 1 | 07/07/23 15:18 | 07/08/23 00:43 | JRM | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 6.86 | | 0.0217 | 0.100 | 1 | 07/04/2023 01:23 | WG2088951 |
| (S) a,a,a-Trifluorotoluene(FID) | 92.8 | | | 77.0-120 | | 07/04/2023 01:23 | WG2088951 |

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | 0.165 | | 0.000467 | 0.00100 | 1 | 07/05/2023 13:45 | WG2089553 |
| Toluene | 0.764 | | 0.00130 | 0.00500 | 1 | 07/05/2023 13:45 | WG2089553 |
| Ethylbenzene | 0.0782 | | 0.000737 | 0.00250 | 1 | 07/05/2023 13:45 | WG2089553 |
| Xylenes, Total | 1.17 | | 0.000880 | 0.00650 | 1 | 07/05/2023 13:45 | WG2089553 |
| 1,2,4-Trimethylbenzene | 0.200 | | 0.00158 | 0.00500 | 1 | 07/05/2023 13:45 | WG2089553 |
| 1,3,5-Trimethylbenzene | 0.200 | | 0.00200 | 0.00500 | 1 | 07/05/2023 13:45 | WG2089553 |
| (S) Toluene-d8 | 110 | | | 75.0-131 | | 07/05/2023 13:45 | WG2089553 |
| (S) 4-Bromofluorobenzene | 98.5 | | | 67.0-138 | | 07/05/2023 13:45 | WG2089553 |
| (S) 1,2-Dichloroethane-d4 | 86.0 | | | 70.0-130 | | 07/05/2023 13:45 | WG2089553 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | 140 | | 1.61 | 4.00 | 1 | 07/06/2023 02:02 | WG2089205 |
| C28-C36 Motor Oil Range | 4.76 | | 0.274 | 4.00 | 1 | 07/06/2023 02:02 | WG2089205 |
| (S) o-Terphenyl | 37.2 | | | 18.0-148 | | 07/06/2023 02:02 | WG2089205 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Anthracene | 0.00235 | J | 0.00230 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Fluorene | 0.0153 | | 0.00205 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| 1-Methylnaphthalene | 0.201 | | 0.00449 | 0.0200 | 1 | 07/08/2023 00:43 | WG2089203 |
| 2-Methylnaphthalene | 0.677 | | 0.00427 | 0.0200 | 1 | 07/08/2023 00:43 | WG2089203 |
| Naphthalene | 0.322 | | 0.00408 | 0.0200 | 1 | 07/08/2023 00:43 | WG2089203 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 07/08/2023 00:43 | WG2089203 |
| (S) p-Terphenyl-d14 | 60.6 | | | 23.0-120 | | 07/08/2023 00:43 | WG2089203 |
| (S) Nitrobenzene-d5 | 0.000 | J2 | | 14.0-149 | | 07/08/2023 00:43 | WG2089203 |
| (S) 2-Fluorobiphenyl | 63.3 | | | 34.0-125 | | 07/08/2023 00:43 | WG2089203 |

Sample Narrative:

L1630936-01 WG2089203: Surrogate failure due to matrix interference

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3945479-3 07/03/23 20:42

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | U | | 0.0217 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) | 97.3 | | | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3945479-1 07/03/23 18:22

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction | 5.50 | 4.07 | 74.0 | 72.0-127 | |
| (S) a,a,a-Trifluorotoluene(FID) | | | 104 | 77.0-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3945967-2 07/05/23 11:17

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene | U | | 0.000467 | 0.00100 |
| Toluene | U | | 0.00130 | 0.00500 |
| Ethylbenzene | U | | 0.000737 | 0.00250 |
| Xylenes, Total | U | | 0.000880 | 0.00650 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 |
| (S) Toluene-d8 | 111 | | | 75.0-131 |
| (S) 4-Bromofluorobenzene | 95.3 | | | 67.0-138 |
| (S) 1,2-Dichloroethane-d4 | 92.1 | | | 70.0-130 |

Laboratory Control Sample (LCS)

(LCS) R3945967-1 07/05/23 09:48

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Benzene | 0.125 | 0.123 | 98.4 | 70.0-123 | |
| Toluene | 0.125 | 0.121 | 96.8 | 75.0-121 | |
| Ethylbenzene | 0.125 | 0.138 | 110 | 74.0-126 | |
| Xylenes, Total | 0.375 | 0.417 | 111 | 72.0-127 | |
| 1,2,4-Trimethylbenzene | 0.125 | 0.120 | 96.0 | 70.0-126 | |
| 1,3,5-Trimethylbenzene | 0.125 | 0.118 | 94.4 | 73.0-127 | |
| (S) Toluene-d8 | | | 105 | 75.0-131 | |
| (S) 4-Bromofluorobenzene | | | 108 | 67.0-138 | |
| (S) 1,2-Dichloroethane-d4 | | | 98.4 | 70.0-130 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3945066-1 07/05/23 18:03

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-------------------------|--------------------|--------------|-----------------|-----------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 |
| C28-C36 Motor Oil Range | U | | 0.274 | 4.00 |
| (S) o-Terphenyl | 65.0 | | | 18.0-148 |

Laboratory Control Sample (LCS)

(LCS) R3945066-2 07/05/23 18:16

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| C10-C28 Diesel Range | 50.0 | 29.0 | 58.0 | 50.0-150 | |
| (S) o-Terphenyl | | | 66.7 | 18.0-148 | |

L1630909-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1630909-08 07/05/23 18:28 • (MS) R3945066-3 07/05/23 18:41 • (MSD) R3945066-4 07/05/23 18:53

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| C10-C28 Diesel Range | 48.9 | 39.8 | 48.4 | 105 | 17.6 | 133 | 1 | 50.0-150 | J6 | J3 | 73.8 | 20 |
| (S) o-Terphenyl | | | | | 52.1 | 64.9 | | 18.0-148 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3946322-2 07/08/23 00:26

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Acenaphthene | U | | 0.00209 | 0.00600 |
| Anthracene | U | | 0.00230 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 |
| Chrysene | U | | 0.00232 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 |
| Fluoranthene | U | | 0.00227 | 0.00600 |
| Fluorene | U | | 0.00205 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 |
| Naphthalene | U | | 0.00408 | 0.0200 |
| Pyrene | U | | 0.00200 | 0.00600 |
| (S) p-Terphenyl-d14 | 106 | | | 23.0-120 |
| (S) Nitrobenzene-d5 | 77.8 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 101 | | | 34.0-125 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3946322-1 07/08/23 00:08

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Acenaphthene | 0.0800 | 0.0798 | 99.8 | 50.0-120 | |
| Anthracene | 0.0800 | 0.0798 | 99.8 | 50.0-126 | |
| Benzo(a)anthracene | 0.0800 | 0.0789 | 98.6 | 45.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0797 | 99.6 | 42.0-121 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0772 | 96.5 | 49.0-125 | |
| Benzo(a)pyrene | 0.0800 | 0.0801 | 100 | 42.0-120 | |
| Chrysene | 0.0800 | 0.0852 | 106 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0790 | 98.8 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0902 | 113 | 49.0-129 | |
| Fluorene | 0.0800 | 0.0905 | 113 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0808 | 101 | 46.0-125 | |
| 1-Methylnaphthalene | 0.0800 | 0.0869 | 109 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0887 | 111 | 50.0-120 | |
| Naphthalene | 0.0800 | 0.0819 | 102 | 50.0-120 | |
| Pyrene | 0.0800 | 0.0801 | 100 | 43.0-123 | |

Laboratory Control Sample (LCS)

(LCS) R3946322-1 07/08/23 00:08

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | <u>LCS Qualifier</u> |
|----------------------|-----------------------|---------------------|---------------|------------------|----------------------|
| (S) p-Terphenyl-d14 | | | 112 | 23.0-120 | |
| (S) Nitrobenzene-d5 | | | 87.1 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 112 | 34.0-125 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J2 | Surrogate recovery limits have been exceeded; values are outside lower control limits. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

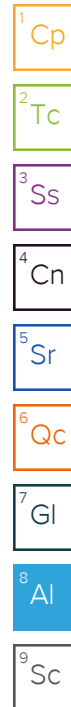
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



Report to:
Blair Rollins

Email To:
brollins@caerusoilandgas.com

Project Description:
LOVE RANCH 8 Release Investigation

City/State
Collected: Piceance Crk, CO Please Circle:
PT MT CT ET

Phone: (970) 640-6919

Client Project #

Lab Project #

Collected by (print):
Jordan Veith

Site/Facility ID #
LOVE RANCH 8

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Date Results Needed

Standard TAT

No.
of
Cntrs

Immediately
Packed on Ice N ____ Y ____ X

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

15:30

2

COGCC Table 915-1 ORGANIC COMPOUNDS

EC, pH, SAR

Arsenic, Boron

COGCC Table 910-1

X TPH

SDG # L1630936

C 0167

Acctnum:

Template:

Prelogin:

PM:

PB:

Shipped Via:

Remarks

Sample # (lab only)

20230627-LOVE RANCH 8-(SBO1) @ 9 Grab SS

9 Ft 6/27/23

15:30

2

X

X

-01

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:

____ UPS ____ FedEx ____ Courier

Tracking #

6126 6537 3383

pH ____ Temp ____

Flow ____ Other ____

Sample Receipt Checklist

COC Seal Present/Intact: ____ NP ____ N
COC Signed/Accurate: ____ Y ____ N
Bottles arrive intact: ____ Y ____ N
Correct bottles used: ____ Y ____ N
Sufficient volume sent: ____ Y ____ N

If Applicable

VOA Zero Headspace: ____ Y ____ N
Preservation Correct/Checked: ____ Y ____ N
RAD Screen <0.5 mR/hr: ____ Y ____ N

Relinquished by: (Signature)

Date:

6/27/2023

Time:

18:30

Received by: (Signature)

6/28/23 1000

Trip Blank Received: Yes / No

HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

6/28/23

Time:

1100

Received by: (Signature)

Temp: .2 °C Bottles Received:

Grab - 240 ± .2

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

6/29/23

Time:

9:00

Hold:

Condition:

NCF OK

July 17, 2023

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Caerus Oil and Gas

Sample Delivery Group: L1633322
Samples Received: 07/07/2023
Project Number:
Description: Love Ranch 8 Investigation
Site: LOVE RANCH 8
Report To: Chris McKisson
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

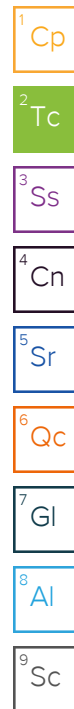
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

20230705-LOVERANCH8-(STOCK01)@1 L1633322-01 Solid

Collected by
Jordan Veith

Collected date/time
07/05/23 14:30

Received date/time
07/07/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|--------------------------|-----------------------|---------|----------------|
| Calculated Results | WG2091359 | 1 | 07/17/23 11:39 | 07/17/23 11:39 | ZSA | Mt. Juliet, TN |
| Wet Chemistry by Method 7199 | WG2091346 | 1 | 07/11/23 13:35 | 07/12/23 15:30 | SET | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D | WG2091619 | 1 | 07/09/23 11:42 | 07/10/23 11:00 | BJM | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod | WG2091873 | 1 | 07/10/23 08:56 | 07/10/23 12:40 | MCC | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B-NE493 Ch 2 | WG2091364 | 1 | 07/11/23 10:16 | 07/17/23 14:38 | ZSA | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020 | WG2091601 | 5 | 07/09/23 22:23 | 07/13/23 04:09 | SJM | Mt. Juliet, TN |
| Volatile Organic Compounds (GC) by Method 8015D/GRO | WG2092833 | 1 | 07/10/23 13:43 | 07/11/23 21:38 | MGF | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG2092297 | 1 | 07/10/23 13:43 | 07/11/23 03:33 | BAM | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method 8015M | WG2093536 | 1 | 07/13/23 06:38 | 07/13/23 14:17 | HLJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG2093557 | 1 | 07/12/23 20:03 | 07/13/23 06:25 | AMG | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

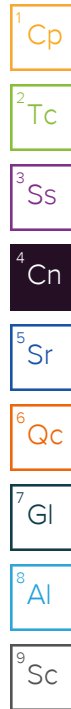
⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager



Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 15.5 | | 1 | 07/17/2023 11:39 | WG2091359 |

Wet Chemistry by Method 7199

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------|--------------|-----------|-----------|-----------|----------|----------------------|---------------------------|
| Hexavalent Chromium | U | | 0.255 | 1.00 | 1 | 07/12/2023 15:30 | WG2091346 |

Wet Chemistry by Method 9045D

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---------|--------|--------------------|----------|----------------------|---------------------------|
| pH | 8.08 | T8 | 1 | 07/10/2023 11:00 | WG2091619 |

Sample Narrative:
L1633322-01 WG2091619: 8.08 at 20.8C

Wet Chemistry by Method 9050AMod

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 10200 | | 10.0 | 1 | 07/10/2023 12:40 | WG2091873 |

Sample Narrative:
L1633322-01 WG2091873: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------------------|-------------|-----------|----------|----------|----------|----------------------|---------------------------|
| Hot Water Sol. Boron | 1.53 | | 0.0167 | 0.200 | 1 | 07/17/2023 14:38 | WG2091364 |

Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------|--------------|-------------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 3.42 | | 0.100 | 1.00 | 5 | 07/13/2023 04:09 | WG2091601 |
| Barium | 285 | | 0.152 | 2.50 | 5 | 07/13/2023 04:09 | WG2091601 |
| Cadmium | 0.160 | J | 0.0855 | 1.00 | 5 | 07/13/2023 04:09 | WG2091601 |
| Copper | 10.5 | | 0.132 | 5.00 | 5 | 07/13/2023 04:09 | WG2091601 |
| Lead | 8.81 | | 0.0990 | 2.00 | 5 | 07/13/2023 04:09 | WG2091601 |
| Nickel | 12.9 | | 0.197 | 2.50 | 5 | 07/13/2023 04:09 | WG2091601 |
| Selenium | 0.386 | J | 0.180 | 2.50 | 5 | 07/13/2023 04:09 | WG2091601 |
| Silver | U | | 0.0865 | 0.500 | 5 | 07/13/2023 04:09 | WG2091601 |
| Zinc | 37.3 | | 0.740 | 25.0 | 5 | 07/13/2023 04:09 | WG2091601 |

Volatile Organic Compounds (GC) by Method 8015D/GRO

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------------------|--------------|-----------|-----------|-----------|----------|----------------------|---------------------------|
| TPH (GC/FID) Low Fraction | 1.18 | | 0.0217 | 0.100 | 1 | 07/11/2023 21:38 | WG2092833 |
| (S) a,a,a-Trifluorotoluene(FID) | 94.0 | | | 77.0-120 | | 07/11/2023 21:38 | WG2092833 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------|-----------------|--------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Benzene | U | | 0.000467 | 0.00100 | 1 | 07/11/2023 03:33 | WG2092297 |
| Toluene | U | | 0.00130 | 0.00500 | 1 | 07/11/2023 03:33 | WG2092297 |
| Ethylbenzene | U | J3 | 0.000737 | 0.00250 | 1 | 07/11/2023 03:33 | WG2092297 |
| Xylenes, Total | U | | 0.000880 | 0.00650 | 1 | 07/11/2023 03:33 | WG2092297 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 | 1 | 07/11/2023 03:33 | WG2092297 |
| 1,3,5-Trimethylbenzene | 0.239 | | 0.00200 | 0.00500 | 1 | 07/11/2023 03:33 | WG2092297 |
| (S) Toluene-d8 | 112 | | | 75.0-131 | | 07/11/2023 03:33 | WG2092297 |
| (S) 4-Bromofluorobenzene | 106 | | | 67.0-138 | | 07/11/2023 03:33 | WG2092297 |
| (S) 1,2-Dichloroethane-d4 | 98.7 | | | 70.0-130 | | 07/11/2023 03:33 | WG2092297 |

Semi-Volatile Organic Compounds (GC) by Method 8015M

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 | 1 | 07/13/2023 14:17 | WG2093536 |
| C28-C36 Motor Oil Range | U | | 0.274 | 4.00 | 1 | 07/13/2023 14:17 | WG2093536 |
| (S) o-Terphenyl | 69.1 | | | 18.0-148 | | 07/13/2023 14:17 | WG2093536 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-------------------|--------------|--------------|----------|-------------------------|---------------------------|
| Acenaphthene | U | | 0.00209 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Anthracene | U | | 0.00230 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Chrysene | U | | 0.00232 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Fluoranthene | U | | 0.00227 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Fluorene | 0.0251 | | 0.00205 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| 1-Methylnaphthalene | 0.144 | | 0.00449 | 0.0200 | 1 | 07/13/2023 06:25 | WG2093557 |
| 2-Methylnaphthalene | 0.0514 | | 0.00427 | 0.0200 | 1 | 07/13/2023 06:25 | WG2093557 |
| Naphthalene | 0.00758 | J | 0.00408 | 0.0200 | 1 | 07/13/2023 06:25 | WG2093557 |
| Pyrene | U | | 0.00200 | 0.00600 | 1 | 07/13/2023 06:25 | WG2093557 |
| (S) p-Terphenyl-d14 | 70.2 | | | 23.0-120 | | 07/13/2023 06:25 | WG2093557 |
| (S) Nitrobenzene-d5 | 106 | | | 14.0-149 | | 07/13/2023 06:25 | WG2093557 |
| (S) 2-Fluorobiphenyl | 60.5 | | | 34.0-125 | | 07/13/2023 06:25 | WG2093557 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3947843-1 07/12/23 12:52

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------------------|-----------|--------------|--------|--------|
| Analyte | mg/kg | | mg/kg | mg/kg |
| Hexavalent Chromium | U | | 0.255 | 1.00 |

L1632965-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1632965-06 07/12/23 13:30 • (DUP) R3947843-3 07/12/23 13:35

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/kg | mg/kg | | % | | % |
| Hexavalent Chromium | U | U | 1 | 0.000 | | 20 |

L1633322-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1633322-01 07/12/23 15:30 • (DUP) R3947843-8 07/12/23 15:35

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------------------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/kg | mg/kg | | % | | % |
| Hexavalent Chromium | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3947843-2 07/12/23 12:59

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg | mg/kg | % | % | |
| Hexavalent Chromium | 10.0 | 10.9 | 109 | 80.0-120 | |

L1633298-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633298-01 07/12/23 14:27 • (MS) R3947843-4 07/12/23 14:33 • (MSD) R3947843-5 07/12/23 14:38

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/kg | mg/kg | mg/kg | mg/kg | % | % | | % | | | % | % |
| Hexavalent Chromium | 20.0 | U | 19.6 | 19.5 | 98.1 | 97.3 | 1 | 75.0-125 | | | 0.792 | 20 |

L1633298-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1633298-01 07/12/23 14:27 • (MS) R3947843-6 07/12/23 14:43

| | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|---------------------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| Analyte | mg/kg | mg/kg | mg/kg | % | | % | |
| Hexavalent Chromium | 643 | U | 872 | 136 | 50 | 75.0-125 | J5 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1633300-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1633300-02 07/10/23 11:00 • (DUP) R3946583-2 07/10/23 11:00

| | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte | pH | su | | % | | % |
| pH | 8.95 | 8.93 | 1 | 0.224 | | 1 |

Sample Narrative:

OS: 8.95 at 20.9C

DUP: 8.93 at 20.9C

L1633435-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1633435-04 07/10/23 11:00 • (DUP) R3946583-3 07/10/23 11:00

| | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|----------------------|----------------|
| Analyte | pH | su | | % | | % |
| pH | 8.13 | 8.17 | 1 | 0.491 | | 1 |

Sample Narrative:

OS: 8.13 at 21.1C

DUP: 8.17 at 21.1C

Laboratory Control Sample (LCS)

(LCS) R3946583-1 07/10/23 11:00

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | <u>LCS Qualifier</u> |
|---------|--------------|------------|----------|-------------|----------------------|
| Analyte | su | su | % | % | |
| pH | 10.0 | 10.0 | 100 | 99.0-101 | |

Sample Narrative:

LCS: 10.01 at 20.5C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3946650-1 07/10/23 12:40

| Analyte | MB Result umhos/cm | MB Qualifier | MB MDL umhos/cm | MB RDL umhos/cm |
|----------------------|-----------------------|--------------|--------------------|--------------------|
| Specific Conductance | U | | 10.0 | 10.0 |

Sample Narrative:

BLANK: at 25C

L1633242-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1633242-02 07/10/23 12:40 • (DUP) R3946650-3 07/10/23 12:40

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 511 | 511 | 1 | 0.000 | | 20 |

Sample Narrative:

OS: at 25C

DUP: at 25C

L1633276-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1633276-03 07/10/23 12:40 • (DUP) R3946650-4 07/10/23 12:40

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 1170 | 1170 | 1 | 0.000 | | 20 |

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3946650-2 07/10/23 12:40

| Analyte | Spike Amount umhos/cm | LCS Result umhos/cm | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|--------------------------|------------------------|---------------|------------------|---------------|
| Specific Conductance | 327 | 335 | 102 | 85.0-115 | |

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R3949375-1 07/17/23 13:41

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|----------------------|-------------------|--------------|----------------|----------------|
| Hot Water Sol. Boron | U | | 0.0167 | 0.200 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3949375-2 07/17/23 13:43 • (LCSD) R3949375-3 07/17/23 13:46

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|----------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Hot Water Sol. Boron | 1.00 | 0.955 | 0.969 | 95.5 | 96.9 | 80.0-120 | | | 1.41 | 20 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3948040-1 07/13/23 02:58

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|----------|--------------------|--------------|-----------------|-----------------|
| Arsenic | U | | 0.100 | 1.00 |
| Barium | U | | 0.152 | 2.50 |
| Cadmium | U | | 0.0855 | 1.00 |
| Copper | 0.152 | J | 0.133 | 5.00 |
| Lead | U | | 0.0990 | 2.00 |
| Nickel | U | | 0.197 | 2.50 |
| Selenium | U | | 0.180 | 2.50 |
| Silver | U | | 0.0865 | 0.500 |
| Zinc | U | | 0.740 | 25.0 |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

Laboratory Control Sample (LCS)

(LCS) R3948040-2 07/13/23 03:01

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------|-----------------------|---------------------|---------------|------------------|---------------|
| Arsenic | 100 | 94.2 | 94.2 | 80.0-120 | |
| Barium | 100 | 98.5 | 98.5 | 80.0-120 | |
| Cadmium | 100 | 93.7 | 93.7 | 80.0-120 | |
| Copper | 100 | 94.8 | 94.8 | 80.0-120 | |
| Lead | 100 | 91.9 | 91.9 | 80.0-120 | |
| Nickel | 100 | 90.5 | 90.5 | 80.0-120 | |
| Selenium | 100 | 99.3 | 99.3 | 80.0-120 | |
| Silver | 20.0 | 19.1 | 95.7 | 80.0-120 | |
| Zinc | 100 | 88.8 | 88.8 | 80.0-120 | |

7
Gl

8
Al

9
Sc

L1632841-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1632841-01 07/13/23 03:05 • (MS) R3948040-5 07/13/23 03:15 • (MSD) R3948040-6 07/13/23 03:18

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Arsenic | 100 | 6.82 | 110 | 99.0 | 103 | 92.1 | 5 | 75.0-125 | | | 10.6 | 20 |
| Cadmium | 100 | 0.623 | 107 | 99.4 | 106 | 98.8 | 5 | 75.0-125 | | | 6.90 | 20 |
| Copper | 100 | 15.0 | 145 | 112 | 130 | 96.6 | 5 | 75.0-125 | J5 | J3 | 25.8 | 20 |
| Lead | 100 | 10.9 | 117 | 107 | 107 | 95.9 | 5 | 75.0-125 | | | 9.56 | 20 |
| Nickel | 100 | 16.2 | 112 | 106 | 95.7 | 89.8 | 5 | 75.0-125 | | | 5.42 | 20 |
| Selenium | 100 | 0.468 | 115 | 107 | 115 | 107 | 5 | 75.0-125 | E | E | 7.04 | 20 |
| Silver | 20.0 | U | 20.9 | 19.4 | 105 | 97.1 | 5 | 75.0-125 | | | 7.40 | 20 |
| Zinc | 100 | 60.0 | 164 | 150 | 104 | 90.2 | 5 | 75.0-125 | | | 8.87 | 20 |

Method Blank (MB)

(MB) R3947537-2 07/11/23 15:40

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------------------|--------------------|--------------|-----------------|-----------------|
| TPH (GC/FID) Low Fraction | 0.0294 | ⬇ | 0.0217 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) | 98.4 | | | 77.0-120 |

Laboratory Control Sample (LCS)

(LCS) R3947537-1 07/11/23 14:04

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| TPH (GC/FID) Low Fraction | 5.50 | 4.53 | 82.4 | 72.0-127 | |
| (S) a,a,a-Trifluorotoluene(FID) | | | 100 | 77.0-120 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3947915-3 07/10/23 21:18

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------------------------|--------------------|--------------|-----------------|-----------------|
| Benzene | U | | 0.000467 | 0.00100 |
| Toluene | U | | 0.00130 | 0.00500 |
| Ethylbenzene | U | | 0.000737 | 0.00250 |
| Xylenes, Total | U | | 0.000880 | 0.00650 |
| 1,2,4-Trimethylbenzene | U | | 0.00158 | 0.00500 |
| 1,3,5-Trimethylbenzene | U | | 0.00200 | 0.00500 |
| (S) Toluene-d8 | 117 | | | 75.0-131 |
| (S) 4-Bromofluorobenzene | 95.8 | | | 67.0-138 |
| (S) 1,2-Dichloroethane-d4 | 102 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3947915-1 07/10/23 19:43 • (LCSD) R3947915-2 07/10/23 20:02

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Benzene | 0.125 | 0.127 | 0.105 | 102 | 84.0 | 70.0-123 | | | 19.0 | 20 |
| Toluene | 0.125 | 0.144 | 0.121 | 115 | 96.8 | 75.0-121 | | | 17.4 | 20 |
| Ethylbenzene | 0.125 | 0.149 | 0.121 | 119 | 96.8 | 74.0-126 | | J3 | 20.7 | 20 |
| Xylenes, Total | 0.375 | 0.416 | 0.352 | 111 | 93.9 | 72.0-127 | | | 16.7 | 20 |
| 1,2,4-Trimethylbenzene | 0.125 | 0.115 | 0.0986 | 92.0 | 78.9 | 70.0-126 | | | 15.4 | 20 |
| 1,3,5-Trimethylbenzene | 0.125 | 0.112 | 0.100 | 89.6 | 80.0 | 73.0-127 | | | 11.3 | 20 |
| (S) Toluene-d8 | | | | 112 | 112 | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | 97.4 | 97.4 | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | 106 | 105 | 70.0-130 | | | | |

L1633300-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633300-01 07/11/23 04:11 • (MS) R3947915-4 07/11/23 04:48 • (MSD) R3947915-5 07/11/23 05:07

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Benzene | 2.48 | 0.0228 | 2.48 | 2.51 | 100 | 101 | 20 | 10.0-149 | | | 1.20 | 37 |
| Toluene | 2.48 | 1.44 | 4.45 | 4.61 | 121 | 128 | 20 | 10.0-156 | | | 3.53 | 38 |
| Ethylbenzene | 2.48 | 1.41 | 4.13 | 4.26 | 110 | 115 | 20 | 10.0-160 | | | 3.10 | 38 |
| Xylenes, Total | 7.43 | 15.2 | 28.2 | 30.3 | 175 | 203 | 20 | 10.0-160 | J5 | J5 | 7.18 | 38 |
| 1,2,4-Trimethylbenzene | 2.48 | 4.47 | 8.27 | 8.50 | 153 | 163 | 20 | 10.0-160 | | J5 | 2.74 | 36 |
| 1,3,5-Trimethylbenzene | 2.48 | 3.97 | 8.12 | 8.44 | 167 | 180 | 20 | 10.0-160 | J5 | J5 | 3.86 | 38 |
| (S) Toluene-d8 | | | | | 113 | 115 | | 75.0-131 | | | | |
| (S) 4-Bromofluorobenzene | | | | | 101 | 103 | | 67.0-138 | | | | |
| (S) 1,2-Dichloroethane-d4 | | | | | 97.2 | 95.9 | | 70.0-130 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3948300-2 07/13/23 16:25

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-------------------------|--------------------|--------------|-----------------|-----------------|
| C10-C28 Diesel Range | U | | 1.61 | 4.00 |
| C28-C36 Motor Oil Range | U | | 0.274 | 4.00 |
| (S) o-Terphenyl | 83.3 | | | 18.0-148 |

Laboratory Control Sample (LCS)

(LCS) R3948300-1 07/13/23 14:04

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| C10-C28 Diesel Range | 50.0 | 31.6 | 63.2 | 50.0-150 | |
| (S) o-Terphenyl | | | 58.0 | 18.0-148 | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3948583-2 07/13/23 02:07

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Acenaphthene | U | | 0.00209 | 0.00600 |
| Anthracene | U | | 0.00230 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00173 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00153 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00215 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00179 | 0.00600 |
| Chrysene | U | | 0.00232 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00172 | 0.00600 |
| Fluoranthene | U | | 0.00227 | 0.00600 |
| Fluorene | U | | 0.00205 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00181 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00449 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00427 | 0.0200 |
| Naphthalene | U | | 0.00408 | 0.0200 |
| Pyrene | U | | 0.00200 | 0.00600 |
| (S) p-Terphenyl-d14 | 80.2 | | | 23.0-120 |
| (S) Nitrobenzene-d5 | 69.1 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 73.4 | | | 34.0-125 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3948583-1 07/13/23 01:47

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Acenaphthene | 0.0800 | 0.0593 | 74.1 | 50.0-120 | |
| Anthracene | 0.0800 | 0.0608 | 76.0 | 50.0-126 | |
| Benzo(a)anthracene | 0.0800 | 0.0667 | 83.4 | 45.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0632 | 79.0 | 42.0-121 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0621 | 77.6 | 49.0-125 | |
| Benzo(a)pyrene | 0.0800 | 0.0638 | 79.8 | 42.0-120 | |
| Chrysene | 0.0800 | 0.0630 | 78.8 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0609 | 76.1 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0620 | 77.5 | 49.0-129 | |
| Fluorene | 0.0800 | 0.0619 | 77.4 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0670 | 83.8 | 46.0-125 | |
| 1-Methylnaphthalene | 0.0800 | 0.0612 | 76.5 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0623 | 77.9 | 50.0-120 | |
| Naphthalene | 0.0800 | 0.0608 | 76.0 | 50.0-120 | |
| Pyrene | 0.0800 | 0.0634 | 79.3 | 43.0-123 | |

Laboratory Control Sample (LCS)

(LCS) R3948583-1 07/13/23 01:47

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| (S) p-Terphenyl-d14 | | | 87.1 | 23.0-120 | |
| (S) Nitrobenzene-d5 | | | 87.2 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 84.9 | 34.0-125 | |

L1633276-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633276-01 07/13/23 03:46 • (MS) R3948583-3 07/13/23 04:06 • (MSD) R3948583-4 07/13/23 04:26

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Acenaphthene | 0.0788 | U | 0.0496 | 0.0557 | 62.9 | 70.0 | 1 | 14.0-127 | | | 11.6 | 27 |
| Anthracene | 0.0788 | U | 0.0496 | 0.0563 | 62.9 | 70.7 | 1 | 10.0-145 | | | 12.7 | 30 |
| Benzo(a)anthracene | 0.0788 | U | 0.0524 | 0.0595 | 66.5 | 74.7 | 1 | 10.0-139 | | | 12.7 | 30 |
| Benzo(b)fluoranthene | 0.0788 | U | 0.0465 | 0.0543 | 59.0 | 68.2 | 1 | 10.0-140 | | | 15.5 | 36 |
| Benzo(k)fluoranthene | 0.0788 | U | 0.0474 | 0.0554 | 60.2 | 69.6 | 1 | 10.0-137 | | | 15.6 | 31 |
| Benzo(a)pyrene | 0.0788 | U | 0.0552 | 0.0637 | 70.1 | 80.0 | 1 | 10.0-141 | | | 14.3 | 31 |
| Chrysene | 0.0788 | U | 0.0513 | 0.0588 | 65.1 | 73.9 | 1 | 10.0-145 | | | 13.6 | 30 |
| Dibenz(a,h)anthracene | 0.0788 | U | 0.0463 | 0.0541 | 58.8 | 68.0 | 1 | 10.0-132 | | | 15.5 | 31 |
| Fluoranthene | 0.0788 | U | 0.0505 | 0.0571 | 64.1 | 71.7 | 1 | 10.0-153 | | | 12.3 | 33 |
| Fluorene | 0.0788 | U | 0.0512 | 0.0576 | 65.0 | 72.4 | 1 | 11.0-130 | | | 11.8 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0788 | U | 0.0492 | 0.0577 | 62.4 | 72.5 | 1 | 10.0-137 | | | 15.9 | 32 |
| 1-Methylnaphthalene | 0.0788 | U | 0.0520 | 0.0569 | 66.0 | 71.5 | 1 | 10.0-142 | | | 9.00 | 28 |
| 2-Methylnaphthalene | 0.0788 | 0.0147 | 0.0531 | 0.0580 | 48.7 | 54.4 | 1 | 10.0-137 | | | 8.82 | 28 |
| Naphthalene | 0.0788 | 0.0155 | 0.0507 | 0.0563 | 44.7 | 51.3 | 1 | 10.0-135 | | | 10.5 | 27 |
| Pyrene | 0.0788 | U | 0.0523 | 0.0597 | 66.4 | 75.0 | 1 | 10.0-148 | | | 13.2 | 35 |
| (S) p-Terphenyl-d14 | | | | | 71.6 | 83.9 | | 23.0-120 | | | | |
| (S) Nitrobenzene-d5 | | | | | 73.3 | 78.3 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 70.5 | 79.3 | | 34.0-125 | | | | |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

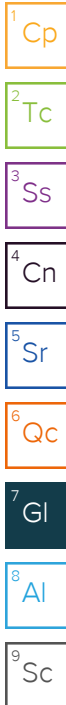
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| T8 | Sample(s) received past/too close to holding time expiration. |



ACCREDITATIONS & LOCATIONS

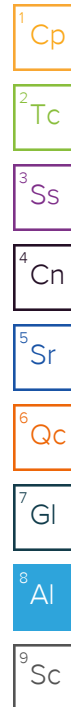
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information:
SAME AS LEFT

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ____ of ____



Report to:
Blair Rollins

Email To:
brollins@caerusoilandgas.com

Project Description:

LOVE RANCH 8 INVESTIGATION

City/State
Collected: Piceance Crk, CO

Please Circle:
PT MT CT ET

Phone: (970) 640-6919

Client Project #

Lab Project #

Collected by (print):

Jordan Veith

Site/Facility ID #

LOVE RANCH 8

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Date Results Needed

Standard TAT

No.
of
Cnts

Sample ID

Comp/Grab
COMP

Matrix*

Depth

Date

Time

20230705 - LOVE RANCH 8 - (STOCKPILE)

SS

1 ft

7/5/23

14:30

4

X

COGCC Table 915-1

EC, pH, SAR

Arsenic, Boron

COGCC Table 910-1

SDG # L11033822

Table #

B165

Prelogin:

PM:

PB:

Shipped Via:

Remarks

Sample # (lab only)

-01

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:

UPS FedEx Courier

pH Temp

Flow Other

Sample Receipt Checklist

COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)

Date:

7/5/2023

Time:

1645

Relinquished by: (Signature)

Date:

7/5/23

Time:

1730

Relinquished by: (Signature)

Date:

Time:

Tracking # 6426 8306 6801

Received by: (Signature)

Trip Blank Received: Yes/No

HCL / MeOH

TBR

Received by: (Signature)

Temp GBH °C

Bottles Received:

3.6 to 3.6

4

If preservation required by Login: Date/Time

Received for lab by: (Signature)

Date:

7-7-23

Time:

9:00

Hold:

Condition:
NCF OK