

HRL Compliance Solutions- CO

Sample Delivery Group: L988552
Samples Received: 04/25/2018
Project Number: LARAMIE
Description: Laramie- WF D-17 - Cuttings Remediation
Site: WHITTAKER FLATS D-17
Report To: Kris Rowe
2385 F ½ Road
Grand Junction, CO 81650

Entire Report Reviewed By:



Chris Ward
Technical Service Representative

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 ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



| | | |
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| | | ⁷ Al |
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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



LIFT #2 MONITOR L988552-01 Solid

Collected by
Shane Armendariz

Collected date/time
04/23/18 14:00

Received date/time
04/25/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|--------------------|-----------|----------|-----------------------|--------------------|---------|
| Calculated Results | WG1103808 | 1 | 04/30/18 10:44 | 05/01/18 10:52 | CCE |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Gl

⁷Al

⁸Sc

ACCOUNT:

HRL Compliance Solutions- CO

PROJECT:

LARAMIE

SDG:

L988552

DATE/TIME:

05/02/18 10:47

PAGE:

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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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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
Technical Service Representative

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Gl⁷ Al⁸ Sc



Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|-------------------------|-----------|
| Sodium Adsorption Ratio | 21.7 | | 1 | 05/01/2018 10:52 | WG1103808 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Gl

⁷Al

⁸Sc



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.

Abbreviations and Definitions

| | |
|------------------------------|--|
| SDG | Sample Delivery Group. |
| 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, 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. |
| 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. |
| 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. |

| |
|-----------------|
| ¹ Cp |
| ² Tc |
| ³ Ss |
| ⁴ Cn |
| ⁵ Sr |
| ⁶ Gl |
| ⁷ Al |
| ⁸ Sc |

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* 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 ESC Lab Sciences.

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| 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 | TN2000002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

Third Party Federal Accreditations

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

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



Hall Environmental Consultants, LLC

Analysis / Container / Preservative

ENVIRONMENTAL SCIENCE CORP.

12065 Lebanon Road

Mt. Juliet, TN 37122

Phone (615) 758-5859

A179

Phone (800) 757-5859

FAX (615) 758-5859

CoCode: (lab use only)

Template/Prelogin

Cooler#:

Shipped Via:

1988549

Remarks/Contaminant

Sample# (lab only)

-01

REPORT TO:

Cyndy Leasor

Project Name: Bruss/Stormwater-Jamestown

Phone:

Fax:

Client Project #:

ESC Key:

Collected By: (signature)

Site/Facility ID #:

P. O. #:

Collected By: (signature)

Rush? (Lab MUST Be
Notified)

___ Same Day.....200%

___ Next Day.....100%

___ Two Day.....50%

Date Results Needed:

Fax? ___ No ___ Yes

No
of
Cnts

Sample ID

Comp/Grab

Matrix*

Depth

Date

Time

Outfall 001

Grab

WW

4.24.18

1257

2

TSS 1L-HDPE No Pres

Oil & Grease (Total)

pH

Flow (MGD)

6.94

0.002 MGD

*Matrix: SS - Solid/Soil GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other

Remarks:

4269 9215 6080 4142^{2.3} 5233 5264

pH _____ Temp _____
Flow _____ Other _____

Relinquished By: (Signature)

Date:

Time

Received By: (Signature)

Samples returned via: ___ UPS

___ FedEx ___ Courier

Condition: (lab use only)

Relinquished By: (Signature)

Date:

Time

Received By: (Signature)

Temp:

Bottles Received:

OK

Relinquished By: (Signature)

Date:

Time

Received for lab by: (Signature)

Date:

Time:

pH Checked:

NCF:

4.24.18 1510

4/25/18

0815

ESC LAB SCIENCES Cooler Receipt Form

| | | | |
|---|--------------|--------------|-----------|
| Client: <u>HAUKY</u> | SDG# | <u>98579</u> | |
| Cooler Received/Opened On: <u>4/25/18</u> | Temperature: | <u>2.3</u> | |
| Received By: <u>MAH Shucklock</u> | | | |
| Signature: <u>[Signature]</u> | | | |
| | | | |
| Receipt Check List | NP | Yes | No |
| COC Seal Present / Intact? | ✓ | | |
| COC Signed / Accurate? | | ✓ | |
| Bottles arrive intact? | | ✓ | |
| Correct bottles used? | | ✓ | |
| Sufficient volume sent? | | ✓ | |
| If Applicable | | | |
| VOA Zero headspace? | | | |
| Preservation Correct / Checked? | | | |