

Caerus Oil and Gas

Sample Delivery Group: L1646994
Samples Received: 08/17/2023
Project Number:
Description: DivideCreek TB Background Samples
Site: DIVIDE CREEK TB
Report To: Brett Middleton
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

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SAMPLE SUMMARY

20230816-DCUBG-(DIVIDECREETHE-W) @3 L1646994-01 Solid

Collected by Tristan Schmalz Collected date/time 08/16/23 11:20 Received date/time 08/17/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results | WG2117695 | 1 | 08/24/23 10:16 | 08/24/23 10:16 | ZSA | Mt. Juliet, TN |
| Wet Chemistry by Method 7199 | WG2115503 | 1 | 08/18/23 11:06 | 08/21/23 14:07 | VSS | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D | WG2116585 | 1 | 08/18/23 15:07 | 08/19/23 14:50 | NTG | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod | WG2116515 | 1 | 08/18/23 07:15 | 08/18/23 09:57 | NTG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B-NE493 Ch 2 | WG2117697 | 1 | 08/20/23 20:48 | 08/24/23 10:47 | ZSA | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020 | WG2117158 | 5 | 08/19/23 16:52 | 08/24/23 20:47 | LD | Mt. Juliet, TN |



20230816-DCUBG-(DIVIDECREETHE-N) @3 L1646994-02 Solid

Collected by Tristan Schmalz Collected date/time 08/16/23 11:46 Received date/time 08/17/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results | WG2117695 | 1 | 08/24/23 10:19 | 08/24/23 10:19 | ZSA | Mt. Juliet, TN |
| Wet Chemistry by Method 7199 | WG2115503 | 1 | 08/18/23 11:06 | 08/21/23 14:12 | VSS | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D | WG2116585 | 1 | 08/18/23 15:07 | 08/19/23 14:50 | NTG | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod | WG2116693 | 1 | 08/18/23 15:00 | 08/18/23 17:06 | NTG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B-NE493 Ch 2 | WG2117697 | 1 | 08/20/23 20:48 | 08/24/23 10:49 | ZSA | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020 | WG2117202 | 5 | 08/19/23 19:53 | 08/23/23 00:46 | SJM | Mt. Juliet, TN |

20230816-DCUBG-(DIVIDECREETHE-E) @3 L1646994-03 Solid

Collected by Tristan Schmalz Collected date/time 08/16/23 12:09 Received date/time 08/17/23 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Calculated Results | WG2117695 | 1 | 08/24/23 10:42 | 08/24/23 10:42 | ZSA | Mt. Juliet, TN |
| Wet Chemistry by Method 7199 | WG2115503 | 1 | 08/18/23 11:06 | 08/21/23 14:17 | VSS | Mt. Juliet, TN |
| Wet Chemistry by Method 9045D | WG2116585 | 1 | 08/18/23 15:07 | 08/19/23 14:50 | NTG | Mt. Juliet, TN |
| Wet Chemistry by Method 9050AMod | WG2116515 | 1 | 08/18/23 07:15 | 08/18/23 09:57 | NTG | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B-NE493 Ch 2 | WG2117697 | 1 | 08/20/23 20:48 | 08/24/23 09:53 | ZSA | Mt. Juliet, TN |
| Metals (ICPMS) by Method 6020 | WG2117202 | 5 | 08/19/23 19:53 | 08/23/23 00:49 | SJM | 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

Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 0.131 | | 1 | 08/24/2023 10:16 | WG2117695 |

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 | 08/21/2023 14:07 | WG2115503 |

Wet Chemistry by Method 9045D

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---------|--------|--------------------|----------|----------------------|---------------------------|
| pH | 7.83 | T8 | 1 | 08/19/2023 14:50 | WG2116585 |

Sample Narrative:

L1646994-01 WG2116585: 7.83 at 20.3C

Wet Chemistry by Method 9050AMod

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 235 | | 10.0 | 1 | 08/18/2023 09:57 | WG2116515 |

Sample Narrative:

L1646994-01 WG2116515: 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 | 0.260 | | 0.0167 | 0.200 | 1 | 08/24/2023 10:47 | WG2117697 |

Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------|--------------|--------------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 4.07 | O1 | 0.100 | 1.00 | 5 | 08/24/2023 20:47 | WG2117158 |
| Barium | 239 | O1 | 0.152 | 2.50 | 5 | 08/24/2023 20:47 | WG2117158 |
| Cadmium | 0.243 | J | 0.0855 | 1.00 | 5 | 08/24/2023 20:47 | WG2117158 |
| Copper | 10.2 | | 0.132 | 5.00 | 5 | 08/24/2023 20:47 | WG2117158 |
| Lead | 13.4 | O1 | 0.0990 | 2.00 | 5 | 08/24/2023 20:47 | WG2117158 |
| Nickel | 14.5 | O1 | 0.197 | 2.50 | 5 | 08/24/2023 20:47 | WG2117158 |
| Selenium | 0.463 | J | 0.180 | 2.50 | 5 | 08/24/2023 20:47 | WG2117158 |
| Silver | U | | 0.0865 | 0.500 | 5 | 08/24/2023 20:47 | WG2117158 |
| Zinc | 55.1 | O1 | 0.740 | 25.0 | 5 | 08/24/2023 20:47 | WG2117158 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

| | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Analyte | SAR | | | | |
| Sodium Adsorption Ratio | 0.169 | | 1 | 08/24/2023 10:19 | WG2117695 |

Wet Chemistry by Method 7199

| | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------|--------------|-----------|-----------|-----------|----------|----------------------|---------------------------|
| Analyte | | | | | | | |
| Hexavalent Chromium | U | | 0.255 | 1.00 | 1 | 08/21/2023 14:12 | WG2115503 |

Wet Chemistry by Method 9045D

| | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---------|--------|--------------------|----------|----------------------|---------------------------|
| Analyte | pH | | | | |
| pH | 8.04 | T8 | 1 | 08/19/2023 14:50 | WG2116585 |

Sample Narrative:
L1646994-02 WG2116585: 8.04 at 20.6C

Wet Chemistry by Method 9050AMod

| | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Analyte | | | | | | |
| Specific Conductance | 104 | | 10.0 | 1 | 08/18/2023 17:06 | WG2116693 |

Sample Narrative:
L1646994-02 WG2116693: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

| | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------------------|-------------|-----------|----------|----------|----------|----------------------|---------------------------|
| Analyte | | | | | | | |
| Hot Water Sol. Boron | 0.207 | | 0.0167 | 0.200 | 1 | 08/24/2023 10:49 | WG2117697 |

Metals (ICPMS) by Method 6020

| | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------|--------------|-------------------|-----------|-----------|----------|----------------------|---------------------------|
| Analyte | | | | | | | |
| Arsenic | 2.01 | | 0.100 | 1.00 | 5 | 08/23/2023 00:46 | WG2117202 |
| Barium | 165 | | 0.152 | 2.50 | 5 | 08/23/2023 00:46 | WG2117202 |
| Cadmium | 0.224 | J | 0.0855 | 1.00 | 5 | 08/23/2023 00:46 | WG2117202 |
| Copper | 6.72 | | 0.132 | 5.00 | 5 | 08/23/2023 00:46 | WG2117202 |
| Lead | 7.42 | | 0.0990 | 2.00 | 5 | 08/23/2023 00:46 | WG2117202 |
| Nickel | 11.6 | | 0.197 | 2.50 | 5 | 08/23/2023 00:46 | WG2117202 |
| Selenium | 0.258 | J | 0.180 | 2.50 | 5 | 08/23/2023 00:46 | WG2117202 |
| Silver | U | | 0.0865 | 0.500 | 5 | 08/23/2023 00:46 | WG2117202 |
| Zinc | 39.5 | | 0.740 | 25.0 | 5 | 08/23/2023 00:46 | WG2117202 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Calculated Results

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------------|--------|-----------|----------|----------------------|-----------|
| Sodium Adsorption Ratio | 0.196 | | 1 | 08/24/2023 10:42 | WG2117695 |

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 | 08/21/2023 14:17 | WG2115503 |

Wet Chemistry by Method 9045D

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|---------|--------|--------------------|----------|----------------------|---------------------------|
| pH | 8.02 | T8 | 1 | 08/19/2023 14:50 | WG2116585 |

Sample Narrative:
L1646994-03 WG2116585: 8.02 at 20.4C

Wet Chemistry by Method 9050AMod

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|----------------------|-----------------|-----------|--------------|----------|----------------------|---------------------------|
| Specific Conductance | 225 | | 10.0 | 1 | 08/18/2023 09:57 | WG2116515 |

Sample Narrative:
L1646994-03 WG2116515: 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 | 0.182 | J | 0.0167 | 0.200 | 1 | 08/24/2023 09:53 | WG2117697 |

Metals (ICPMS) by Method 6020

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|----------|--------------|-------------------|-----------|-----------|----------|----------------------|---------------------------|
| Arsenic | 1.51 | | 0.100 | 1.00 | 5 | 08/23/2023 00:49 | WG2117202 |
| Barium | 172 | | 0.152 | 2.50 | 5 | 08/23/2023 00:49 | WG2117202 |
| Cadmium | 0.163 | J | 0.0855 | 1.00 | 5 | 08/23/2023 00:49 | WG2117202 |
| Copper | 6.18 | | 0.132 | 5.00 | 5 | 08/23/2023 00:49 | WG2117202 |
| Lead | 6.33 | | 0.0990 | 2.00 | 5 | 08/23/2023 00:49 | WG2117202 |
| Nickel | 8.57 | | 0.197 | 2.50 | 5 | 08/23/2023 00:49 | WG2117202 |
| Selenium | 0.271 | J | 0.180 | 2.50 | 5 | 08/23/2023 00:49 | WG2117202 |
| Silver | U | | 0.0865 | 0.500 | 5 | 08/23/2023 00:49 | WG2117202 |
| Zinc | 30.7 | | 0.740 | 25.0 | 5 | 08/23/2023 00:49 | WG2117202 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3963559-1 08/21/23 12:00

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------------------|-----------|--------------|--------|--------|
| Analyte | mg/kg | | mg/kg | mg/kg |
| Hexavalent Chromium | U | | 0.255 | 1.00 |

L1646298-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1646298-01 08/21/23 12:44 • (DUP) R3963559-7 08/21/23 12:49

| | 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 |

L1646782-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1646782-01 08/21/23 13:41 • (DUP) R3963559-8 08/21/23 13:46

| | 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) R3963559-2 08/21/23 12:07

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------------------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/kg | mg/kg | % | % | |
| Hexavalent Chromium | 10.0 | 11.3 | 113 | 80.0-120 | |

L1646269-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1646269-01 08/21/23 12:13 • (MS) R3963559-3 08/21/23 12:18 • (MSD) R3963559-4 08/21/23 12:23

| | 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 | 0.611 | 21.5 | 21.6 | 105 | 105 | 1 | 75.0-125 | | | 0.170 | 20 |

L1646269-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1646269-01 08/21/23 12:13 • (MS) R3963559-5 08/21/23 12:28

| | Spike Amount | Original Result | MS Result | MS Rec. | Dilution | Rec. Limits | MS Qualifier |
|---------------------|--------------|-----------------|-----------|---------|----------|-------------|--------------|
| Analyte | mg/kg | mg/kg | mg/kg | % | | % | |
| Hexavalent Chromium | 643 | 0.611 | 529 | 82.2 | 50 | 75.0-125 | |



L1645741-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1645741-01 08/19/23 14:50 • (DUP) R3962879-2 08/19/23 14:50

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su | su | | % | | % |
| pH | 9.43 | 9.44 | 1 | 0.106 | | 1 |

Sample Narrative:

OS: 9.43 at 21C

DUP: 9.44 at 21C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1646892-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1646892-02 08/19/23 14:50 • (DUP) R3962879-3 08/19/23 14:50

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | su | su | | % | | % |
| pH | 5.04 | 5.04 | 1 | 0.000 | | 1 |

Sample Narrative:

OS: 5.04 at 20.9C

DUP: 5.04 at 20.8C

Laboratory Control Sample (LCS)

(LCS) R3962879-1 08/19/23 14:50

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | su | su | % | % | |
| pH | 10.0 | 10.0 | 100 | 99.0-101 | |

Sample Narrative:

LCS: 10.01 at 21C

Method Blank (MB)

(MB) R3962395-1 08/18/23 09:57

| 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

L1646269-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1646269-02 08/18/23 09:57 • (DUP) R3962395-3 08/18/23 09:57

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 211 | 212 | 1 | 0.709 | | 20 |

Sample Narrative:

OS: at 25C

DUP: at 25C

L1646994-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1646994-03 08/18/23 09:57 • (DUP) R3962395-4 08/18/23 09:57

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 225 | 229 | 1 | 1.76 | | 20 |

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3962395-2 08/18/23 09:57

| Analyte | Spike Amount umhos/cm | LCS Result umhos/cm | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|--------------------------|------------------------|---------------|------------------|---------------|
| Specific Conductance | 732 | 744 | 102 | 85.0-115 | |

Sample Narrative:

LCS: at 25C

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method Blank (MB)

(MB) R3962785-1 08/18/23 17:06

| 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

L1647546-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1647546-05 08/18/23 17:06 • (DUP) R3962785-3 08/18/23 17:06

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 2250 | 2280 | 1 | 1.19 | | 20 |

Sample Narrative:

OS: at 25C

DUP: at 25C

L1647549-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1647549-01 08/18/23 17:06 • (DUP) R3962785-4 08/18/23 17:06

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|----------------------|-----------------------------|------------------------|----------|--------------|---------------|------------------------|
| Specific Conductance | 6330 | 6390 | 1 | 0.943 | | 20 |

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3962785-2 08/18/23 17:06

| Analyte | Spike Amount umhos/cm | LCS Result umhos/cm | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------------------|--------------------------|------------------------|---------------|------------------|---------------|
| Specific Conductance | 732 | 744 | 102 | 85.0-115 | |

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R3964879-1 08/24/23 10:13

| Analyte | MB Result mg/l | <u>MB Qualifier</u> | 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) R3964879-2 08/24/23 10:15 • (LCSD) R3964879-3 08/24/23 10:22

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | <u>LCS Qualifier</u> | <u>LCSD Qualifier</u> | RPD % | RPD Limits % |
|----------------------|----------------------|--------------------|---------------------|---------------|----------------|------------------|----------------------|-----------------------|----------|-----------------|
| Hot Water Sol. Boron | 1.00 | 1.04 | 1.03 | 104 | 103 | 80.0-120 | | | 0.601 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3965242-1 08/24/23 20:40

| 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 | U | | 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 |

Laboratory Control Sample (LCS)

(LCS) R3965242-2 08/24/23 20:43

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------|-----------------------|---------------------|---------------|------------------|---------------|
| Arsenic | 100 | 101 | 101 | 80.0-120 | |
| Barium | 100 | 97.6 | 97.6 | 80.0-120 | |
| Cadmium | 100 | 98.3 | 98.3 | 80.0-120 | |
| Copper | 100 | 90.9 | 90.9 | 80.0-120 | |
| Lead | 100 | 100 | 100 | 80.0-120 | |
| Nickel | 100 | 98.3 | 98.3 | 80.0-120 | |
| Selenium | 100 | 103 | 103 | 80.0-120 | |
| Silver | 20.0 | 19.5 | 97.5 | 80.0-120 | |
| Zinc | 100 | 94.9 | 94.9 | 80.0-120 | |

L1646994-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1646994-01 08/24/23 20:47 • (MS) R3965242-5 08/24/23 20:57 • (MSD) R3965242-6 08/24/23 21:00

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Arsenic | 100 | 4.07 | 92.3 | 89.9 | 88.2 | 85.9 | 5 | 75.0-125 | | | 2.62 | 20 |
| Barium | 100 | 239 | 320 | 333 | 81.2 | 94.2 | 5 | 75.0-125 | | | 3.95 | 20 |
| Cadmium | 100 | 0.243 | 92.4 | 90.6 | 92.2 | 90.4 | 5 | 75.0-125 | | | 2.00 | 20 |
| Copper | 100 | 10.2 | 93.8 | 93.1 | 83.6 | 82.9 | 5 | 75.0-125 | | | 0.778 | 20 |
| Lead | 100 | 13.4 | 105 | 106 | 91.6 | 92.3 | 5 | 75.0-125 | | | 0.679 | 20 |
| Nickel | 100 | 14.5 | 101 | 97.0 | 86.7 | 82.5 | 5 | 75.0-125 | | | 4.29 | 20 |
| Selenium | 100 | 0.463 | 98.6 | 96.1 | 98.1 | 95.6 | 5 | 75.0-125 | | | 2.55 | 20 |
| Silver | 20.0 | U | 18.3 | 18.1 | 91.3 | 90.5 | 5 | 75.0-125 | | | 0.912 | 20 |
| Zinc | 100 | 55.1 | 138 | 135 | 82.7 | 79.6 | 5 | 75.0-125 | | | 2.31 | 20 |



Method Blank (MB)

(MB) R3964287-1 08/22/23 23:12

| 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 | U | | 0.133 | 5.00 |
| Lead | 0.205 | J | 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) R3964287-2 08/22/23 23:15

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|----------|-----------------------|---------------------|---------------|------------------|---------------|
| Arsenic | 100 | 87.8 | 87.8 | 80.0-120 | |
| Barium | 100 | 83.2 | 83.2 | 80.0-120 | |
| Cadmium | 100 | 86.9 | 86.9 | 80.0-120 | |
| Copper | 100 | 83.0 | 83.0 | 80.0-120 | |
| Lead | 100 | 87.5 | 87.5 | 80.0-120 | |
| Nickel | 100 | 85.2 | 85.2 | 80.0-120 | |
| Selenium | 100 | 89.5 | 89.5 | 80.0-120 | |
| Silver | 20.0 | 19.8 | 99.0 | 80.0-120 | |
| Zinc | 100 | 83.7 | 83.7 | 80.0-120 | |

7
Gl

8
Al

9
Sc

L1647566-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1647566-01 08/22/23 23:19 • (MS) R3964287-5 08/22/23 23:29 • (MSD) R3964287-6 08/22/23 23:32

| 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 | 3.89 | 85.9 | 98.4 | 82.0 | 94.5 | 5 | 75.0-125 | | | 13.6 | 20 |
| Barium | 100 | 93.3 | 147 | 173 | 54.0 | 80.0 | 5 | 75.0-125 | J6 | | 16.2 | 20 |
| Cadmium | 100 | 0.578 | 85.2 | 99.2 | 84.6 | 98.6 | 5 | 75.0-125 | | | 15.1 | 20 |
| Copper | 100 | 34.2 | 104 | 121 | 70.1 | 87.1 | 5 | 75.0-125 | J6 | | 15.1 | 20 |
| Lead | 100 | 167 | 225 | 244 | 58.0 | 77.3 | 5 | 75.0-125 | J6 | | 8.25 | 20 |
| Nickel | 100 | 7.39 | 85.2 | 100 | 77.8 | 92.7 | 5 | 75.0-125 | | | 16.0 | 20 |
| Selenium | 100 | 0.193 | 86.9 | 97.9 | 86.7 | 97.7 | 5 | 75.0-125 | | | 11.9 | 20 |
| Silver | 20.0 | 0.145 | 19.3 | 21.0 | 95.6 | 104 | 5 | 75.0-125 | | | 8.38 | 20 |
| Zinc | 100 | 124 | 176 | 196 | 51.8 | 71.9 | 5 | 75.0-125 | J6 | J6 | 10.8 | 20 |

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

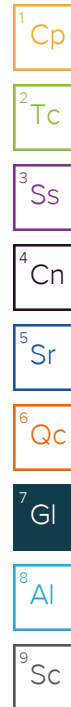
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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. |
| 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. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| O1 | The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| T8 | Sample(s) received past/too close to holding time expiration. |



ACCREDITATIONS & LOCATIONS

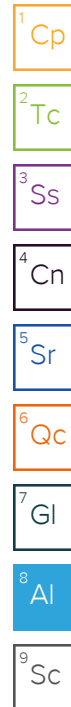
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| 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.



Immediately Packed on Ice N Y X

20230816-DUBRG-(DIVIDE CREEK TR)-N-03 grab
20230816-DUBRG-(DIVIDE CREEK TR)-N-03 grab
20230816-DUBRG-(DIVIDE CREEK TR)-E-03 grab

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

Relinquished by : (Signature)

Relinquished by : (Signature)

Relinquished by : (Signature)

Standard TAT

| Matrix* | Depth | Date | Time |
|---------|-------|------|------|
|---------|-------|------|------|

| | | | |
|---|----|---------|-------|
| S | 3A | 8/16/23 | 11:20 |
| ↓ | ↓ | ↓ | 11:46 |
| | | | 12:09 |

urier

6.

| Depth | Date | Time |
|-------|------|------|
|-------|------|------|

| | |
|------|------|
| 3 ft | 8/16 |
| ↓ | ↓ |

Trustee Election

8/16/2023

Time:

Time:

Time:

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

Pres
ChkECMC Table 915-1 *Minus Organics*

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 #

Ta

Acctnum:

Template:

Prelogin:

PM:

PB:

Shipped Via:

| |
|---------|
| Remarks |
|---------|

| | |
|--|-----|
| | 201 |
|--|-----|

| | | |
|--|--|-----|
| | | -02 |
| | | -03 |

Sample Receipt Checklist

| | | | |
|--------------------------|----|---|---|
| COC Seal Present/Intact: | NP | X | M |
| COC Signed/Accurate: | | X | M |
| Bottles arrive intact: | | X | M |
| Correct bottles used: | | X | M |
| Sufficient volume sent: | | X | M |

If Applicable

VOA Zero Headspace: 1 Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: 1 Y N

If preservation required by Login: Date/Time

| | |
|-------|------------|
| Hold: | Condition: |
| | NCF / OK |