

**CTEH - ER**

Sample Delivery Group: L1859671  
Samples Received: 05/16/2025  
Project Number: PROJ-054017  
Description: Bishop Loss of Containment Incident

Report To: CTEH  
5120 North Shore Drive  
North Little Rock, AR 72118

Entire Report Reviewed By:



Jared Starkey  
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 mydata.pacelabs.com

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# SAMPLE SUMMARY

GACO0515T084CRS009 L1859671-01

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:20

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 13:48     | DDD     | Mt. Juliet, TN |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

GACO0515T084CRS010 L1859671-02

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:40

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 13:48     | DDD     | Mt. Juliet, TN |

<sup>4</sup>Cn

<sup>5</sup>Sr

GACO0515T084CRC010 L1859671-03

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:40

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 13:48     | DDD     | Mt. Juliet, TN |

<sup>6</sup>Qc

<sup>7</sup>Gl

GACO0515T084CRS011 L1859671-04

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:20

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 13:49     | DDD     | Mt. Juliet, TN |

<sup>8</sup>Al

<sup>9</sup>Sc

GACO0515T084CRS012 L1859671-05

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:40

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 14:40     | DDD     | Mt. Juliet, TN |

GACO0515T084CRS013 L1859671-06

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 09:00

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 14:41     | DDD     | Mt. Juliet, TN |

GACO0515T084CRS014 L1859671-07

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 09:15

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 14:41     | DDD     | Mt. Juliet, TN |

GACO0515T084CRS001 L1859671-08

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:10

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 14:41     | DDD     | Mt. Juliet, TN |

# SAMPLE SUMMARY

GACO0515T084CRS002 L1859671-09

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:20

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 14:42     | DDD     | Mt. Juliet, TN |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

GACO0515T084CRS003 L1859671-10

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:30

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 14:44     | DDD     | Mt. Juliet, TN |

<sup>4</sup>Cn

<sup>5</sup>Sr

GACO0515T084CRS004 L1859671-11

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:40

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 15:02     | DDD     | Mt. Juliet, TN |

<sup>6</sup>Qc

<sup>7</sup>Gl

GACO0515T084CRS005 L1859671-12

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 08:45

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 15:32     | DDD     | Mt. Juliet, TN |

<sup>8</sup>Al

<sup>9</sup>Sc

GACO0515T084CRS006 L1859671-13

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 09:00

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 15:32     | DDD     | Mt. Juliet, TN |

GACO0515T084CRS007 L1859671-14

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 09:15

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 15:32     | DDD     | Mt. Juliet, TN |

GACO0515T084CRS008 L1859671-15

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 09:25

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 15:32     | DDD     | Mt. Juliet, TN |

GACO0515T084CRS015 L1859671-16

Collected by  
Kaitlin Wykoff

Collected date/time  
05/15/25 09:35

Received date/time  
05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 15:34     | DDD     | Mt. Juliet, TN |

# SAMPLE SUMMARY

GACO0515T084CRS016 L1859671-17

Collected by: Kaitlin Wykoff  
 Collected date/time: 05/15/25 09:40  
 Received date/time: 05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2517406 | 1        | 05/16/25 19:50        | 05/17/25 15:34     | DDD     | Mt. Juliet, TN |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

GACO0515T084CRS017 L1859671-18

Collected by: Kaitlin Wykoff  
 Collected date/time: 05/15/25 09:45  
 Received date/time: 05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2518130 | 1        | 05/16/25 20:38        | 05/19/25 10:50     | ZRG     | Mt. Juliet, TN |

<sup>4</sup>Cn

<sup>5</sup>Sr

GACO0515T084CRS018 L1859671-19

Collected by: Kaitlin Wykoff  
 Collected date/time: 05/15/25 10:00  
 Received date/time: 05/16/25 12:30

| Method                                     | Batch     | Dilution | Preparation date/time | Analysis date/time | Analyst | Location       |
|--|-----------|----------|-----------------------|--------------------|---------|----------------|
| Radiochemistry by Method DOE Ga-01-R/901.1 | WG2518130 | 1        | 05/16/25 20:38        | 05/19/25 10:51     | ZRG     | Mt. Juliet, TN |

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# CASE NARRATIVE

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.



Jared Starkey  
Project Manager

- <sup>1</sup> Cp
- <sup>2</sup> Tc
- <sup>3</sup> Ss
- <sup>4</sup> Cn
- <sup>5</sup> Sr
- <sup>6</sup> Qc
- <sup>7</sup> Gl
- <sup>8</sup> Al
- <sup>9</sup> Sc

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.623           |           | 0.269               | 0.269        | 0.562        | 0.250       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.528           |           | 0.175               | 0.175        | 0.273        | 0.122       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |
| Lead-214              | 0.585           |           | 0.166               | 0.166        | 0.272        | 0.123       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | -1.46           | U         | 1.63                | 1.63         | 3.96         | 1.57        | 05/17/2025 13:48             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | -0.259          | U         | 1.03                | 1.03         | 2.00         | 0.939       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.930           |           | 0.304               | 0.304        | 0.576        | 0.247       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.778           |           | 0.211               | 0.211        | 0.267        | 0.115       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |
| Lead-214              | 0.710           |           | 0.180               | 0.180        | 0.270        | 0.120       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.903           | U         | 1.20                | 1.20         | 2.53         | 0.990       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 1.27            | J         | 0.805               | 0.805        | 1.41         | 0.643       | 05/17/2025 13:48             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result | Qualifier | 2 sigma CE | TPU   | MDA   | Lc     | Analysis Date    | Batch                     |
|-----------------------|--------|-----------|------------|-------|-------|--------|------------------|---------------------------|
|                       | pCi/g  |           | + / -      | + / - | pCi/g | pCi/g  | date / time      |                           |
| Actinium-228 (Ra-228) | 0.799  |           | 0.260      | 0.260 | 0.487 | 0.207  | 05/17/2025 13:48 | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.638  |           | 0.186      | 0.186 | 0.238 | 0.103  | 05/17/2025 13:48 | <a href="#">WG2517406</a> |
| Lead-214              | 0.411  |           | 0.270      | 0.270 | 0.216 | 0.0957 | 05/17/2025 13:48 | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.717  | <u>U</u>  | 0.793      | 0.793 | 1.82  | 0.719  | 05/17/2025 13:48 | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 1.77   |           | 0.754      | 0.754 | 1.14  | 0.524  | 05/17/2025 13:48 | <a href="#">WG2517406</a> |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.620           | J         | 0.381               | 0.381        | 0.893        | 0.365       | 05/17/2025 13:49             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.520           |           | 0.297               | 0.297        | 0.487        | 0.209       | 05/17/2025 13:49             | <a href="#">WG2517406</a> |
| Lead-214              | 0.686           |           | 0.225               | 0.225        | 0.357        | 0.154       | 05/17/2025 13:49             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.112           | U         | 0.893               | 0.893        | 2.42         | 0.950       | 05/17/2025 13:49             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | -0.0336         | U         | 1.06                | 1.06         | 1.93         | 0.880       | 05/17/2025 13:49             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.671           |           | 0.255               | 0.255        | 0.553        | 0.244       | 05/17/2025 14:40             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.555           |           | 0.181               | 0.181        | 0.272        | 0.122       | 05/17/2025 14:40             | <a href="#">WG2517406</a> |
| Lead-214              | 0.575           |           | 0.153               | 0.153        | 0.244        | 0.110       | 05/17/2025 14:40             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.651           | U         | 0.839               | 0.839        | 1.95         | 0.778       | 05/17/2025 14:40             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 0.270           | U         | 0.756               | 0.756        | 1.41         | 0.659       | 05/17/2025 14:40             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result | Qualifier | 2 sigma CE | TPU   | MDA   | Lc     | Analysis Date    | Batch                     |
|-----------------------|--------|-----------|------------|-------|-------|--------|------------------|---------------------------|
|                       | pCi/g  |           | + / -      | + / - | pCi/g | pCi/g  | date / time      |                           |
| Actinium-228 (Ra-228) | 0.956  |           | 0.232      | 0.232 | 0.374 | 0.163  | 05/17/2025 14:41 | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.677  |           | 0.167      | 0.167 | 0.234 | 0.106  | 05/17/2025 14:41 | <a href="#">WG2517406</a> |
| Lead-214              | 0.714  |           | 0.167      | 0.167 | 0.215 | 0.0983 | 05/17/2025 14:41 | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 1.88   | J         | 1.30       | 1.30  | 2.40  | 0.954  | 05/17/2025 14:41 | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 1.79   |           | 0.755      | 0.755 | 1.28  | 0.600  | 05/17/2025 14:41 | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.724           | J         | 0.333               | 0.333        | 0.742        | 0.331       | 05/17/2025 14:41             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.735           |           | 0.230               | 0.230        | 0.357        | 0.161       | 05/17/2025 14:41             | <a href="#">WG2517406</a> |
| Lead-214              | 0.804           |           | 0.207               | 0.207        | 0.340        | 0.155       | 05/17/2025 14:41             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.378           | U         | 1.55                | 1.55         | 3.47         | 1.38        | 05/17/2025 14:41             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 2.08            |           | 1.04                | 1.04         | 1.79         | 0.835       | 05/17/2025 14:41             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result | Qualifier | 2 sigma CE | TPU   | MDA   | Lc     | Analysis Date    | Batch                     |
|-----------------------|--------|-----------|------------|-------|-------|--------|------------------|---------------------------|
|                       | pCi/g  |           | + / -      | + / - | pCi/g | pCi/g  | date / time      |                           |
| Actinium-228 (Ra-228) | 0.978  |           | 0.238      | 0.238 | 0.384 | 0.168  | 05/17/2025 14:41 | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.582  |           | 0.153      | 0.153 | 0.221 | 0.0996 | 05/17/2025 14:41 | <a href="#">WG2517406</a> |
| Lead-214              | 0.560  |           | 0.141      | 0.141 | 0.244 | 0.112  | 05/17/2025 14:41 | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | -1.68  | U         | 1.44       | 1.44  | 3.42  | 1.36   | 05/17/2025 14:41 | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 0.0250 | U         | 0.854      | 0.854 | 1.61  | 0.761  | 05/17/2025 14:41 | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.548           |           | 0.192               | 0.192        | 0.366        | 0.153       | 05/17/2025 14:42             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.419           |           | 0.132               | 0.132        | 0.167        | 0.0701      | 05/17/2025 14:42             | <a href="#">WG2517406</a> |
| Lead-214              | 0.377           |           | 0.119               | 0.119        | 0.191        | 0.0848      | 05/17/2025 14:42             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.428           | U         | 0.785               | 0.785        | 1.73         | 0.671       | 05/17/2025 14:42             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 0.352           | U         | 0.500               | 0.500        | 0.948        | 0.430       | 05/17/2025 14:42             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 1.06            |           | 0.229               | 0.229        | 0.343        | 0.151       | 05/17/2025 14:44             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.570           |           | 0.138               | 0.138        | 0.186        | 0.0844      | 05/17/2025 14:44             | <a href="#">WG2517406</a> |
| Lead-214              | 0.717           |           | 0.116               | 0.116        | 0.163        | 0.0749      | 05/17/2025 14:44             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | -0.0738         | U         | 0.616               | 0.616        | 1.52         | 0.612       | 05/17/2025 14:44             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 0.718           | J         | 0.587               | 0.587        | 0.995        | 0.471       | 05/17/2025 14:44             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 1.03            |           | 0.255               | 0.255        | 0.387        | 0.162       | 05/17/2025 15:02             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.660           |           | 0.170               | 0.170        | 0.202        | 0.0873      | 05/17/2025 15:02             | <a href="#">WG2517406</a> |
| Lead-214              | 0.995           |           | 0.158               | 0.158        | 0.199        | 0.0891      | 05/17/2025 15:02             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.381           | <u>U</u>  | 0.708               | 0.708        | 1.69         | 0.673       | 05/17/2025 15:02             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 1.29            |           | 0.713               | 0.713        | 1.13         | 0.525       | 05/17/2025 15:02             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.999           |           | 0.229               | 0.229        | 0.362        | 0.160       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.733           |           | 0.159               | 0.159        | 0.205        | 0.0926      | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Lead-214              | 0.810           |           | 0.165               | 0.165        | 0.202        | 0.0925      | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 1.75            | J         | 1.26                | 1.26         | 2.32         | 0.924       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 0.764           | J         | 0.702               | 0.702        | 1.30         | 0.613       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.814           |           | 0.344               | 0.344        | 0.746        | 0.334       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.876           |           | 0.227               | 0.227        | 0.298        | 0.132       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Lead-214              | 0.744           |           | 0.196               | 0.196        | 0.310        | 0.141       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.873           | U         | 1.55                | 1.55         | 3.22         | 1.28        | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 1.50            | U         | 1.00                | 1.00         | 1.79         | 0.837       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 1.00            |           | 0.245               | 0.245        | 0.413        | 0.185       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.833           |           | 0.165               | 0.165        | 0.212        | 0.0958      | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Lead-214              | 0.598           |           | 0.142               | 0.142        | 0.235        | 0.108       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.735           | U         | 1.49                | 1.49         | 3.28         | 1.31        | 05/17/2025 15:32             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 0.403           | U         | 0.871               | 0.871        | 1.60         | 0.755       | 05/17/2025 15:32             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result  | Qualifier | 2 sigma CE | TPU   | MDA   | Lc     | Analysis Date    | Batch                     |
|-----------------------|---------|-----------|------------|-------|-------|--------|------------------|---------------------------|
|                       | pCi/g   |           | + / -      | + / - | pCi/g | pCi/g  | date / time      |                           |
| Actinium-228 (Ra-228) | 1.16    |           | 0.299      | 0.299 | 0.460 | 0.195  | 05/17/2025 15:32 | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.801   |           | 0.194      | 0.194 | 0.219 | 0.0936 | 05/17/2025 15:32 | <a href="#">WG2517406</a> |
| Lead-214              | 0.764   |           | 0.175      | 0.175 | 0.254 | 0.114  | 05/17/2025 15:32 | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | -0.0930 | <u>U</u>  | 1.08       | 1.08  | 2.45  | 0.963  | 05/17/2025 15:32 | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 1.94    |           | 0.839      | 0.839 | 1.39  | 0.643  | 05/17/2025 15:32 | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result | Qualifier | 2 sigma CE | TPU   | MDA   | Lc     | Analysis Date    | Batch                     |
|-----------------------|--------|-----------|------------|-------|-------|--------|------------------|---------------------------|
|                       | pCi/g  |           | + / -      | + / - | pCi/g | pCi/g  | date / time      |                           |
| Actinium-228 (Ra-228) | 0.719  |           | 0.201      | 0.201 | 0.366 | 0.161  | 05/17/2025 15:34 | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.753  |           | 0.147      | 0.147 | 0.175 | 0.0783 | 05/17/2025 15:34 | <a href="#">WG2517406</a> |
| Lead-214              | 0.713  |           | 0.115      | 0.115 | 0.157 | 0.0718 | 05/17/2025 15:34 | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.603  | <u>U</u>  | 0.608      | 0.608 | 1.38  | 0.554  | 05/17/2025 15:34 | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 1.24   |           | 0.598      | 0.598 | 0.964 | 0.455  | 05/17/2025 15:34 | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.521           | J         | 0.276               | 0.276        | 0.562        | 0.232       | 05/17/2025 15:34             | <a href="#">WG2517406</a> |
| Bismuth-214 (Ra-226)  | 0.744           |           | 0.234               | 0.234        | 0.317        | 0.137       | 05/17/2025 15:34             | <a href="#">WG2517406</a> |
| Lead-214              | 0.577           |           | 0.172               | 0.172        | 0.313        | 0.141       | 05/17/2025 15:34             | <a href="#">WG2517406</a> |
| Thorium-234 (U-238)   | 0.365           | U         | 0.660               | 0.660        | 1.68         | 0.667       | 05/17/2025 15:34             | <a href="#">WG2517406</a> |
| Radium-226 (186 KeV)  | 1.12            | J         | 0.839               | 0.839        | 1.37         | 0.633       | 05/17/2025 15:34             | <a href="#">WG2517406</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result | Qualifier | 2 sigma CE | TPU   | MDA   | Lc     | Analysis Date    | Batch                     |
|-----------------------|--------|-----------|------------|-------|-------|--------|------------------|---------------------------|
|                       | pCi/g  |           | + / -      | + / - | pCi/g | pCi/g  | date / time      |                           |
| Actinium-228 (Ra-228) | 0.678  |           | 0.197      | 0.197 | 0.377 | 0.170  | 05/19/2025 10:50 | <a href="#">WG2518130</a> |
| Bismuth-214 (Ra-226)  | 0.464  |           | 0.125      | 0.125 | 0.187 | 0.0847 | 05/19/2025 10:50 | <a href="#">WG2518130</a> |
| Lead-214              | 0.553  |           | 0.123      | 0.123 | 0.194 | 0.0892 | 05/19/2025 10:50 | <a href="#">WG2518130</a> |
| Thorium-234 (U-238)   | -1.10  | U         | 1.28       | 1.28  | 2.84  | 1.13   | 05/19/2025 10:50 | <a href="#">WG2518130</a> |
| Radium-226 (186 KeV)  | -0.202 | U         | 0.713      | 0.713 | 1.38  | 0.654  | 05/19/2025 10:50 | <a href="#">WG2518130</a> |

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

Radiochemistry by Method DOE Ga-01-R/901.1

| Analyte               | Result<br>pCi/g | Qualifier | 2 sigma CE<br>+ / - | TPU<br>+ / - | MDA<br>pCi/g | Lc<br>pCi/g | Analysis Date<br>date / time | Batch                     |
|-----------------------|-----------------|-----------|---------------------|--------------|--------------|-------------|------------------------------|---------------------------|
| Actinium-228 (Ra-228) | 0.916           |           | 0.277               | 0.277        | 0.530        | 0.234       | 05/19/2025 10:51             | <a href="#">WG2518130</a> |
| Bismuth-214 (Ra-226)  | 0.770           |           | 0.192               | 0.192        | 0.240        | 0.106       | 05/19/2025 10:51             | <a href="#">WG2518130</a> |
| Lead-214              | 0.789           |           | 0.164               | 0.164        | 0.264        | 0.121       | 05/19/2025 10:51             | <a href="#">WG2518130</a> |
| Thorium-234 (U-238)   | 1.58            | J         | 1.15                | 1.15         | 2.12         | 0.835       | 05/19/2025 10:51             | <a href="#">WG2518130</a> |
| Radium-226 (186 KeV)  | 1.09            | J         | 0.733               | 0.733        | 1.30         | 0.605       | 05/19/2025 10:51             | <a href="#">WG2518130</a> |

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Sr
- <sup>6</sup>Qc
- <sup>7</sup>Gl
- <sup>8</sup>Al
- <sup>9</sup>Sc

Method Blank (MB)

(MB) R4216282-1 05/17/25 13:49

| Analyte               | MB Result<br>pCi/g | MB Qualifier | MB 2 sigma CE<br>+ / - | MB MDA<br>pCi/g | MB Lc<br>pCi/g |
|-----------------------|--------------------|--------------|------------------------|-----------------|----------------|
| Actinium-228 (Ra-228) | -0.0236            | IC           | 0.108                  | 0.365           | 0.146          |
| Americium-241         | 0.213              | IC           | 0.150                  | 0.257           | 0.116          |
| Bismuth-214 (Ra-226)  | 0.00894            | IC           | 0.0788                 | 0.175           | 0.0718         |
| Cesium-137            | 0.0248             | IC           | 0.0487                 | 0.100           | 0.0413         |
| Cobalt-60             | 0.0116             | IC           | 0.0373                 | 0.130           | 0.0509         |
| Lead-214              | -0.0131            | IC           | 0.0683                 | 0.172           | 0.0746         |
| Radium-226 (186 KeV)  | 0.714              | IC           | 0.576                  | 0.979           | 0.444          |
| Thorium-234 (U-238)   | 1.20               | IC           | 0.705                  | 1.44            | 0.564          |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1859660-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1859660-01 05/17/25 13:46 • (DUP) R4216282-3 05/17/25 14:44

| Analyte               | Original Result<br>pCi/g | Original 2<br>sigma CE<br>+ / - | Original MDA<br>pCi/g | Original Lc<br>pCi/g | DUP Result<br>pCi/g | DUP 2 sigma<br>CE<br>+ / - | DUP MDA<br>pCi/g | DUP Lc<br>pCi/g | DUP RPD<br>% | DUP RER | DUP Qualifier | DUP RPD<br>Limits<br>% | DUP RER Limit |
|-----------------------|--------------------------|---------------------------------|-----------------------|----------------------|---------------------|----------------------------|------------------|-----------------|--------------|---------|---------------|------------------------|---------------|
| Actinium-228 (Ra-228) | 0.809                    | 0.313                           | 0.639                 | 0.280                | 0.976               | 0.415                      | 0.827            | 0.341           | 18.7         | 0.321   |               | 20                     | 3             |
| Bismuth-214 (Ra-226)  | 0.552                    | 0.240                           | 0.390                 | 0.177                | 0.618               | 0.300                      | 0.459            | 0.198           | 11.3         | 0.172   |               | 20                     | 3             |
| Lead-214              | 0.615                    | 0.180                           | 0.297                 | 0.134                | 0.854               | 0.226                      | 0.343            | 0.149           | 32.6         | 0.828   |               | 20                     | 3             |
| Radium-226 (186 KeV)  | 1.51                     | 0.972                           | 1.68                  | 0.784                | 1.93                | 1.19                       | 1.89             | 0.870           | 24.4         | 0.274   |               | 20                     | 3             |
| Thorium-234 (U-238)   | 1.33                     | 1.10                            | 2.49                  | 0.996                | 1.55                | 1.03                       | 2.31             | 0.913           | 15.0         | 0.143   | J             | 20                     | 3             |

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

(LCS) R4216282-2 05/17/25 14:43 • (LCSD) R4216282-4 05/17/25 15:29

| Analyte       | Spike Amount<br>pCi/g | LCS Result<br>pCi/g | LCSD Result<br>pCi/g | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Americium-241 | 36.9                  | 34.7                | 35.4                 | 94.1          | 96.0           | 80.0-120         |               |                | 1.91     | 20              |
| Cesium-137    | 53.8                  | 58.0                | 55.3                 | 108           | 103            | 80.0-120         |               |                | 4.73     | 20              |
| Cobalt-60     | 62.9                  | 62.9                | 61.7                 | 100           | 98.1           | 80.0-120         |               |                | 1.85     | 20              |

Method Blank (MB)

(MB) R4216734-3 05/19/25 09:39

| Analyte               | MB Result<br>pCi/g | MB Qualifier | MB 2 sigma CE<br>+ / - | MB MDA<br>pCi/g | MB Lc<br>pCi/g |
|-----------------------|--------------------|--------------|------------------------|-----------------|----------------|
| Actinium-228 (Ra-228) | 0.121              | ⊞            | 0.342                  | 0.765           | 0.324          |
| Americium-241         | -0.131             | ⊞            | 1.35                   | 2.63            | 1.20           |
| Bismuth-214 (Ra-226)  | -0.118             | ⊞            | 0.191                  | 0.453           | 0.200          |
| Cesium-137            | 0.0273             | ⊞            | 0.100                  | 0.206           | 0.0880         |
| Cobalt-60             | 0.0319             | ⊞            | 0.0616                 | 0.198           | 0.0762         |
| Lead-214              | 0.121              | ⊞            | 0.143                  | 0.288           | 0.123          |
| Radium-226 (186 KeV)  | -0.671             | ⊞            | 0.866                  | 1.92            | 0.867          |
| Thorium-234 (U-238)   | -0.514             | ⊞            | 1.15                   | 3.08            | 1.18           |

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1858916-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1858916-19 05/19/25 08:53 • (DUP) R4216734-4 05/19/25 09:59

| Analyte               | Original Result<br>pCi/g | Original 2<br>sigma CE<br>+ / - | Original MDA<br>pCi/g | Original Lc<br>pCi/g | DUP Result<br>pCi/g | DUP 2 sigma<br>CE<br>+ / - | DUP MDA<br>pCi/g | DUP Lc<br>pCi/g | DUP RPD<br>% | DUP RER | DUP Qualifier | DUP RPD<br>Limits<br>% | DUP RER Limit |
|-----------------------|--------------------------|---------------------------------|-----------------------|----------------------|---------------------|----------------------------|------------------|-----------------|--------------|---------|---------------|------------------------|---------------|
| Actinium-228 (Ra-228) | 0.831                    | 0.316                           | 0.644                 | 0.286                | 0.744               | 0.196                      | 0.339            | 0.151           | 11.1         | 0.234   |               | 20                     | 3             |
| Bismuth-214 (Ra-226)  | 0.671                    | 0.206                           | 0.313                 | 0.141                | 0.705               | 0.134                      | 0.154            | 0.0685          | 4.98         | 0.140   |               | 20                     | 3             |
| Lead-214              | 0.430                    | 0.171                           | 0.326                 | 0.150                | 0.742               | 0.153                      | 0.195            | 0.0902          | 53.3         | 1.36    |               | 20                     | 3             |
| Radium-226 (186 KeV)  | -1.10                    | 0.883                           | 1.85                  | 0.872                | 0.935               | 0.607                      | 1.09             | 0.515           | 200          | 1.90    | ⊞             | 20                     | 3             |
| Thorium-234 (U-238)   | -1.68                    | 1.36                            | 3.04                  | 1.21                 | 0.488               | 0.952                      | 2.14             | 0.854           | 200          | 1.31    | ⊞             | 20                     | 3             |

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

(LCS) R4216734-1 05/19/25 08:52 • (LCSD) R4216734-2 05/19/25 09:13

| Analyte       | Spike Amount<br>pCi/g | LCS Result<br>pCi/g | LCSD Result<br>pCi/g | LCS Rec.<br>% | LCSD Rec.<br>% | Rec. Limits<br>% | LCS Qualifier | LCSD Qualifier | RPD<br>% | RPD Limits<br>% |
|---------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Americium-241 | 36.9                  | 34.7                | 36.6                 | 94.0          | 99.2           | 80.0-120         |               |                | 5.36     | 20              |
| Cesium-137    | 53.8                  | 58.1                | 57.7                 | 108           | 107            | 80.0-120         |               |                | 0.829    | 20              |
| Cobalt-60     | 62.9                  | 67.5                | 67.1                 | 107           | 107            | 80.0-120         |               |                | 0.654    | 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.

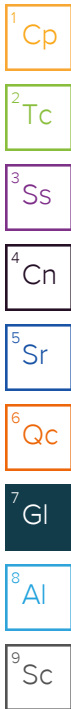
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

|                              |  |
|------------------------------|--|
| MDA                          | Minimum Detectable Activity.   |
| Rec.                         | Recovery.  |
| RER                          | Replicate Error Ratio.   |
| RPD                          | Relative Percent Difference.   |
| SDG                          | Sample Delivery Group.   |
| Analyte                      | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.   |
| 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. |
| U | Below Detectable Limits: Indicates that the analyte was not detected.               |



# 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 <sup>1</sup>     | TN00003          |
| Colorado                      | TN00003     | New York                    | 11742            |
| Connecticut                   | PH-0197     | North Carolina              | Env375           |
| Florida                       | E87487      | North Carolina <sup>1</sup> | DW21704          |
| Georgia                       | NELAP       | North Carolina <sup>3</sup> | 41               |
| Georgia <sup>1</sup>          | 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 <sup>1,6</sup>       | KY90010     | South Carolina              | 84004002         |
| Kentucky <sup>2</sup>         | 16          | South Dakota                | n/a              |
| Louisiana                     | AI30792     | Tennessee <sup>1,4</sup>    | 2006             |
| Louisiana                     | LA018       | Texas                       | T104704245-20-18 |
| Maine                         | TN00003     | Texas <sup>5</sup>          | 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 <sup>5</sup> | 1461.02     | DOD                         | 1461.01          |
| Canada                        | 1461.01     | USDA                        | P330-15-00234    |
| EPA–Crypto                    | TN00003     |                             |                  |

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al


<sup>9</sup> Sc

**Pace** Pace® Location Requested (City/State): **CHAIN-OF-CUSTODY Analytical Request Document**  
 Pace National, 12065 Lebanon Road, Mt. Juliet, TN 37122 Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company Name: CTEH, LLC Contact/Report To: Chevon-Bishop, Kyle Lawrence, Tami McMullin, Andy Henault, Eric Catlin, Madelyn Klinkerman  
 Street Address: 5120 North Shore Drive, North Little Rock, AR 72118 Phone #: E-Mail: chevon\_bishop@cteh.com; kylelawrence@cteh.com; tmcnullin@cteh.com; ahenault@cteh.com  
 Cc E-Mail: ecatin@cteh.com; mklinkerman@cteh.com

Customer Project #: PROJ-054017 Invoice to: CTEH  
 Project Name: Bishop LOC Invoice E-mail: ctehap@montrose-env.com  
 Site Collection Info/Facility ID (as applicable): Galeton, CO Purchase Order # (if applicable):  
 Quote #:

LAB USE ONLY - Affix Workorder/Login Label Here



Scan QR Code for instructions

*19859671*

Specify Container Size \*\*  
 10  
 Identify Container Preservative Type\*\*\*  
 1  
 Analysis Requested

\*\*Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other  
 \*\*\* Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Time Zone Collected: [ ] AK [ ] PT [X] MT [ ] CT [ ] ET County / State origin of sample(s): CO

Data Deliverables: [X] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No  
 Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [X] 3 Day Other  
 Date Results Requested: Field Filtered (if applicable): [ ] Yes [ ] No  
 Analysis:

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Radionuclides EPA 901.1

|                          |                   |
|--------------------------|-------------------|
| Proj. Mgr:               | 546-Jared Starkey |
| AcctNum / Client ID:     | CTEHER            |
| Table #:                 |                   |
| Profile / Template:      | T271979           |
| Prelog / Bottle Ord. ID: |                   |

Sample Comment

Preservation non-conformance identified for sample.

| Customer Sample ID | Matrix * | Comp / Grab | Composite Start |      | Collected or Composite End |      | # Cont. | Residual Chlorine |       | X | Sample Comment |
|--------------------|----------|-------------|-----------------|------|----------------------------|------|---------|-------------------|-------|---|----------------|
|                    |          |             | Date            | Time | Date                       | Time |         | Result            | Units |   |                |
| GAC00515T084CRS009 | SS       | G           | -               | -    | 5/15/2025                  | 0820 | 1       | -                 | -     | X | 01             |
| GAC00515T084CRS010 | SS       | G           | -               | -    | 5/15/2025                  | 0840 | 1       | -                 | -     | X | 02             |
| GAC00515T084CRS010 | SS       | G           | -               | -    | 5/15/2025                  | 0840 | 1       | -                 | -     | X | 03             |
| GAC00515T084CRS011 | SS       | G           | -               | -    | 5/15/2025                  | 0820 | 1       | -                 | -     | X | 04             |
| GAC00515T084CRS012 | SS       | G           | -               | -    | 5/15/2025                  | 0840 | 1       | -                 | -     | X | 05             |
| GAC00515T084CRS013 | SS       | G           | -               | -    | 5/15/2025                  | 0900 | 1       | -                 | -     | X | 06             |
| GAC00515T084CRS014 | SS       | G           | -               | -    | 5/15/2025                  | 0915 | 1       | -                 | -     | X | 07             |

Additional Instructions from Pace\*: Collected By: Jonathan Aiker Signature: *[Signature]*

Customer Remarks / Special Conditions / Possible Hazards: # Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C): Corrected Temp. (°C): [ ] On Ice

Relinquished by/Company: (Signature) *[Signature]* Date/Time: 5/15/25 1800 Received by/Company: (Signature) Date/Time: 5/16/25 12:30pm

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time: Tracking Number: Delivered by: [ ] In-Person [ ] Courier [ ] FedEx [ ] UPS [ ] Other

Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature) Date/Time: Page: 1 of 2

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N  NP IF Applicable  
 COC Signed/Accurate:  Y  N VOA Zero Headspace:  Y  N  
 Bottles arrive intact:  Y  N Pres. Correct/Check:  Y  N  
 Correct bottles used:  Y  N Condition:    NCF    OK  
 Sufficient volume sent:  Y  N  
 RA Screen <0.5 mR/hr:  Y  N Count = 19

00515T084CRS



Pace® Location Requested (City/State):

### CHAIN-OF-CUSTODY Analytical Request Document

LAB USE ONLY- Affix Workorder/Login Label Here



Scan QR Code for instructions

*489671*

Company Name: CTEH, LLC  
 Street Address:  
 5120 North Shore Drive, North Little Rock, AR 72118

Contact/Report To: Chevron-Bishop, Kyle Lawrence, Tami McMullin, Andy Henault, Eric Catlin, Madelyn Klinkerman  
 Phone #:  
 E-Mail: chevron\_bishop@cteh.com; kylelawrence@cteh.com; tmcnullin@cteh.com; ahenault@cteh.com  
 Cc E-Mail: ecatlin@cteh.com; mlinkerman@cteh.com

Customer Project #: PROJ-054017  
 Project Name:  
 Bishop LOC  
 Site Collection Info/Facility ID (as applicable):  
 Galeton, CO

Invoice to: CTEH  
 Invoice E-mail:  
 ctehap@montrose-env.com  
 Purchase Order # (if applicable):  
 Quote #:

Time Zone Collected: [ ] AK [ ] PT [  ] MT [ ] CT [ ] ET

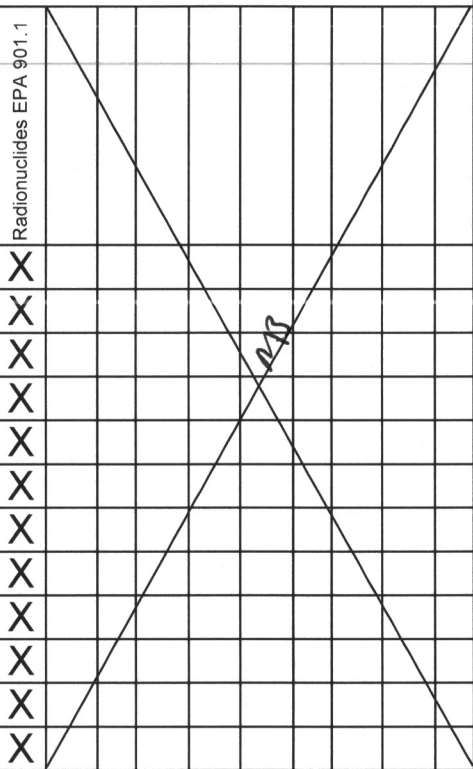
County / State origin of sample(s): CO

Data Deliverables: [  ] Level II [ ] Level III [ ] Level IV  
 Regulatory Program (DW, RCRA, etc.) as applicable: \_\_\_\_\_ Reportable [ ] Yes [ ] No

Rush (Pre-approval required):  
 [ ] Same Day [ ] 1 Day [ ] 2 Day [  ] 3 Day Other \_\_\_\_\_  
 Date Results Requested: \_\_\_\_\_  
 DW PWSID # or WW Permit # as applicable: \_\_\_\_\_  
 Field Filtered (if applicable): [ ] Yes [ ] No  
 Analysis: \_\_\_\_\_

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OI), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

| Customer Sample ID | Matrix * | Comp / Grab | Composite Start |      | Collected or Composite End |      | # Cont. | Residual Chlorine |       | Radionuclides EPA 901.1 | Sample Comment |
|--------------------|----------|-------------|-----------------|------|----------------------------|------|---------|-------------------|-------|-------------------------|----------------|
|                    |          |             | Date            | Time | Date                       | Time |         | Result            | Units |                         |                |
| GAC00515T084CRS001 | SS       | G           | -               | -    | 5/15/2025                  | 0810 | 1       | -                 | -     | X                       | <i>01</i>      |
| GAC00515T084CRS002 | SS       | G           | -               | -    | 5/15/2025                  | 0820 | 1       | -                 | -     | X                       | <i>02</i>      |
| GAC00515T084CRS003 | SS       | G           | -               | -    | 5/15/2025                  | 0830 | 1       | -                 | -     | X                       | <i>03</i>      |
| GAC00515T084CRS004 | SS       | G           | -               | -    | 5/15/2025                  | 0840 | 1       | -                 | -     | X                       | <i>04</i>      |
| GAC00515T084CRS005 | SS       | G           | -               | -    | 5/15/2025                  | 0845 | 1       | -                 | -     | X                       | <i>05</i>      |
| GAC00515T084CRS006 | SS       | G           | -               | -    | 5/15/2025                  | 0900 | 1       | -                 | -     | X                       | <i>06</i>      |
| GAC00515T084CRS007 | SS       | G           | -               | -    | 5/15/2025                  | 0915 | 1       | -                 | -     | X                       | <i>07</i>      |
| GAC00515T084CRS008 | SS       | G           | -               | -    | 5/15/2025                  | 0925 | 1       | -                 | -     | X                       | <i>08</i>      |
| GAC00515T084CRS015 | SS       | G           | -               | -    | 5/15/2025                  | 0935 | 1       | -                 | -     | X                       | <i>15</i>      |
| GAC00515T084CRS016 | SS       | G           | -               | -    | 5/15/2025                  | 0940 | 1       | -                 | -     | X                       | <i>16</i>      |
| GAC00515T084CRS017 | SS       | G           | -               | -    | 5/15/2025                  | 0945 | 1       | -                 | -     | X                       | <i>17</i>      |
| GAC00515T084CRS018 | SS       | G           | -               | -    | 5/15/2025                  | 1000 | 1       | -                 | -     | X                       | <i>18</i>      |



Proj. Mgr:  
 546-Jared Starkey  
 AcctNum / Client ID:  
 CTEHER  
 Table #:  
 Profile / Template:  
 T271979  
 Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

Additional Instructions from Pace\*:

Collected By:  
 Printed Name: *M. Beck*  
 Signature: *Matt Beck*

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers: \_\_\_\_\_ Thermometer ID: \_\_\_\_\_ Correction Factor (°C): \_\_\_\_\_ Obs. Temp. (°C): \_\_\_\_\_ Corrected Temp. (°C): \_\_\_\_\_ [ ] On Ice

Relinquished by/Company: (Signature)  
*Matt Beck* CTEH  
 Date/Time:  
 5-15-25 1800

Received by/Company: (Signature)  
*Justin* Pace  
 Date/Time:  
 5-15-25 1800

Received by/Company: (Signature)  
*Justin*  
 Date/Time:  
 5/16/25 12:30pm

Tracking Number:  
 Delivered by: [ ] In-Person [ ] Courier  
 [ ] FedEx [ ] UPS [ ] Other  
 Page: 2 of 2

Multiple Parcel Form

L# U859671

| Parcel Tracking Number | Infrared Thermometer ID | Temperature Reading (°C) | Correction Factor (°C) | Corrected Temperature (°C) | Custody Seal Intact    |
|------------------------|-------------------------|--------------------------|------------------------|----------------------------|------------------------|
|                        | TUA9                    | 22.0 +                   | 0.4 =                  | 22.4                       | Yes / No / Not Present |
|                        | TUA9                    | 19.7 +                   | 0.4 =                  | 20.1                       | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |
|                        |                         |                          |                        |                            | Yes / No / Not Present |

*Stewart Quinn*

Name

5/16/25

12:30 p.m.

Date